



BANGLADESH EDUCATION COMMISSION REPORT

May, 1974

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ପାଠକମଣ୍ଡଳ ବିଜ୍ଞାନ ଓ ପଂଚମ ସଂସ୍କରଣ କୁମ୍ଭରା
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INTRODUCTION

The people of Bangladesh have earned their freedom through sustained and arduous struggle and great sacrifices after having suffered the agony of slavery over a long period of time. Our people never forfeited their dream of a noble and meaningful life during all these years of oppression and exploitation and lack of freedom. They had striven ceaselessly for happy and prosperous existence and chosen the path of struggle time and again.

Our people have long realised that a properly-conceived education system is a vital requirement for the emergence of this new existence. It is precisely for this reason that the demand for educational reforms has always played a central role in our movement for the attainment of democratic freedom. Our manpower is huge and our resources are ample; the real necessity is the acquirement of an appropriate ability to train our large manpower and to make adequate use of our natural resources with a view to attaining a reasonable standard of life, a healthy morality and relative prosperity. In order to perpetuate their exploitation of our manpower and resources, the colonial powers had made calculated efforts to arrest the spread of education in our country. Our people, the student community in particular, have always actively fought against this policy of negation.

On July 26, 1972 the National Education Commission was formed in accordance with a proposal accepted by the Government of the People's Republic of Bangladesh. The aim was to remove the various defects and deficiencies of our present education system, to indicate a way as to how a wholesome nationhood can be achieved through the medium of education and to strengthen the country in modern knowledge and creative endeavour.

Prime Minister Bangabandhu Sheikh Mujibur Rahman inaugurated the National Education Commission on September 24, 1972. In his inspiring inaugural address the Prime Minister made a stirring appeal to the members of the Commission to give their independent and considered opinions as to how a reconstructed education system can help achieve the people's desire for a socialistic society. He further hoped that the Commission would make all possible efforts to evolve a long-term education system capable of meeting all our legitimate educational requirements on a semi-permanent basis.

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At the invitation of the Government of India and under the leadership of the Chairman, the members of the Commission visited India in January, 1973. They gained valuable direct experience about the education system in India during this tour. For the competent arrangement of this tour and for their kind hospitality, we extend our grateful thanks to the Government of India, to the relevant states and to the educationists and leaders concerned.

According to the directive of Government we submitted our interim report on June 8, 1973. While accepting this report, the Prime Minister was gracious enough to express his satisfaction at its timely submission. To ascertain public opinion about our education system and its manifold problems, a questionnaire was sent to educational institutions of various levels, to related organisations, to educationists and teachers and public leaders.

The questionnaire was also circulated through newspapers. We got an encouraging response, and the replies received were analysed through computer. Many persons interested in education were kind enough to submit a detailed memorandum to us at their own initiative. In addition, we carefully considered all the articles, criticisms and proposals about education published in different news-papers and journals after independence. We received many valuable suggestions and proposals through replies to the questionnaire, through memoranda, through newspapers and journals and through our discussions with educationists and teachers. We express our thanks to all those who thus helped us.

We travelled in all districts of Bangladesh as a means to ascertain public opinion and to acquire practical knowledge about our present educational condition. We visited many educational institutions, at all levels, during this period and held discussions with the Vice-Chancellors and Professors of various Universities. We also held discussions with the Principals and Professors of many Engineering and Medical Colleges as well as those of general Colleges and also ascertained the views and opinions of heads of educational institutions of different categories as well as their teachers. We met student-representatives at various places and sought their opinions about our present educational system. Moreover, we had meetings with persons interested in education and local leaders at different places and we came to know about their thinking on the subject. We received many valuable suggestions from these visits and got acquainted with the opinions and views of a cross section of people about our education system. We also had an opportunity to

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discuss the present condition at our educational institutions and to make contracts with people at all levels to ascertain public opinion. These experiences helped us a great deal in the formulation of this report. The Officers of the Education Directorate, different Deputy Commissioners, Sub-divisional Officers and other officers as well as local leaders and educationists gave us all possible help and co-operation and during our internal tours. We are grateful to them all.

The Commission have arrived at their decisions, regarding the different aspects of education after mature deliberation, long discussions and a careful analysis of different opinions. About 400 members of 30 study and special committees, practically forming our educational elite, helped the Commission in the formulation of its recommendations. All these members helped the Commission in all possible ways with the utmost sincerity and devotion. We are grateful to each of them. In the present report we have tried our utmost to indicate the right direction regarding the reconstruction and reconstruction of our educational system and also shown the actions necessary for the attainment of this goal. We believe that the hopes and aspirations of our people, our teachers and students and of persons interested in education regarding educational reform have been reflected in this report.

The present educational system in our country faces many complex widespread and serious problems. We have laid special stress on those problems which we consider to be most pressing and have endeavoured to indicate the way as to how the particular defects and deficiencies in our education system can be removed. Every thoughtful person has naturally his or her own opinion about education. We have observed that almost all are in agreement about the defects and deficiencies of our education system but there is considerable difference of opinion as to how these can be removed. In the perspective of present conditions and environment, we have accepted only those proposals which we found most acceptable.

It is necessary to tackle the present critical position in the field of education in our country. We earnestly believe that it would be possible to resolve to a large extent many of our pressing educational problems and to begin a new educational era if our recommendations are implemented. We therefore hope that Govt. will take effective steps to urgently consider our recommendations and quickly implement them. The setting up of an implementation unit in this connection is an urgent necessity. We have drawn the attention of Government to the equally urgent necessity of formulating without delay a new curriculum and

new syllabuses are vitally necessary for the implementation of our proposals. It would have been impossible for the Commission to complete its difficult assignment without the interest, encouragement and help of the Prime Minister, Bangabandhu Sheikh Mujibur Rahman. We are specially grateful and indebted to him. Prof. Yusuf Ali, our Education Minister, also helped and encouraged us in various ways. We also express our deep gratitude to him. The Education Ministry has also cooperated with us in several ways. They do deserve our thanks. The officers and assistants attached to the Education Commission have also, through their untiring efforts, helped a great deal in the formulation of this report. We owe them a debt of gratitude.

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CHAPTER 1

THE AIMS AND GOAL OF EDUCATION

1.1 Education can be used as a weapon to implement the hopes and aspirations of a nation and to build a new society. So the main responsibility and goal of education is to arouse an awareness among all people—including agriculturists, labourers, and the middle class—about the urgent requirements of life and to enable them to evolve the ability to solve various related problems and inspire them to move ahead towards the creation of a socialistic society. This aim is in consonance with the fundamental principles embodied in our constitution. We can state the aims and goal of education, maintaining a balance between the main principles of education and those of our constitution, as follows:

1.2. **Patriotism and good citizenship:** Every citizen must have a deep attachment for his/her country. Patriotism in this context does not mean vague ecstasies but an appropriate realisation of the ideals of Bangladesh. Its aim is to feel a pride in our national traditions, to be hopeful about the present role of Bangladesh and to hold an unshakable faith in its future. The main function of patriotism is to achieve national cohesion and a feeling of oneness with the collective hopes and aspirations of our people. Every citizen must feel that he belongs as much to his country as to his family. He must further feel that his own future is inextricably bound up with the future of his country.

Education has a crucial role in creating the elements of good citizenship and in generating progress in the society as a whole. It must be ensured that every citizen of Bangladesh is properly reverential towards our national ideals and ideology and has the urge to become a good and patriotic citizen dedicated to the welfare of our motherland and her people. With this aim in view we must be able through education to instil into the minds of our people a genuine attachment for nationalism, socialism, democracy and secularism and to ensure that this is truly reflected in their every-day existence.

(A) **Nationalism:** A social and national awareness has to be generated through study of history, specially the history of our freedom movement depicting our cultural efforts as well as our determination to enrich our mother to gue. One of our aims must be to promote the all-round welfare of our-mother tongue. Bengali—which is the symbol of our national unity and of our common aspirations as well as the pride of our nation. We have to introduce such an education system that will broaden our national awareness and unity. To ensure national unity above group-consciousness, common syllabuses up to a certain level of education must be introduced.

(B) **Socialism:** A radical change in our economic system is necessary for the development of socialism. We should therefore aim at achieving a revolutionary change in our collective awareness. This must be determined to be one of the main aims of education. The primary condition in achieving a satisfactory transition to a socialistic society is the awakening of a sense of responsibility together with a consciousness of citizenship and its rights, from the view point of both society and state, to acquire the skills and knowledge necessary for individual as well as social welfare and to build a cooperative attitude in furtherance of our national and social advancement.

(C) Democracy: In a democratic society all citizens have equal rights and responsibilities. It is, however, necessary to lay down the limits of those rights and responsibilities. Every pupil must have a clear awareness of basic human rights of the real meaning of freedom and of how human dignity is determined in a democratic society. They must also be conversant with the concept of mutual respect on the part of individuals. We consider it necessary that our pupils should be taught the attributes of democracy through our education system.

(D) Secularism: The principle of secularism embodied in our constitution has ensured that all citizens irrespective of their religious persuasion will enjoy the same rights and privileges. The necessary attributes required for the promotion of common human welfare should be developed in consonance with this fundamental principle.

1.3. Humanism and World-Citizenship: For the sake of national welfare we must extend our hand of friendship to all people struggling for the establishment of a new society free from all exploitation. An attitude of respect for friendship and amity among nations and for human rights and dignity must be evolved. Our pupils must acquire not only knowledge and skills but also an abiding sense of moral values. We must see that they grow up to be virtuous citizens free from greed and dedicated to the welfare of their fellow human beings, and determined actively to resist any manifestation of injustice. Our educational institutions must assume a meaningful role in building the character of their pupils and in generating a sense of values in their minds.

1.4. Moral Character: It is necessary to create a favourable climate for this purpose through an appropriate curriculum and a proper academic atmosphere. Our teachers must also show honesty, impartiality, diligence and genuine sympathy for their pupils together with scholarship and competent teaching to set high standards of morality. A sense of unity must prevail in all educational institutions on the basis of mutual cooperation and respect between the students on the one hand and teachers and educational administrators on the other. We must make every endeavour at all levels of our education system to promote imagination, initiative and courage necessary for educational advancement and for the solution of educational problems.

1.5. Education as a weapon for social transformation: We must use education as a weapon to effect a fast social transformation and advancement in our long exploited society. In the interest of a socialistic and democratic society we must ensure the judicious use of our national genius through equal opportunities for education in accordance with the merit and inclination of a pupil. Our education system must be used as a medium for the utilisation of particular creative skills for the reconstruction of our individual and social lives. Simultaneously we must arrange for the development of vocational skills required for the creation of a democratic and progressive society. We must try to form a scientific as well as an idealistic attitude conducive to social development and able to destroy prejudices, mal-practices and corruption. For this purpose we must ensure that every citizen gets the right to education up to a certain minimum level.

1.6. Applied learning favourable to economic development:

Our education system has the responsibility for developing the competence and ability of our large manpower for our economic development and the total progress and welfare of our country.

Our country is among the poorest in the world and our standard of life is considerably lower than that of the developed countries. Our greatest interest as a nation is to strive ceaselessly to raise our standard of living. In the field of economic development education is a social investment, as economic development is connected with a skilled and dedicated manpower. The utilisation of national resources becomes possible when all sections of the populace have been educated. It is necessary to make education a matter of applied learning to accelerate this development. Our national resources will doubtless be enriched if our large manpower is enabled to acquire the manifold skills required for our modern society. But this has to be ensured through overall educational planning. Agricultural, scientific, technical, vocational and commercial training must be made meaningful and deep-based in order to introduce a modern scientific system in the field of agriculture making necessary modifications in the present system, to establish a close relationship between agriculture and industry and to make possible a new enterprise in the field of industry. In short, we must produce specialists having the necessary proficiency and competence to assume leadership and determined to make maximum possible use of local resources.

1.7. Our weakness as a nation is our disinclination to give appropriate value to physical and manual work. If we want to accelerate our economic development we must quickly remove this weakness. Hence it is important that our education system should lay special stress on manual work.

1.8. It can be stated in brief that for creating skilled manpower a synthesis between productive manual labour and mental work must be achieved through applied learning as well as a multipurpose education system—covering agriculture, science, arts, industry, technical education, medicine, commerce and teachers' training.

1.9. **Leadership and organisational powers, creativity and research:** The instinct for imitation and self-forgiveness and dependence of thought, so characteristic of slavery, must now be quickly removed to meet the challenge of independence. A proper emphasis has to be laid on free thought, creativity, leadership, and organisational powers in our new socialistic society. Understanding, analysis, curiosity, research and independent pursuit of truth and not merely unthinking collection of data must receive proper recognition in all our education system. For this purpose we need the democratisation of our overall education system and the methods of teaching together with a full awareness of the importance of the creativity and energy of youth.

1.10. We must try to make our whole education system as much dynamic as possible and capable of playing a useful role in social advancement, economic development and political progress. The same attention must therefore be paid to educational progress as to social, economic and political advancement.

THE AIMS AND GOAL OF EDUCATION

SUMMARY

An education system is a weapon for implementation of a nation's hopes and aspirations and for building a new society. The main responsibility and goal of our education system is to create an awareness among all sections of people about the requirements of life, to help develop an ability to solve various problems and to create an urge to establish a new socialistic society in consonance with the desires of the people. Moreover, we have to ensure the reflection of the four fundamental principles of state at all levels of education. After achieving a synthesis between the main principles of education and the four fundamental principles of state, the aims and goal of education in Bangladesh can be set forth as below :

Nationalism, socialism, democracy, secularism, patriotism and enlightened citizenship, humanism and world-citizenship, moral values, education as a weapon for social transformation, applied learning for economic development, proper respect for manual work, organisational and leadership qualities, creativity research and social progress, education for political and economic advancement.

CHAPTER 2

THE FORMATION OF CHARACTER AND PERSONALITY

2.1. The formation of a pupil's character is of central importance in every educational scheme. Any educational reform which fails to generate a sense of values relating to individual and national welfare among the common people as well as the teachers and students of Bangladesh must be reckoned to have failed in its main purpose.

2.2. Broadly speaking, the main constituent of personality is the individual's character. His truthfulness, his honesty, his sense of fairness, his impartiality, his sense of responsibility, his orderly behaviour and his readiness to give greater value to common rather than individual welfare,—all these qualities constitute his personality. The teacher must endeavour to implant these qualities among his pupils so that these are absorbed in their consciousness and automatically reflected in their thoughts and activities.

2.3. So the academic atmosphere, the curriculum and the methods of teaching should be such as to encourage the proper development of the character and personality of the pupils. Lifeless and drab surroundings are hardly conducive to a feeling of individual or national pride. To ensure that this pride is achieved, we must make the building, the furniture, the equipment and the other accessories of education clean and attractive though for economic reasons they may well be functional. There is very little effort or cost involved in keeping the campus and buildings clean, but its wholesome effect on the pupil's mentality and attitude is incalculable.

2.4. A long-term work-programme has to be accepted to include in the syllabuses, at all levels of education, material depicting the basic qualities of mankind—particularly self-sacrifice, memorable contributions to national progress or welfare and the lives of leading patriots. The ideal we have in mind will thus be highlighted before the pupils. One of the main aims of our education should be to train every pupil as a good citizen on the basis of nationalism, socialism, democracy and secularism. Material relating to these themes must invariably be included in syllabuses of literature, history, civics and economics.

2.5. A general sense of responsibility and honesty must be implanted in the mind of every pupil. For the realisation of this aim, students' clubs and organisations must be formed and encouraged to operate independently but under the general supervision of teachers to foster qualities of leadership and a willingness to assume responsibility. The teacher or teachers in charge should encourage the pupils under them to assume responsibility and explain the significance of their activities while tactfully supervising their work. Small funds should be allowed to be operated by the students under the guidance of teachers. Those who show special ability in operating such funds must be given special encouragement. Special stress should be laid on the pupil's sense of responsibility, self-confidence and self-respect. Moreover, where possible a situation has to be devised to test the pupil's honesty and his sense of responsibility. Besides, the introduction of an open library, with provision for lending and an honour code for the conduct of students, in a particular field may be tried.

2.6. Efforts must continue to develop social-consciousness among the pupils. Necessary material must be included in the routine of an educational institution to illustrate how our society operates, the facilities offered by society to every citizen and the methods of social-administration. It is necessary to bring the pupils in direct touch with different social organisations so that their social-consciousness may be strengthened and they may be encouraged to participate in social welfare.

2.7. The physical fitness and mental powers of every pupil must be fully developed and strengthened through sports and games at all levels of education. Thus he may be taught the value of discipline, order, co-operation, co-operative effort and honest leadership.

2.8. The role of educational institutions in the formation of a pupil's character is of crucial importance. But, without proper supervision, no educational institution can play this role effectively. An educational institution where the teacher-student ratio is unsatisfactory, where accommodation for students and equipment and accessories are inadequate, where supervision is weak and discipline lax must be satisfied with producing students of low calibre. We visualise an educational institution to be such a place where teachers and students not only work and study together but also set examples through their work of attention to details, of disciplined behaviour and of a disinterested concern for the welfare of others. The extent of success of an educational institution in regard to this will depend mainly on how much co-operation of the students, the head of the institution and his colleagues are able to gain. For the attainment of this goal, the teachers must be men of personality and devoted to their work. At the time of appointment of teachers, these qualities must be given due importance. All reasonable steps taken by heads of educational institutions and their colleagues to establish high standards of competence and to ensure hard work must receive the unstinted help and support of the relevant higher authorities.

2.9. The attitude of neglect and scorn shown by our educated community towards manual work has become a serious problem. We have therefore to create an awareness about the dignity of labour as well as a pride in it among all sections of people, specially the educated classes. For this purpose all pupils must be made to participate in some type of manual work. Of course, the nature and volume of manual work will vary according to the pupils' levels of physical fitness. To encourage, in addition to character, diligence and the ability to perform arduous work, a programme for field-work must be incorporated in our entire education system.

2.10. To implement the above programme it is essential to have a band of competent and inspired teachers and appropriate text books in consonance with the fundamental state principles and other related appliances.

2.11. It is, of course, not correct to assume that the development of a pupil's character and personality can be achieved only through an educational system or educational institutions. The home, the family and the society each plays a more crucial role in this task. But the effect of an educational institution and its environment can certainly be particularly fruitful in the formation and development of a pupil's character. In fact, this is a task which must be shared equally by the educational institution, the family and the larger society. Generally speaking, a child spends at least five whole years entirely with his family before going to school and so the moral atmosphere at home counts a great deal in these formative years. His basic habits and attitude are gradually

formed in the particular atmosphere of his home. As they grow up, the pupils are increasingly involved in social life. Here they come in contact with different persons and institutions, outside both home and school, and the ideals, the attitude and behaviour which they learn there become a part of their consciousness.

2.12. The importance of the example provided by parents and guardians in character development of their children and wards thus becomes clear. In our country, where more than eighty per cent of the populace is illiterate, it is indeed very difficult to realise the aim of making the majority of them educated or even literate. For quick results, the main aim of adult education must be to make the parents fully realise their responsibility and duties towards their children. If we are able to properly educate the parents and the guardians, their influence on their children and wards is bound to be wholesome. In basic education, special emphasis should be laid on cleanliness, the importance of regular eating and sleeping hours, the desirability of avoiding falsehood and making false promises discipline, truthfulness and civilised conduct. The parents should try to persuade their children to do minor household chores. They must also endeavour to explain why evil is harmful and thus encourage their children to desist from it and follow the path of righteousness. Affection, determination and example are, of course, more effective in this matter than threats and punishment. In this connexion we must remember that all these efforts to improve the pupil's character will be negated if dishonesty becomes a way of life with most of our people.

2.13. Every pupil must form a deep attachment to Bangladesh and realise fully the ideals of Bengali nationhood. He must feel a pride in national traditions, be enthusiastic about the present role of our nation, have full confidence in the future of Bangladesh and believe that he has a special responsibility in the matter of promoting the progress and development of his country. He must simultaneously discover his affinity with and love for, the world-community as well as develop an attitude of respect to world-citizenship, human rights and human dignity.

2.14. Every pupil must endeavour to become a good citizen. For his full development as a citizen he must be conscious not only of his rights but also Practice honesty, fairplay and impartiality as well as show a high sense of responsibility and duty. We must arrange for an education system suitable for the creation of relevant moral and spiritual values in the pupil's mind. Old moral rules and regulations taught in the traditional way will not serve the purpose; what is required is a set of attractive stories related to the actual experiences of the pupil and the particular circumstances of his life. Only thus he can be taught the value of good citizenship and a moral awareness implanted in him.

2.15. Appropriate schemes must be formulated and different efforts coordinated in order to develop a pupil's character in conformity with national welfare. The educational institution, the home and the society must work together if the above aim is to be realised. The educational institution must therefore have close contacts with the home and the society to ensure that one single influence may not strike a discordant note in the collective effort. In this perspective, it is of great importance that every educational institution should have a teacher-guardian association.

2.16. The teacher is at the heart of every effort to form and develop a pupil's character and personality. It is therefore necessary that the teacher must be fully aware of his crucial role. The teacher should direct his special attention

to this task as the formation of national character eventually depends on this. The teacher must therefore strive to be a model in conduct and behaviour, in knowledge and learning and in training and competence as well as show a continued concern for the development of his pupils as good citizens. All responsible citizens of Bangladesh must co-operate with the teachers in this task of supreme national importance.

THE FORMATION OF CHARACTER AND PERSONALITY

SUMMARY

1. The formation of a pupil's character and personality is of central importance in every educational scheme. Therefore the academic atmosphere, syllabuses and textbooks, methods of teaching and provision for sports and games at all levels of education must be such as to encourage the favourable development of a pupil's character and personality. The pupils must be made to realise the importance of and follow truthfulness, honesty, fairplay, impartiality, orderly conduct, duty and disinterested work for the country's welfare. (2.1-2.3.)

2. One of the main aims of our education should be to create an appropriate awareness in the pupil's mind about Bengali nationalism, socialism, democracy and secularism so that he can develop into a good citizen. Such themes and material must find a special place in the syllabuses of history, civics and economics. A general sense of responsibility and honesty must be created in the pupil's mind. For the attainment of this aim, pupils must be encouraged to start clubs and associations of limited functions and run them so that they get the necessary training for assuming a specific responsibility and for leadership: (2.4-2.5.)

3. Efforts must continue for developing social consciousness among the pupils. Necessary material should be incorporated in the daily routine of an educational institution to enable the pupil to understand how our society operates, what facilities society offers him and the principle of social administration. (2.6.)

4. Wide provision for sports and games must be made at every level of education to promote and develop the physical and mental skills of the pupils. Through sports and games the pupils must be made to realise the value of discipline, order, co-operation, co-operative effort and good leadership. (2.7.)

5. The role of an educational institution in the formation of character and personality of its pupils is of crucial importance. But, without proper supervision, no educational institution can play this role effectively. The success of an educational institution in playing this role will depend on the extent of co-operation between the teachers and the taught. The teachers have to be dutiful as well as men of personality to realise this aim. (2.9.)

6. A great defect of our educated community is its attitude of neglect and scorn towards manual work. We have to include forthwith material in our syllabuses designed to create a pride in manual work in the pupil's mind. For this purpose, all pupils must be made to participate in some type of manual work. (2.9.)

7. It is not correct to assume that the formation of a pupil's character and personality can be achieved only through an education system or educational institutions. The home, the family, and the society each eventually plays a more crucial role in this. So the parents and guardians must be made aware of their special responsibilities and the need to acquire at least basic education to be able to discharge these satisfactorily. In addition, all responsible citizens of Bangladesh must play an appropriate role in this matter. (2.10-2.15.)

8. The teacher's role in the formation of character and personality of his pupils is of very great importance. So he must be fully conscious of the crucial significance of this particular task. (2.16.)

CHAPTER 3

WORK EXPERIENCE

3.1. By work experience we usually mean participation in some productive work whether at school or at home or at farm or at factory or at any place connected with such work. The aim of work experience at an educational institution is to achieve a synthesis between work and learning. Work experience is not only a great weapon of education but it is also effective in removing the huge social gap that exists at the moment between mental activity and manual work.

3.2. Unfortunately, a distorted sense of values and an attitude of scorn towards manual work can still be found among our educated community as a result of the long-prevalent colonial and bookish education system which was bereft of all work experience. We must therefore see that our children learn to value manual work properly right from the beginning. For the realisation of this aim, the educational institution, the family and related social organisations must work in a concerted manner. We must so reconstruct our education system that from the primary to the university level an appropriate respect for manual work is formed in the pupils' mind through provision for work experience in the syllabuses as well as an urge to play an adequate role in social services and in increasing national production.

3.3. The educated community in our country the lightest type and those not engaged in manual work have to depend on others even for the smallest kind of manual work. This not only works against professional competence but also tends to create a particular class for certain types of work. This social practice is wholly unacceptable. The notion that one profession is inferior to another cannot at all be entertained. For compelling reasons different kinds of profession or business evolve in a society and the actual labour involved may also vary from one field to another. Naturally, some types of work are less attractive than others. In this age of technical and industrial expansion we must give equal respect and value to manual workers, technicians and labourers so that they become an inseparable part of a progressive people in a socialistic state.

3.4. We have to determine our goal of national education in consonance with our own ideals as well as the requirements of a modern and scientific age. Our educational institutions have to be made a fit instrument for achieving this goal. This can be partially achieved through provision of adequate facilities in the fields of technical and vocational education. The traditional attitude of our youth towards vocational types of work and eventually the common people's aversion to it can be thus hopefully overcome. We must include, at all levels of our education system, a special scheme for the acquirement of work experience. It is necessary to maintain and encourage the effort to acquire work experience at all levels of education, from the primary to the university.

3.5. The pupils at primary and secondary levels must participate in some type of manual work through a regular work-programme. In each case, the teachers must work with their pupils and supervise their activities. At the

primary level, provision must be made for light manual work so that the pupil's mental and emotional attitude to it is appropriately changed. The pupils must be taught to work in the school garden and to keep the school building in proper hygienic conditions.

3.6. Provision should also exist for college and university students to acquire work experience. During the long vacation they should be associated with various schemes of public utility. The majority of these students can acquire work experience specially during the summer vacation. There should be a provision for each of them to acquire work experience of at least three months during their college or university life. This work can be of different kinds; for example prevention of malaria, economic development, the removal of illiteracy, promotion of public health, etc. The girl students can participate in nursing, adult literacy and other activities of social development.

3.7. The responsibility for framing an appropriate scheme for manual work for the students must rest on school, college and university teachers. They will be required to make contacts with higher authorities and with planners at the national level. The proper educational authorities will examine and supervise this scheme and make necessary modifications in the light of their own experience.

3.8. For the proper implementation of work experience, we have to be specially careful about three things:

- (a) The gradual expansion of work experience at all levels of education through a broad-based work-scheme;
- (b) Provision for necessary facilities such as proper materials and instruments, and equipment and accessories, and above all;
- (c) Teacher-training.

3.9. The individual effort of an educational institution will not suffice for creation of a constructive attitude to manual work. Efforts have to be made simultaneously in other fields so that the wrong conception about manual work is removed. Those who work in offices and courts, in industrial concerns and other related organizations and those who have no scope for participation in manual work must also be enthused to take part in some development work outside their office-hours.

3.10. In order to increase the prestige of labourers with the common people, the farmer's contribution to economic and national development must be recognised and highlighted through news-papers, the radio and television. A proper atmosphere for the labourers must also be created in other ways. If we give proper value to the work of our labourers they will also come to realise the importance and value of others' work.

WORK EXPERIENCE

SUMMARY

(1) As a result of the prevalence of a bookish education system bereft of all work experience a distorted sense of values shunning manual work exists, among our educated community. Our educated people and those not engaged in manual work depend on others even for the lightest type of such work. Work experience is a great weapon of education and this can remove the huge gap that now exists between mental and manual work. So we must be careful to see that our children learn to give proper value to manual work from the very beginning. We must so reconstruct our education system that from the primary to the university level an appropriate respect for manual work is formed in the pupil's mind through provision for work experience in syllabuses as well as an urge to play an adequate role in social services and in increasing national production. (3.1.-3.6.)

(2) Responsibility for framing a scheme for work experience for the pupils must rest with school, college and university teachers. (3.7.)

(3) For proper implementation of work experience we have to be specially careful about three things:

- (a) Gradual expansion of work experience at every level of education through a broad-based work-scheme;
- (b) Provision for necessary facilities such as proper materials and instruments, and equipment and accessories and above all;
- (c) Teacher-training. (3.8.)

(4) Individual effort of an educational institution will not suffice for the creation of a constructive attitude to manual work, efforts have to be made simultaneously in other fields to remove the wrong conception about manual work.

CHAPTER 4

**MEDIUM OF INSTRUCTION AND PLACE OF FOREIGN LANGUAGES
IN OUR EDUCATION SYSTEM.**

4.1. The National Language is the embodiment of our national aspirations and of our culture. It is also a bridge between the past and the present and the main source of the emergence of nationalism. All sections of the country's population are able to feel, think and work through this medium. This is the most effective medium for achieving national cohesion, the symbol of national dignity and the chief weapon for the spread of knowledge and skills. It is only through the national language that the good results of the varied thinking, research and contribution of the country's distinguished thinkers and reformers can be made available to the common people. The instruction given through the national language is more readily intelligible and helps the pupils to develop more easily their natural intelligence, their original thinking and their imagination. Moreover books written in the national language help spread knowledge among the common people outside the class room. The importance of the national language in every education system is very great and the aim of education is to spread knowledge, to broaden cultural awareness and to create national cohesion. We must, therefore, use Bengali without delay as the medium of instruction at all levels of education to make our educational schemes successful. There is a clear Government directive about this and its urgent necessity is universally acknowledged.

4.2. Although Bengali is used as a medium of instruction at the lower levels of education, English to-day continues to be the medium of instruction at the higher levels as a result of the colonial education system still prevalent. This is an impediment for the pupils and has an adverse effect on their creative faculty. This system has created major drawbacks in the fields of science, technical education, commerce and agriculture. As a result, we have not been able to make any original contribution to the great fund of knowledge available in these fields. We have therefore to take more effective steps to use Bengali as the medium of instruction in the higher stage of education as well.

4.3. Class-instruction through the medium of Bengali and the use of Bengali in answering examination-questions can, we believe, be introduced readily at all levels of education. But we admit that the chief obstacle in this regard is the paucity of standard Bengali textbooks at the higher levels of education. We, therefore, urge Government to be more active about removing this want, specially at the higher stages of education and in the fields of science, medicine, technical education and professional and vocational education. The teachers concerned must also show a greater sincerity and eagerness to write original textbooks, and wherever necessary to translate into Bengali the appropriate textbooks written in foreign languages. In this connection the national institutions concerned should adopt a well-conceived scheme and implement it with the utmost despatch.

4.4. In this matter, we believe that there is considerable scope for improvement regarding instruction through Bengali. The foundation of language teaching is laid at the school level but the method of teaching languages, specially Bengali, in our classes, is highly defective and unscientific. As a result the pupils show lamentable ignorance in matters of pronunciation, spelling and syntax. The deficiency must be urgently removed.

4.5. Proper measures are taken in every country for the teaching of national language and literature. This should be applicable in the case of Bengali too. Bengali must remain a compulsory subject up to class XII.

4.6. To give due recognition to Bengali, our national language, does not mean the denial of utility of other languages in our national life. Even after the introduction of Bengali as the medium of instruction at all levels of education, the necessity for learning English as a second language will remain. In our opinion it is not necessary for our pupils to learn any language other than Bengali up to class V. One modern and developed foreign language must, however, be taught as a compulsory subject from class VI to the terminal class of the higher secondary stage of education. English, Arabic, Persian, Russian, Greek, Japanese and Chinese can each be this foreign language. But for historical reasons and for the sake of reality English will continue for the present as our second language.

4.7. In the modern world, English is undoubtedly the most important and the most widely spoken language. The pre-eminence of English in exchange of data and knowledge in the international field is unchallenged. The English language is being continuously enriched by the publication of innumerable books and quality journals embodying the latest findings in modern knowledge and research. The data published in other languages are also incorporated in English. English is at present extensively used in all the continents and widely used in trade and commerce, in industry and in diplomacy. The value of English as an international language cannot therefore be ignored.

4.8. We must ensure that our pupils are able to read and understand English books and journals at the higher stages of education by introducing English as a second compulsory language from class VI to the terminal class of the higher secondary stage. At this stage greater stress has to be laid on English as language rather than literature. English has to be learnt as a medium for exchange of ideas, and modern and scientific methods for its teaching must be introduced. The special application of the language and its phonetics have to be clearly learned, teachers must be well trained, modern textbooks have to be used and adequate provision made for modern appliances.

4.9. In honours and higher studies, at the college and university levels, the different departments may make provision according to need for the teaching of different languages. For example, in the departments of Bengali Language and Literature, Islamic Studies, and Comparative Religion, Sanskrit, Pali, Hindi, Arabic, Persian, etc., can be taught according to the requirements of the respective departments. For this purpose, every university should have a department of modern languages.

4.10. It is unnecessary to make the study of any particular foreign language compulsory at the university level. At this level the medium of instruction will of course be Bengali, but that does not mean that teachers and students should not read books or journals in any other language or languages. In fact, the pupils at this level must be able to develop the ability to read and understand books and journals in at least one modern foreign language in addition to their proficiency in their mother tongue. But all such knowledge must be expressed through their own mother tongue. This will ensure creative efforts on the part of the nation.

4.11. We must immediately establish an institute of modern languages in Bangladesh for the teaching of different languages required for the training of our diplomats, and for higher research. The most modern methods of teaching must be introduced in this institute for the proper discharge of its responsibilities. Books and journals in the fields of science, technical education and higher professional education must be plentifully available at this institute.

THE MEDIUM OF INSTRUCTION AND THE PLACE OF FOREIGN LANGUAGES IN OUR EDUCATION SYSTEM

SUMMARY

1. Instruction through the medium of the national language is more readily intelligible to the pupils and it helps them develop more easily their natural intelligence, their original thinking and their imagination. In addition, books written in the national language help spread knowledge among the common people outside the class room. The importance of the national language in every education system is very great and the main aim of education is to spread knowledge, to broaden cultural awareness and to create national cohesion. We must, therefore, use Bengali as the medium of instruction at all levels of education to make our educational schemes successful. (4.1.)

2. Bengali must be used as a compulsory language up to class XII. Text books at the higher stages of education, especially in the fields of science and technical, professional and vocational education must be written in Bengali and translated from foreign languages at Government expenditure. It is also necessary to improve the method of teaching Bengali. (4.2.—4.5.)

3. Even after the introduction of Bengali as the medium of instruction at all levels of education, the necessity will remain for English to be learnt as a compulsory second language. It is not necessary to learn any language other than Bengali up to class V. From classes VI to XII, however, a modern and developed foreign language must be learnt compulsorily. For historical reasons and for the sake of reality, English will continue as a second compulsory language. (4.6.—4.8.)

4. In honours and higher studies, at the college and university levels, different departments may make provision according to need for the teaching of different languages. (4.9.—4.10.)

5. For the teaching of different languages required for the training of our diplomats and for higher research, a modern institute of languages must be set up immediately in Bangladesh. (4.11.)

CHAPTER V.

TEACHER-STUDENT RATIO

5.1. The effectiveness of an educational institution is to a large extent dependent on its teacher-student ratio. Apart from class-room teaching the teacher has to devote some personal attention to each of his pupils. Through his overall supervision, the pupil has to be directed towards self-development and encouraged to achieve greater success, measures must be taken for the correction of his defects and deficiencies and records of his progress in studies maintained. A careful watch has to be kept even on his conduct and behaviour. It becomes impossible on the part of the teacher to satisfactorily discharge his onerous responsibilities if the number of students is excessive.

5.2. Let us consider the position of our primary schools in this perspective. At this level, the teacher-student ratio is approximately 1.47. It is moreover seen in almost every school in the rural areas that in class I only one teacher looks after 100—150 pupils. It is not at all possible for one single teacher to teach so many pupils. Even in primary schools in the urban areas, one can see 60—70 pupils crowding a class-room meant for not more than 40—45 pupils. The position at secondary schools is not so bad but in non-government schools, which constitute 98 per cent of the total, the teacher-student ratio varies from 1: 20 to 1: 50. The teacher-student ratio is highly unsatisfactory at non-government colleges which have to depend largely on student-fees and, therefore, are very liberal about admitting students but stingy regarding appointing an adequate number of teachers. There are many such colleges where the teacher-student ratio is nothing short of 1.100.

5.3. In practice there is variance even in developed countries about what should be the ideal teacher-student ratio at different educational institutions, but in such countries a special emphasis is laid on the desirability of fixing what should be the highest teacher-student ratio.

5.4. All efforts to accelerate our educational development will be frustrated if the teacher-student ratio is not reasonably fixed at our educational institutions. Of course, the 'desirable ratio' cannot be achieved within a short time in the context of our present circumstances. The necessary number of qualified teachers will not be available at once and moreover our limited resources will not permit any such ambitious undertaking. For this reason we recommend that the teacher-student ratio be improved as much as possible in all educational institutions under the first five-year plan. This will be a practical step towards the realization of the 'desirable ratio'.

5.5. Below is given the existing teacher-student ratio, the 'desirable ratio' and the proposed ratio under the First Five-year Plan at all levels of education:

Level of Education.	The existing teacher-student ratio.	The desirable teacher-student ratio.	Proposed ratio under 1st 5-year Plan.
1	2	3	4
1. Primary	1.45-1.50	1.35	1.40
2. Govt. Secondary Schools	[1.20-1.30]	1.20	1.25
Non-Govt. Schools			
Vocational Courses:		1.20	1.25
3. Technical Diploma Course.	1.15	1.15	1.20
4. Colleges: Government	1.25-1.35	Intermediate Courses 1.30	1.35
Non-Government	1.50-1.100	Pass subsidiary Course. 1.25	1.30
		Honours course 1.15	1.20
		Post graduate Course 1.10	1.15
5. Universities:	(a) General: Approx. 1.25	Approx. 1.15 Subsidiary 1.25 Honours 1.15 Post graduate 1.10 Post-graduate Research 1.5	Approx. 1.20 1.30 1.30 1.1 4.
	(b) Engineering and Technological 1.10	1.10	1.10
	(c) Agriculture: 1.10	1.10	1
	(d) Medical	1.10	1.10

5.6. Before determining the number of teachers required for any department at the college or the university level and applying the above teacher-student ratio, some correction has to be made in the number of students of honours and subsidiary/pass course as the first and second year students of such a course spend only one-third of their time in that department. In such cases, the corrected enrolment for the purpose of determining teacher-student ratio should be one-third of the total number of first and second year students in the honours and subsidiary/pass course of the department concerned.

TEACHER-STUDENT RATIO**SUMMARY**

The effectiveness of an educational institution depends to a large extent on its teacher-student ratio. The teacher-student ratio in our educational institutions is not satisfactory. All efforts to accelerate our educational development will be frustrated if the teacher-student ratio is not adequately raised. The teacher-student ratio should be improved as much as possible in all educational institutions under the second five-year plan to make possible the realization of the 'desirable ratio' in subsequent five-year plans. (5.1.-5.6.)

CHAPTER VI

PRE-PRIMARY EDUCATION

6.1. The first five years of a child's life have a special importance. Psychologists have termed this period as the formative years of a man's life. In their opinion the physical habits and the mental and social behaviour of the child begin to assume a particular pattern during these years. The future of the child is later determined in relation to his environment at this stage. It is for this reason that the environment and the supervision with which the child gets familiar at the first stage of his life, have an enduring and crucial effect on the growth of his personality and the development of his intelligence.

6.2. The ideal arrangement is to create an appropriate environment for the child in close proximity to his parents and having the benefit of the care and affection of his family. But as this does not become possible in many cases, there is provision for different schools in the developed countries of the world for infants from one to five years old. The schools are of two types: the first cater to the needs of infants from a few months after their birth up to three years and the second are meant for children between three to five years of age. For teaching and supervision at both these levels, women are definitely more suitable than men. For this, the greatest single need is trained female teachers who can create a feeling of security through affection in the minds of infants under their care and can direct their impish energy into a desirable channel.

6.3. The aims of the first stage of pre-primary education are: (a) to lay the foundation for the formation of the child personality and ideals in later life, (b) to create the necessary habits for the child through sports and games and other pleasurable activities, (c) to foster the child's physical, mental and moral well-being and (d) to train him for his future orderly and well coordinated social activities. The object of the second stage of pre-primary education is to prepare the child for reading, to make him familiar with figures and to help him judge what is right and wrong before he enters primary school.

6.4. The most important of the aims mentioned above is of course the care of the child and making him feel secure. Regular eating-hours, periods of rest, sports and games, etc., will produce the necessary habits and behaviour in conformity with the requirements of society. It is further necessary to make the child self-reliant through teaching music, nursery rhyme, Bengali alphabet and counting, drawing of pictures, proper wearing of clothes and telling him how to eat—in addition to the normal work-load—for the full implementation of the aims of nursery schools.

6.5. The female teachers at the pre-primary stage must be properly trained in accordance with the importance of this formative period in a child's life. Those who will take up this work must have passed at least the secondary school certificate examination and obtained one year's training.

6.6. At least the following subjects must be included in their training: practical knowledge of the methods of teaching children, child psychology, literature for children, the physical and mental health of children, nutrition, first aid, music, sports and games, drawing and hand-embroidery. Besides,

these teachers must be trained in nursing so that they can use scientific data in their work of child-care in conformity with the gradual development of a child's personality. In order to be successful in their work, the female teachers have to be affectionate, hard-working, patient and enthusiastic in addition to having proper educational qualifications and professional competence. Those who will be able to show an attachment for teaching and demonstrate the above qualities should be judged fit for being admitted to this training course.

6.7. Nursery schools and kindergartens must be established in our country in required numbers for pre-primary education. In cities and industrial areas both parents in many families have to work for a living. As a result, the children in such families stand the risk of being left uncared for and living a miserable life. Later the undesirable effects of this unfavourable environment are seen in the life of many such children. To counter this, we have to set up kindergartens in required numbers in our cities and industrial areas, in accordance with the particular needs of our labour-force.

The responsibility of the child's mental, social and physical welfare rests in many developed countries of the world jointly with the education, public health and social welfare departments. In our country the special responsibility for pre-primary education can be entrusted to the local self-government department or jointly to public health, social welfare and family planning departments. In industrial areas the full responsibility for pre-primary education including the establishment of nursery schools and kindergartens and their administrative and financial management must rest with the industrial organisation concerned. In urban and rural areas, according to necessities, the primary responsibility for the establishment and management of such institutions will developed on the local population. Later, the public health, social welfare and family planning departments, the agricultural department, the local self-government department and autonomous bodies can come forward with help and assistance for the proper functioning of these institutions.

6.9. To meet local needs an infant-section can be opened in a primary school for this purpose under the patronage and management of local inhabitants.

6.10. It will be necessary to establish a Research Institute for Child Education. The aim of this Institute will be to introduce scientific methods for the teaching of children after conducting necessary research regarding child psychology and child-education. As long as it is not possible to set up this Institute, a children's department may be opened in the proposed Academy for Primary Education.

PRE-PRIMARY EDUCATION**SUMMARY**

1. The first five years in a child's life are of special importance. The environment in which the child receives his education in his first stage of life and the quality of supervision both have an enduring and crucial effect on the growth of his personality and the development of his intelligence. The ideal arrangement is to create an appropriate environment for the child in close proximity to his parents and having the benefit of the care and affection of his family. But as this does not become possible in many cases, nursery schools and kindergartens are set up in many developed countries of the world for the proper care and education of children up to five years old. The aim of these institutions is to lay the foundation for the formation of the child's habits, ideals and personality and to foster his physical, mental and moral welfare. A further aim of the institution at the second stage of pre-primary education is to prepare the child for reading, to make him familiar with counting and to help him develop the ability to judge what is right and wrong before he enters primary school. Instruction continues in such institutions through sports and games and other pleasurable activities. For this, the vital requirement is properly trained teachers able to divert the child's impish energy into a desirable channel and to make him feel secure. (6.1—6.6.)

2. We must set up nursery schools and kindergartens in required numbers in our country for pre-primary education. Kindergartens have to be established in cities and industrial areas in accordance with the particular requirements of our labour-force. An infant-section may also be opened for this purpose in a primary school under the patronage and supervision of the local inhabitants. (6.7.—6.9.)

3. It will be necessary to establish an Institute of Research for Child-Education for introduction of scientific methods of child-instruction after conducting necessary research in child-psychology and child-education. As long as it is not possible to set up this Institute, a children's section may be opened in the proposed Academy of Primary Education. (6.10).

CHAPTER VII

PRIMARY EDUCATION

7.1. A well-structured and dynamic system of primary education is one of the ways in which the all-round development of our people and the consequential progress and prosperity of our country can be achieved. This system will lay the necessary foundation for all later stages of education. It is not possible to strengthen the higher stage of education on a weak base.

7.2. The main aims of primary education are: (a) the development of the child's whole personality—moral, mental, physical and social, (b) to awaken patriotism and a feeling for good citizenship and to develop such qualities as perseverance, diligence, good conduct and devotion to justice, (c) to help the child to read and write in his vernacular and maintain basic accounts and, in addition, to make him familiar with the fundamentals of knowledge and with skills which he will require as a future citizen and (d) to prepare him for acquiring higher education.

7.3. Primary education has been greatly neglected in the past. As a result, a miserable situation now exists at this stage and there is widespread educational waste. The special problems which our primary schools face at present are: (a) the want of a realistic and life-centred educational programme, (b) the paucity of properly trained and enterprising teachers, (c) the want of classroom accommodation, (d) the non-availability of well-written and attractive text books and (e) the short supply of necessary items of furniture, educational appliances, sports-goods and library books.

7.4. If we want to educate our populace for a constructive role in national development, universal and compulsory primary education is essential. This compulsory education must be of such a nature as to enable the pupil to make proper use later of the opportunities and facilities available to a free citizen as well as to discharge satisfactorily his responsibilities as a citizen. Compulsory education of 8 to 12 years' duration is current in the developed countries of the world. The present system of primary education, of five years' duration, is not fitted to make a responsible citizen or to develop his personality, for five years is too short a period to awaken the necessary awareness in the pupil's mind about basic knowledge and to make him familiar with the fundamental requirements of an effective education. We are of the opinion that this aim cannot be realised if primary education is of less than 8 years duration; nor will it be possible to lay the foundation for the vocational course after class eight which we have recommended. The duration of 8 years is essential for attaining the attributes of a good citizen. Any duration less than this and any scheme of primary education not related to our life and special conditions will not enable us to use our education as a weapon for our country's social transformation and economic progress, in view of the rapid spread of knowledge and learning in the modern world. We therefore recommend that primary education be made universal and the duration raised to eight years from the present five years. The universality of primary education cannot be maintained unless it is made both free and compulsory.

7.5. We recommend that the free primary education now prevalent from class I to class V should be made compulsory by 1980 and free and compulsory education up to class VIII should be introduced by 1983. For this, primary education at class I should be made compulsory by January 1976 and it should be made both compulsory and free wherever primary education has not been introduced so far. Government should complete the preliminaries in this connection by December, 1976. Primary education at class II should be made free and compulsory in 1977, at class III, in 1978 and primary education must be made free and compulsory gradually up to class VIII so that it might be made universal by 1983. For the effective implementation of this scheme, necessary measures should be taken to recruit competent teachers in required numbers, to open new schools wherever necessary and to make provision for text books and other educational appliances and accessories. Schooling for six million additional children between 5 to 10 years of age should be arranged between 1976 and 1980. At present the number of children at school at this stage is a little over seven million. It is possible to make arrangement for the schooling of the additional children indicated above by opening 10 thousand primary schools and by introducing an additional shift in at least 15 thousand existing primary schools. Simultaneously, as preparation for raising primary education to a duration of eight years and making it universal, three additional classes, i.e. class VI, class VII and class VIII, must be opened in at least 10 thousand existing primary schools and a second shift introduced (as long as the required number of schools are not constructed) in two thousand high or junior high schools. This will provide schooling for an additional one and quarter million pupils. The present enrolment in classes VI, VII and VIII stands at a little less than a half million and the total number of children of this age-group is six million (see index regarding educational statistics).

7.6. For economic reasons most of the children in our country, between five and thirteen years of age, are required to undertake some responsibility for earning money. As a result many are unable to go to school and those who go to school do not stay there long. If we wish to make primary education compulsory we must arrange for night-schools in consideration of the real difficulties of such families. Children of up to 15 years of age can be taught in such night-schools.

7.7. The number of girls at the existing primary school, is only one-third of the total enrolment. This is a very discouraging ratio. Girls should be encouraged to go to school in far larger numbers. Female teachers have to be appointed in co-educational schools and priority should be given according to need for opening of girl's schools. The minimum educational and other qualifications can be somewhat relaxed while appointing female teachers. The proposed vocational course for teacher-training mentioned in the chapter on secondary education will encourage women to adopt teaching as their profession in larger numbers.

7.8. Two-thirds of the children enrolled at class one leave school before class III and gradually become illiterate. Effective steps must be taken to arrest this huge waste. In addition to making primary education compulsory, the syllabuses and the surroundings of schools have to be made sufficiently attractive. Adult literacy will also help check this waste. For the guardians getting the benefit of adult literacy will naturally realise the importance of education and become active in sending their children to school.

7.9. A far-reaching reconstruction of the syllabuses of primary education in consonance with the actual environment of daily life, the requirements of society,

the pupil's physical and mental powers as well as his inclinations is necessary. Education from class I to class VIII must be related to work-experience and practical application of knowledge should receive greater attention than merely bookish knowledge. From class I to class VIII a scientific and common education system based on the kind of syllabus indicated above must be introduced throughout the country at Government expenditure. Opportunities for minor-variations according to need may exist within the basic structure. A universal and common education system has to be introduced by 1980 by removing all basic differences in the present system of primary education. Below some idea is given about the subjects to be read and the weekly periods.

7.10. The syllabus and subjects at the primary level:—

SUBJECTS TO BE READ	Weekly Periods :				
	Classes	Classes	Class	Class	Classes
	I & II	III & IV	V	VI	VII & VIII
1. Bengali	10	9	8	7	6
2. Mathematics	6	6	6	6	6
3. History .. ..	..	2	2	2	3
4. Geography .. ..	..	2	2	2	3
5. Science :					
(a) Nature Studies, Agricultural Science & Nutrition.	..	3	3	2	1
(b) Biology ... ..	..	..	2	2	2
(c) Physics ... ..	..	..	..	2	2
(d) Chemistry ... ..	..	..	..	2	2
6. Second Language .. ..	..	..	..	3	3
7. Physical Education and Sports	5	4	4	3	3
8. Vocal and Instrumental Music	2	2	2	1	1
9. Painting	2	2	2	2	2
10. Religious or Moral Instruction.	2	3	3	2	2
11. Manual Work (gardening, cleanliness of the school building, toy-making, making of clay-models, wood-work, weaving, binding, cane and bamboo handicrafts, dyeing, sawing, poultry farming, soap-making, plastic-work, etc).	2	3	3	3	3
12. Agricultural Extension Work : Both male and female pupils from class III to class VIII must participate in this work. They should plant improved seeds of grain and fruit-seeds in their own compound and arrange a school-exhibition at every season.					
Total number of periods :	27	33	34	39	39

A detailed list of text-books has to be prepared by the curriculum and syllabus committee. Civics must be included in the syllabus of history.

7.11. The greatest need for the success of primary education is the required number of properly trained teachers. For this reason, teacher-training institutions in our country have to be largely extended. For teaching at the primary stage, specially from class I to class V, female teachers should be preferably appointed. Necessary initiative must be taken to ensure that properly-qualified women take up this profession in larger numbers.

7.12. Another important consideration is the writing of appropriate text-books in relation to a realistic and dynamic curriculum. The text-books at this stage must reflect the four fundamental principles of our State.

7.13. An Academy of Primary Education and a National Board for Primary Education have to be set up for collection of necessary data, for research and evaluation and for co-ordinating different efforts to extend and improve primary education. We have discussed this in some detail in the chapter on teacher-training.

PRIMARY EDUCATION

SUMMARY

1. A universal education scheme is necessary for educating our populace so that they can play an effective role in national activities and in the country's development. This compulsory education must be of such a nature as to enable the pupil to make proper use later of the opportunities and facilities available to a free citizen as well as discharge satisfactorily his responsibilities as a citizen. The present system of Primary Education, of five years' duration, is not fitted to make a responsible citizen or to develop his personality, for five years is too short a period to awaken the necessary awareness in the pupil's mind about basic knowledge and to make him familiar with the fundamental requirements of an effective education. We are of the opinion that this aim cannot be realised if primary education is of less than 8 years' duration. The duration of 8 years is essential for attaining the attributes of a good citizen. Any duration less than this and any scheme of primary education not related to our life and special conditions will not enable us to use our education as a weapon for our country's social transformation and economic progress, in view of the rapid spread of knowledge and learning in the modern world. Compulsory education of 8 to 12 years' duration is current, in the developed countries of the world. In Bangladesh therefore—(a) the duration of primary education must be raised from the present five years to eight years and it must be made universal, (b) free education that is now prevalent from class I to class V must be made compulsory by 1980 and compulsory education up to class VIII must be introduced by 1983 and (c) the required number of competent teachers have to be recruited and provision made for text books and other educational appliances and for additional facilities for schooling. (7.1.—7.5.)

2. For economic reasons most of the children in our country between 5 and 13 years of age are required to undertake some responsibility for earning money and hence many of them are unable to go to school. If education has to be made compulsory for them, night schools have to be opened according to need. (7.6.)

3. To attract a larger number of girl students female teachers have to be appointed at the primary level and separate schools for girls opened if required. (7.7.)

4. To be able to retain the pupils at primary schools, the syllabus and the surroundings of schools have to be made sufficiently attractive in addition to making primary education compulsory. (7.8.)

5. A far reaching re-construction of the syllabuses of primary education—in consonance with the actual environment of daily life, the requirements of society, the pupil's physical and mental powers as well as his inclinations is necessary. Education from class I to class VIII must be related to work-experience and practical application of knowledge should receive greater attention than merely bookish knowledge. From class I to class VIII, a scientific and common education system based on the kind of syllabus indicated above must be introduced throughout the country at Government expenditure. Opportunities for minor variations according to need can exist within the basic structure. (7.9.)

6. The greatest need for the success of primary education is the required number of properly trained teachers. For this teacher-training institutions have to be largely extended. (7-11.)

7. Another important consideration is the writing of text-books in relation to a realistic dynamic curriculum. (7.12.)

8. An Academy of Primary Education and a National Board for Primary Education have to be set up for collection, of necessary data, for research and evaluation and for co-ordinating different efforts to extend and improve primary education. We have discussed this in some detail in the chapter on teacher-training. (7-13.)

CHAPTER VIII

SECONDARY EDUCATION

8.1. The stage of education after primary education and immediately preceding college education is known as secondary education. Secondary education is the second stage in our educational structure. Secondary education mainly caters for adolescents.

8.2. The general aims of secondary education are: (a) to expand and consolidate the basic education given at the primary stage, (b) to develop a progressive and honest personality committed to a purposeful and well balanced life, (c) to supply the required skilled and conscientious manpower necessary to accelerate the country's economic development and (d) to prepare meritorious pupils for higher education according to their merit and inclinations.

8.3. In the organisation of the secondary school stage, the stage between class IX and class XI/XII can be regarded as the secondary stage. The stage from class I to class VIII falls under primary education. In order to maintain close links between the instruction levels of class IX to class XI/XII, and to ensure the evenness in secondary education as a whole, it is desirable to have provision for instruction in these three/four classes in the educational institutions which already teach up to class VIII. If we intend to make secondary education self-contained and a terminal stage in our education system, it is essential that co-ordination be achieved in the instruction programmes of all classes at this level. To create opportunities for the instruction of pupils, belonging more or less to the same age-group, in the same educational environment is in accord with educational psychology. Unfortunately no such environment exists at present in the Intermediate Colleges having only classes XI and XII. The pupils at Intermediate Colleges look upon their education there as something temporary and therefore their mental commitment to such colleges is never very strong. To counter this, it is necessary for classes IX and X to be opened in present Intermediate Colleges instead of their being indiscriminately raised to the degree level. This will simultaneously meet the need for commitment on the part of the pupils and also effect considerable economy as otherwise a large number of secondary schools have to be opened to meet the great pressure of pupils at the secondary stage.

8.4. It is desirable to have the environment of the pupils, their way of living, local economic activities and all matters connected with entering their future professions reflected in the syllabus at the secondary stage, in view of the present condition of our country. For only a little less than a million pupils between 14 and 17 years of age annually leave school between classes IX and XII for various reasons and are thrown back on society without getting any training necessary to earn a particular living. As a result, most of them feel frustrated and cannot play an effective role in social life because of a very disturbed mind. This is a very harmful situation for any country.

8.5. The secondary stage must be regarded as the terminal stage of education for most of the pupils and a preparatory stage for the meritorious few for higher education. The terminal stage of vocational education should be generally class XI and only general education should be extended up to

class XII. For this purpose, education should be divided into two main categories after class IX : (a) vocational education and (b) general education. In conformity with the first two aims of secondary education stated in para two of this chapter, some subjects must be compulsorily included in the syllabus of both these categories (vocational and general education) in classes IX and X. In addition to the compulsory subjects, the pupils will have a free choice of optional subjects. At the end of class X pupils in both the categories will take a public examination and get certificates as due. The pupils choosing general education can opt for any of the varied general courses meant for classes XI and XII and will qualify for higher education after having completed the courses at class XII. The pupils following the general type of education will take a public examination at the end of class XII and get certificates as due. On the other hand the pupils following the vocational type of education can take a special training in class XI in a course connected with their courses in classes IX and X and thus complete their vocational education. After this training, they will take a public examination and get certificates as due. Provision should be made for an apprentice course in industries for those pupils who would like to enter factories and industrial concerns as skilled workers at the end of the vocational course in class X. At the end of the terminal stage of education, these pupils will be able to enter the world of employment as skilled, efficient and conscientious workers and at the same time achieve success in their personal lives as well as play an effective role in the economic advancement of their country. But if any pupil is keen on receiving higher education in any particular vocational course or courses after having completed the vocational course at class X or at class XI, he will get facilities for such education in select educational institutions. Higher general education will also remain open for such pupils. They can enter class XI in that category of courses, among the varied general courses, which is related to the particular type of vocational education which they have received. If they want to continue their general education after that, their training in class XI will be regarded as additional training. Our aim in the first five-year plan should be to attract 20 per cent of our pupils at the end of class VIII to the vocational type of education. In the subsequent five-year plans this ratio must be raised to at least 50 per cent.

Vocational Education :

3.6. Vocational education at this stage of secondary education will be usually terminal. We have therefore recommended special training in class XI after completion of vocational courses at classes IX and X. This special training will be determined in accordance with the needs of the employing agencies and requirements of the country's development work. We have already mentioned that most of the pupils will enter their professional careers as manpower of middle level at the end of this terminal education. The proposed vocational training can benefit society in still another way. In order to make partially-trained manpower and the unemployed youth educated in general courses fit for employment, the facilities of this special vocational training should be made available to them outside the school routine. This will of course involve some additional expenditure but it is something negligible in relation to the larger interests it will serve. It is not an easy task to make due provision for employment for all passing out of this terminal stage of education or getting the benefit of the special vocational training. It is to be hoped that many of them will be able to find employment through their own efforts. This of course requires some capital. Considering the general

poverty of our people, we have to provide for capital-loan on easy terms through a well-conceived scheme or set up co-operatives according to need and on a regional basis to utilize their skills. If Government helps them in these two matters, many of them will be encouraged to apply their own vocational skills and to find their own employment instead of looking for jobs.

8.7. To help spread vocational education and to popularise it we should start a 'Earn while you learn' scheme as in India. Provision should exist for the popularisation of this scheme. The necessary appliances have to be supplied to schools and the required expenditure jointly shared by government and school authorities, and a revolving fund has to be provided in every school for the purchase of raw materials and contingent expenditure. There should be a separate record for every pupil, from class IX to class XI, of the volume and quality of his work so that the profit can be equitably distributed among them. A sale-centre has to be opened under a marketing officer for the marketing of the finished goods. Government will, moreover, give necessary directives to government and semi-government institutions for the patronage of these goods.

8.8. The syllabus for vocational education may be as follows:

Subjects to be taught.	Classes IX and X.		Class IX.	
	Marks.	Weekly periods.	Marks.	Weekly periods.
1. Bengali ..	200	8		
2. Mathematics ..	100	4		
3. General Science ..	100	4		
4. English ...	100	5		
5. Vocational courses	500	18	500	38
Total ...	1,000	39	500	38
Physical Education and sports and games.	Must participate regularly.		Must participate regularly.	
Participation in social and developmental work.	Compulsory sixty hours in a year.		Compulsory sixty hours in a year.	

8.9. Vocational courses

- | | |
|---|------------------------------|
| 1. Type-writing and Stenography. | 7. Woodwork. |
| 2. Book-keeping. | 8. Metal work. |
| 3. Salesmanship and commercial methods. | 9. Electrical work. |
| 4. Teacher-training. | 10. Machine work. |
| 5. Library-assistant training. | 11. Foundry work. |
| 6. Bookbinding. | 12. Repairing of motor-cars. |

- | | |
|--|--|
| 13. Radio-repairing. | 28. Paramedical. |
| 14. House-repair-including plumbing and use of machinery. | 29. Religious instruction. |
| 15. Draughtsmanship. | 30. Drawing and Painting. |
| 16. Agricultural science: production and conservation of grains. | 31. Vocal music. |
| 17. Pisciculture. | 32. Instrumental music. |
| 18. Poultry-farming and Rearing of cattle. | 33. Dancing. |
| 19. Food preservation and Nutrition. | 34. Acting and Recitation. |
| 20. Leather-work. | 35. Cane and Bamboo-work. |
| 21. Graphic Arts. | 36. Toymaking. |
| 22. Printing. | 37. Plastic Arts. |
| 23. Claywork. | 38. Soap-making. |
| 24. Weaving. | 39. Catering and Hotel-management. |
| 25. Embroidery. | 40. Electroplating and Metal-sheet work. |
| 26. Dyeing and printing of clothes. | 41. Hair dressing. |
| 27. Nursing. | |

The proposed curriculum and syllabus committee will determine the detailed curriculum and syllabuses of vocational courses. The duration of these courses (class IX, X and XI) will be generally three years. If the curriculum and syllabus committee feel that any particular course can be completed in two years or should be extended to four years, they will be free to give such directives provided the main aim is not hampered. The curriculum committee can also propose other vocational courses in addition to those shown above.

Those pupils choosing a science-based vocational course (for example: agricultural, nursing, paramedical, electrical and mechanical) can read the elements of science included in their own courses instead of reading general science separately. For them the total marks of vocational courses will be six hundred.

Effective steps must be taken by local authorities and government in conjunction to introduce one or more vocational courses, according to the particular environment obtaining, in most of the secondary schools of our country. Vocational courses comprising electrical work, wood-work, machine-work and draughtsmanship can easily be introduced in classes IX to XI in the existing 35 vocational institutes under the Directorate of Technical Education. Their present training-courses are not much popular.

General Education

8.10. General education at the secondary stage is meant to be a preparation for higher education. The duration of this education will be four years extending from class IX to class XII. Every pupil must learn five to six compulsory subjects at this stage in classes IX and X. In addition, he must choose two or three more optional subjects and one vocational subject from among the subjects listed below. Provision has been made for the vocational course in order to inculcate an attitude of respect in the pupils' mind towards manual work.

All pupils will take a public examination at the end of class X and get certificates as due. After having completed class X and before entering class XI, each pupil must select a particular course, from among the varied general courses, according to his future educational plans. In classes XI and XII all pupils must read four subjects in addition to Bengali and English. At the end of class XII, they will take a public examination and get certificates as due.

They must regularly participate in physical education and sports and games and must be compulsorily associated with social and development work for sixty hours in a year.

DEPARTMENT OF SCIENCE

8.11. The curriculum of general education may be as follows :

Classes IX and X			Classes XI and XII		
Subject to be taught.	Marks.	Weekly periods.	Subject to be taught.	Marks.	Weekly period.
1. Bengali ..	200	8	1. Bengali	200	8
2. English ..	100	4	2. English	100	5
3. Mathematics ...	100	4			
4. Physics ..	100	4			
5. Chemistry ...	100	4			
6. Optional Subjects (three subjects).	300	12	3. Optional subjects.	300	26
7. Vocational-subjects (one subject)	100	3			
Total ...	1,000	39		1,100	39

Classes IX and X

Optional subjects: Additional Mathematics, Biology, Geometric or Technical drawing Astronomy or Meteorology, Nutrition, Home-Management. Dresses and Clothes, Agricultural Science, Animal Husbandry, Geography, Elements of Economics or History or Civics.

Vocational subjects: Type-writing and Stenography, Agricultural work, Wood-work, Electrical work, Weaving, Blacksmith's work, Book-Binding, Bamboo and Cane work, Clay-work, Sewing, Toy-making, etc.

Classes XI and XII

Optional subjects: 1. Mathematics, 2. Physics, 3. Chemistry, 4. Biology, 5. Psychology, 6. Geography, 7. Astronomy, 8. Meteorology, 9. Economics, 10. Statistics, 11. Technical Drawing and Work-Shop Practice, 12. Military Science or Hygiene or Anatomy.

DEPARTMENT OF COMMERCE

Subjects to be taught.	Marks.	Weekly periods.	Subjects to be taught.	Marks.	Weekly periods.
1. Bengali ..	200	8	1. Bengali	200	8
2. English ...	100	4	2. English	109	5
3. Mathematics	100	4			
4. General Science	100	4			
5. Geography ..	100	4			
6. Optional subjects (three subjects).	300	12	3. Optional subjects (four subjects)	800	26
7. Vocational S. b. (one subject).	100	3			
Total ...	<u>1,000</u>	<u>39</u>		<u>1,100</u>	<u>39</u>

Classes IX and X

Optional subjects: Business Methods and Commercial Writing, Commercial Arithmetic and Accounting, Type-writing and Stenography, Commercial Geography, or Elements of Economics or History or Civics.

Vocational subjects: Agricultural Work, Wood-Work, Electrical Work, Weaving, Blacksmith's work, Book-binding, Bamboo and Cane work, Clay Work, Sewing, Toy-Making, etc.

Classes XI and XII

Optional subjects: 1. Business Methods and Commercial Writing, 2. Commercial Arithmetic and Accounting, 3. Banking, 4. Commercial Geography, 5. Type-writing and Stenography, 6. Economics, 7. Mathematics, 8. Management of Office and Files.

DEPARTMENT OF ARTS

Classes IX and X			Classes XI and XII		
Subject to be taught.	Marks.	Weekly periods.	Subject to be taught.	Marks.	Weekly periods.
1. Bengali ...	200	8	1. Bengali	200	8
2. English ...	100	4	2. English	100	5
3. Mathematics ..	100	4			
4. General Science.	100	4			
5. History ...	100	4			
6. Geography —	100	4			
7. Optional Subjects (two subjects).	200	8	3. Optional subjects (four subjects)	800	26
8. Vocational Subjects (one subject).	100	3			
Total ..	<u>1,000</u>	<u>39</u>		<u>1,100</u>	<u>39</u>

Classes IX and X

Optional subjects: Bengali (Advanced), English (Advanced), History of Civilisation, Vocal Music and Instrumental Music, Fine Arts, Arabic, Sanskrit, Pali, Persian, etc., A Modern language. Elements of Economics, Civics, Religious Instruction, Easy Domestic Science, Hygiene and Anatomy, Additional Mathematics.

Vocational subjects: Type-writing and Stenography, Agricultural work, Woodwork, Electrical work, Weaving, Blacksmith's work, Book-Binding, Bamboo and Cane Work, Clay Work, Sewing, Toy-Making, etc.,

Classes XI and XII

Optional subjects: 1. Bengali (Advanced), 2. English (Advanced), 3. History/Islamic History, 4. Home Economics, 5. Geography, 6. Economics, 7. Civics, 8. Mathematics, 9. A Modern Language, 10. Arabic, Persian, Sanskrit, Pali, etc., 11. Psychology, 12. Statistics, 13. Logic, 14. Social Science or 15. Social Welfare, 16. Military Science, 17. Music, 18. Mathematics.

Department of Agriculture, Department of Home, Economics, Department of Fine Arts, Department of Education and Department of Religious Instruction:

Classes XI and XII

Subjects to be taught.	Marks.	Weekly periods.
1. Bengali	200	8
2. English	100	5
3. Optional subjects (four subjects)	800	26
Total	1,100	39

Classes XI and XII

Department of Agriculture: Optional subjects 1. Agricultural Science, 2. Physics, 3. Chemistry, 4. Mathematics, 5. Biology, 6. Soil Science.

Department of Home Economics: Optional subjects 1. General Science, 2. Dresses and Clothes, 3. Home Management and Domestic Life, 4. Food or Nutrition, 5. Economics, 6. Mathematics, 7. Child-Psychology, 8. Music, 9. Geography, 10. Practical Arts and Weaving.

Department of Fine Arts: Optional Subjects; 1. Dancing, 2. Vocational Music, 3. Instrumental Music, 4. Painting, 5. Acting or Stage Management, 6. Home Economics, 7. Social Welfare, 8. Social Science, 9. Psychology, 10. Logic, 11. Hygiene and Anatomy.

Department of Education: Optional subjects; 1. Child Psychology, 2. History of Education, 3. Principles of Education and Philosophy of Educa-

tion, 4. Educational Statistics, 5. Methods of Education, 6. Health and Physical Education, 7. Industrial Arts and Crafts, 8. General Science, 9. Mathematics, 10. Geography, 11. History, 12. Civics, 13. Economics.

Department of Religious Instruction: The proposed Curriculum and Syllabus Committee will determine the Optional Subjects.

According to our present educational structure the duration of primary education is five years, of secondary education, five years, of intermediate of higher secondary education, two years, of the first University degree course, two to three years and of the second University degree course, one to two years. Many Education Committees or Commissions in the past, such as the 1934 Sapru Committee, the 1938 Sergeant Committee, the 1952 East Bengal Education Committee and the 1957 East Pakistan (formerly) Education Commission had recommended the abolition of the intermediate or higher secondary stage and the introduction of a new educational structure. According to this recommendation, the duration of the school stage will be eleven years and the duration of the first general degree course will be three years. In favour of this recommendation it has been said that: (a) the intermediate or higher secondary stage cannot be regarded as a separate stage as it is hemmed in by the secondary stage on one side and the University stage on the other and it is related to neither, (b) the intermediate stage can easily be abolished and one year of this stage can be transferred to the secondary stage and one year to the university stage. Greater proficiency will ensue from this, as it will facilitate the introduction of varied and balanced courses at the secondary stage and strengthen the degree pass stage by adding one useful year to it (the duration of the degree pass stage should never be less than three years). In this connection it can be mentioned that an eleven-year school system has been introduced throughout Ceylon since 1972 instead of the previous twelve-year system. The argument advanced against these reasons is: the 1966 Kothari Commission recommended the re-introduction of the higher secondary stage after observing the effects of an eleven year school system as recommended by the 1952 Mudaliar Commission. Many distinguished Indian educationists are of the opinion, in the light of their experience, that many avoidable difficulties and much confusion had arisen when the eleven-year old school system was introduced on a very wide scale without much preparatory work.

The educational structure recommended by the Kothari Commission—permanent secondary stage of ten years' duration, a higher secondary stage of two years' duration and the first general degree stage of three years duration—was adopted in India. This educational structure is more or less similar to that recommended by the 1959 Sharif Commission during the Pakistani regime. This structure was accepted by the then Government, but it was eventually abandoned because of the country wide agitation against it. It is true that in our existing education system, the pupils have to wait for quite a few months for their S. S. C. Examination results at the end of class X and are required to repeat in classes XI and XII parts of the syllabus already followed in classes IX and X. For this reason many believe that the course of studies between classes IX and XII can in fact be completed in three years in classes IX, X and XI. That is why they are in favour of abolishing the higher secondary stage and starting eleven-class schools. According to them if the secondary stage is made to be of three years' duration it will prevent unnecessary waste of time and repeating of subjects already learnt. As a result, secondary education will be more fruitful and balanced. This proposal may in principle be accepted but in our present condition its implementation will cause many difficulties, and require major improvements, such as non-availability of teachers

with M.A. or M.Sc. degree in sufficient numbers for our High Schools (whose present number is more than seven thousand), the proper development of libraries and laboratories, the building of new class rooms, the removal of financial stringency faced by our schools and colleges, etc.

Considering all these things our proposal is that experiment may be made in some selected schools regarding the eleven-year school system during our first five year plan. If the results of the experiment are satisfactory, a suitable decision may be taken in the second five-year plan for its gradual implementation.

8. 13. We were also faced with a proposal for abolishing the higher secondary stage and introducing instead a ten-year school system to be followed by a three-year pass degree course or a four-year honours course. Such an education system is prevalent in Russia. But it would not be possible for a developing country like ours to accept this system, because the standard of education at the primary and secondary levels in our country is very discouraging and there is considerable want of competent teachers, necessary educational appliances and other facilities in our educational institutions. Moreover, our Universities are not in favour, for the reasons stated above, of introducing a four-year honours course with pupils passing out of the ten year school system. If our proposed reforms are properly implemented there will be, we believe, a revolutionary change in our education in the next few years and the educational environment as well as educational standards will be considerably improved. In that case, we can make a full survey and assessment of the improved standards after five years. At that time the question of introduction of the first degree course after a ten year school system can be reconsidered in the light of the improvement of educational environment and educational standards.

SECONDARY EDUCATION

SUMMARY

1. Secondary education is the second stage in our educational structure. The general aims of secondary education are: (a) to expand and consolidate the basic education given at the primary stage, (b) to develop a progressive and honest personality committed to a purposeful and well balanced life, (c) to supply the required skilled manpower necessary to accelerate the country's economic development and (d) to prepare meritorious pupils for higher education according to their merit and inclinations. (8.1.—8.2.)

2. The stage between class IX and class XI/XII should be regarded as the secondary stage. In order to maintain close links between the instruction levels of class IX to class XI/XII, and to ensure the evenness in secondary education as a whole, it is desirable to have provision for teaching in these three/four classes in the educational institutions which already teach up to class VIII. If we intend to make secondary education self-contained and a terminal stage in our education system, it is essential that co-ordination be achieved in the instruction programmes of all classes at this level. To create opportunities for the instruction of pupils, belonging more or less to the same age-group, in the same educational environment is in accord with educational psychology. For these reasons, it is necessary to direct the intermediate colleges to open classes IX and X and not to start degree classes. (8.3.)

3. It is desirable to have the environment of the pupils, their way of living, local economic activities and all matters connected with entering their future professions reflected in the syllabus at the secondary stage. (8.4.)

4. The secondary stage must be regarded as the terminal stage of education for most of the pupils and a preparatory stage for the meritorious few for higher education. For this purpose, education should be divided into two main categories after class IX: (a) vocational education and (b) general education. Vocational education should be generally of three years' duration (classes IX, X and XI). General education will be of four years' duration (classes IX, X, and XI and XII). Some subjects will be compulsorily included in the syllabus of both categories. In addition to these compulsory subjects, pupils will choose a particular course of vocational or general education. Our aim in the first five-year plan should be to attract twenty per cent of our pupils at the end of class VIII to the vocational type of education. In the subsequent five-year plans, this ratio must be raised to at least fifty per cent. (8.5.)

5. Vocational education is primarily terminal education. Provision will therefore exist for special training in class XI after completion of vocational courses at class IX or X. This special training will be determined in accordance with the needs of the employing agencies and requirements of the country's development work. It is not an easy task to make due provision for employment for all passing out of this terminal stage of education. Many of them will become self-reliant through their own initiative and find employment for themselves. For this purpose, provision has to be made for capital-loan on easy terms. To utilise their skills, co-operatives have to be set up according to need and on a regional basis. (8.6.)

6. To help spread vocational education and to popularise it, we should start a 'Earn while you learn' scheme as in India. (8.7.)

7. Effective steps must be taken by local authorities and government in conjunction to introduce one or more vocational courses according to the particular environment obtaining in most of the secondary schools in our country. (8.9.)

8. The intermediate or higher secondary stage cannot be regarded as a separate stage as it is hemmed in by the secondary stage on one side and the university stage on the other and is related to neither. The intermediate-stage should be abolished and one year of this transferred to the secondary stage and another to the university stage. This will ensure proficiency in more subjects as the degree course will be strengthened by one-year and the extra-year in the secondary stage will help introduce a varied and balanced curriculum. Of course, in our present condition its implementation will create many difficulties and require major improvements, such as the non-availability of teachers with M. A. or M. Sc. degree in sufficient numbers for our high schools, the proper improvement of the libraries and laboratories, the building of new class-rooms and the removal of the financial stringency faced by our schools and colleges. Our considered recommendation regarding the change in our educational structure therefore is:

- (a) Let there be an experiment in some of our schools regarding the eleven-class school during our first five-year plan. If the results of the experiment are proved to be satisfactory, a suitable decision regarding its gradual implementation can be taken during the second five-year plan. In this case, the duration of the first degree course will be three years and that of the Master degree course, two years.
- (b) If the educational environment and educational standards markedly improve in the next five years, the question of introducing the first degree course after a ten-year school system can be considered. In that case, the pass degree course must be of three years' duration and the honours degree course of four years' duration. And the duration of Master degree course will be one year in case of those holding honours degrees and two years in cases of those with pass degrees. (8.12-8.13.)

CHAPTER IX

VOCATIONAL EDUCATION

9.1. The importance of vocational education is today universally acknowledged. The pupils learning vocational skills enter their professional careers as skilled workers through the practical application of vocational education. No nation can achieve any mentionable progress in the fields of agriculture and industry and other productive and technical fields without the expansion and improvement of vocational education. The necessity of vocational education in every field of human life is today unquestionable. Vocational education is completed in a relatively short period and its effects are therefore seen more quickly. It is possible to improve fast the economic condition of the common people through the spread of vocational education. Many countries offer such examples.

9.2. The type of vocational education now prevalent in Bangladesh is inadequate and of a low standard. Previous Education Commissions, specialists in technical education and economists have all laid a special stress on the need for expansion of qualitative vocational education in our country. But we have failed to give vocational education its proper place in our education system up to now. As a result we are faced with a paucity of skilled workers on one side and a large number of educated unemployed on the other. Our country faces many complex problems because of the rapidly increasing population and insufficiency of agricultural land. One of the ways in which these problems can be tackled is through spreading vocational education among our common people and making the youth of our country ready for an active working life, so that they can help promote the economic welfare of their families from a relatively early age.

9.3. Vocational education is more expensive than general education. We must therefore have a well-thought-out scheme regarding the expansion of vocational education in consonance with our limited resources and apply it properly and implement it fast, as otherwise our limited resources are likely to be wasted.

9.4. One of the main aims of vocational education is to make the pupils practical-minded and self-reliant so that if necessary they can eke out an independent living without depending on jobs.

9.5. The foundation of vocational education is laid at the secondary level. After completing the courses at class X in the vocational type of education and after acquiring proficiency according to need in higher vocational skills, the pupils can enter the work-a-day world as skilled workers. For this purpose, arrangement should be made for an apprentice course in the industrial agencies concerned and for additional vocational training in class XI.

9.6. A list of the proposed vocational subjects is given below:

(a) *Vocational subjects with a technical bias:*

- (1) Wood Work, (2) Metal Work, (3) Electrical Work, (4) Machine Work, (5) Foundry Work, (6) Repairing of Motor Cars,

(7) Repairing of Radios, (8) House-building, (9) Draughtsmanship, (10) Marine-Deisel-Engine Work, (11) Electroplating and Metal Sheet Work, (12) Weaving, (13) Embroidery, (14) Drawing, (15) Graphic Arts, (16) Clay Modelling, (17) Leather Work, etc.

(b) *Agriculture-based:*

(1) Agricultural Science, Production and Conservation of Grains, (2) Pisciculture, (3) Poultry Farming and Animal Husbandry (4) Preservation of Food and Nutrition, (5) Agricultural Machines (for protection work), etc.

(c) *Fine Arts-based:*

(1) Drawing, (2) Vocal Music, (3) Instrumental Music, (4) Dancing, (5) Acting and Recitation, etc.

(d) *Business and Commerce-based:*

(1) Type-Writing and Stenography, (2) Book-Keeping and Accounting, (3) Commercial Methods and Salesmanship, etc.

(e) *Medical-based:*

(1) Nursing, Para-Medical, etc.

(f) *Others:*

(1) Teacher-Training, (2) Religious Instruction, (2) Library-Assistant Training, (4) Toy-making, (5) Plastic Arts, (6) Soap making, (7) Bamboo and Cane Work, (8) Catering and Hotel Management, (9) Book-Binding, etc.

9.7. The Syllabus and Curriculum Committee will determine the courses for vocational education. The duration of such courses will be usually three years (classes IX, X and XI). If the Curriculum Committee so wish they can recommend the completion of certain vocational courses in two years without hampering the main aim. The Curriculum and Syllabus Committee can also propose additional courses according to need in addition to those mentioned above.

The present arrangement of vocational education:

9.8. In Bangladesh vocational education is now limited only to subjects with a technical bias. The existing facilities of this type of education are generally as follows:

- (a) About one thousand pupils are admitted every year to the five Technical Training Centres under the Director of Labour. The duration of this course is two years. The minimum educational qualification needed is class VIII-passed, and in some cases, class X-passed.
- (b) One thousand fifty pupils on the average are given vocational training every year through the Industrial Apprenticeship Scheme. The duration of this training is between three and a half years. At present about three hundred pupils are being so trained.
- (c) One hundred and ten pupils are admitted every year to a two-year course at the Marine Deisel Training Centre at Narayanganj under the Labour Director.

(d) One hundred fifty pupils can be admitted every year to a two-year course the five Weaving Training Centres under the Director of Industries.

(e) Two hundred pupils can be admitted every year to the 35 Vocational Training Institutes under the Director of Technical Education. The minimum educational qualification needed is class VIII-passed and the duration of training two years.

(f) About one thousand seven hundred pupils can be admitted to the Night Shift at the thirteen Polytechnic Institutes under the Director of Technical Education. The minimum educational qualification required is class VIII-passed and the duration of training is two years.

The defects and deficiencies in our vocational education system?

9.9. Below are mentioned some of the reasons for the slow expansion of vocational education and its lack of popularity and its inability to play an effective role in the country's economic development.

(a) Vocational education has not been given its due place in our education system and it has not been properly co-ordinated. Some vocational training institutes are under the Labour Director and some under the Director of Industries, where educational management gets a low priority and where there is noticeable lack of direction and supervision. The provision for direction and supervision in the vocational training institutes under the directorates of technical education also leaves something to be desired.

(b) The steps taken so far by government for the expansion and improvement of vocational education are clearly inadequate. Vocational education is more effective in a shorter period of time for increasing production and improving the standard of life of the common people in comparison with technical education at the higher level. Moreover higher technical education cannot fully achieve its goal if it is not supplemented by a well-established and co-ordinated system of vocational education. This will become clear if we make an objective assessment of the effectiveness of higher technical education in the country's economic development. So far as its expansion is concerned and in relation to development and quality, vocational education must be placed much lower than technical education at other levels. But it should have expanded more than technical education at other levels considering the true interests of our country and its people.

(c) Only a small number of pupils of relatively low quality go in for vocational education as at the end of it there is not much scope for employment in mills and factories and other technical organisations.

(d) The unwillingness on the part of mills and factories and other technical organisations to co-operate with the vocational training institutes deprives the pupils of an opportunity for actual technical experience and thus their education remains incomplete.

(e) Meritorious pupils and their guardians shun this type of education as due provision does not exist for higher vocational courses.

(f) The youth of the country do not regard vocational skills as of any particular importance because of the hostile attitude of the country's educated section to manual work.

(g) As there is hardly any competition in certain fields of production and as mills and factories make huge profit in these fields by employing semi-skilled workers and producing commodities of low quality, there is not much demand for skilled workers in such fields.

(h) There is paucity of properly qualified and able vocational teachers. At the time of appointing teachers, due importance is not given to technical competence and there is no provision for later training.

(i) As no importance is given to manual work and physical labour at the primary and secondary stages of education, the pupils later come to hate all manual work.

(j) There is a great want of appropriate books in the field of vocational education and it is no exaggeration to say that such books are hardly available in Bengali. These available books are all in English and quite inadequate to the pupils' needs moreover they are very highly priced and beyond the purchasing capacity of children low income group.

(k) The pupils are not able to chose the right course or courses as dependable data regarding the social utility of particular vocational courses and their utility for the pupils are lacking.

(l) As there is a wide gap between the methods of teaching, the subjects and the environment of education on the one hand and the working methods, the subjects and the environment in the actual field on the other, the pupils are not able afterwards to make necessary adjustment and are therefore not successful in the working field.

(m) Vocational education is up now limited to only subjects with a technical bias; hence its influence on our country's economic development negligible.

The expansion and improvement of Vocational Education.

9.10. In order to properly co-ordinate vocational education and have the way for the training of skilled workers in required numbers we make the following recommendations.

(a) Vocational education has to be given its proper place in our education system by making its an inseparable part of this system. Considerable stress has to be laid at the primary stage on manual work so that the pupils gets accustomed to this from the very beginning and develop an attitude of respect to it. In most of our secondary school provision has to be made for vocational education, having due regard to the particular environment obtaining and according to need, and the pupils, both boys and girls have to be attracted to vocational education.

(b) Vocational courses as recommended for classes IX, X and XI, should be introduced in the 35 Vocational Training Institutes under the Director of Technical Education. At present these Institutes only a few students and their facilities are not fully utilised. Of course more teachers will be needed if the vocational courses are introduced as recommended. In a few cases, it may be necessary to open one or two more class-rooms. These institutions can introduce terminal training courses in particular subjects for those who have left school and others by starting an afternoon or evening shift. Vocational education based on weaving can be introduced in the five Weaving Training Centres under the Director of Industries. At present these Centres attract

very few pupils. More teachers will again be needed if vocational education is introduced in these Centres. Like-wise vocational secondary education can be introduced in the technical training centres under the Director of Labour after ensuring that their present terminal courses are not thereby interrupted or hampered.

(c) Able and experienced teachers are at the heart of vocational education. The effectiveness and success of vocational education depends upon its teachers to a greater extent than in any other field of education. There is a great want of able teachers in the field of vocational education. Able persons are not attracted to vocational teaching because of low salaries and as they get higher salaries and more facilities in factories and other industrial concerns. In order to attract really capable persons, scales of salary and other facilities should be raised at par with those of skilled workers in mills and factories. If competent persons are not available for full-time teaching they must be recruited for part-time teaching on a contract basis.

(d) At present there is no arrangement for teacher-training in the field of vocational education in our country, although this is urgently required. We, therefore, recommend that at least two teacher-training centres in vocational education be set up as priority measure so that they can supply the required number of trained teachers in vocational subjects. Because of the great urgency, we further recommend that such a training course be introduced in one or two technical training centres by employing competent teachers in sufficient numbers until it is possible to set up a full-fledged teachers training centre.

The Curriculum Specialists Committee will determine the course for teacher-training vocational education. Its duration must be at least one year. Competent technicians as well as those who have passed the vocational course or the polytechnic diploma course will be eligible for admission to this training course.

The constituents of this training will be as follows :

- (1) Higher training in the fixed vocational subjects.
- (2) Training in subjects related to education.
- (3) Practical experience in mills and factories.

At the end of this training the pupils will receive diplomas. Arrangement for teacher-training in such vocational subjects as agriculture, trade and commerce, weaving, printing, leather-work, ceramic and fine arts should be made in institutions like agricultural polytechnic, commerce institutes, textile institutes, leather institutes and ceramic institutes. This is necessary because the recommendation made for higher education in different vocational courses as part of teacher-training will require expensive instruments and accessories in every subject and it will not be feasible to make all these available in the proposed teacher-training centres.

(e) It has been mentioned before the vocational training institutes are at present under three different directors belonging to three different ministries. The improvement and co-ordination of these institutes will be hard to achieve if the present system is allowed to continue. It is necessary to bring all the vocational institutes in the country under the Education Department for their more effective management and for better co-ordination. There is an urgent necessity for considerable expansion and improvement

in the field of vocational education under the current five-year plan. In Bangladesh to-day only five thousand skilled workers are produced every year. According to the estimate of the planning Commission we must produce thirty thousand skilled workers every year from 1978 onwards. It would not be possible to reach this ambitious goal without suitable administrative arrangement.

(f) The pupils passing out of the secondary vocational education system should be admitted on a priority basis to our polytechnic institutes as well as to other technical institutes. Those who will complete the special vocational training at class IX should get an opportunity to be admitted to the diploma course. It would be desirable for such pupils to be admitted to the evening shift at the polytechnic institutes. We believe that larger numbers of pupils will be attracted to vocational teaching if the door to higher education is kept open for them. The equivalence committee will determine the courses and their duration for those opting for higher education at technical institutes after completing the vocational course at class XI or the apprentice-course in industry.

(g) Due provision should be made for employment in industrial concerns and technical organisation for those completing vocational education course. For this purpose, it is necessary to open employment centres in different parts of the country.

(h) The apprentice-course in industry must be widened and strengthened as this is the practical way to produce skilled workers and as this creates opportunities for these workers to get suitable employment in industrial concerns and technical organisations.

(i) In different fields of agriculture and in commerce and industry, so important economically, the expansion of vocational education must be effected. Eighty per cent of our population lives in villages. So in order to make vocational education people-oriented provision for teaching suitable vocational subjects according to the particular regional requirements must be made in local schools. We believe the crucial importance of teacher-training in vocational education will be properly realised. It will be possible through this medium to attract larger numbers of female teachers to primary education. Steps should be taken for the immediate introduction of this course, in secondary schools under the supervision of trained teachers.

(j) It is apprehended that all efforts to expand vocational education will be negated if a sufficient number of Bengali text-books in different vocational subjects are not immediately prepared and published. A virtual stalemate will obtain in the field of vocational education if in addition to the paucity of competent teachers, the non-availability of the required text-books in Bengali continues. The English text-books available in the market should be translated into Bengali on the priority basis. If necessary, the assistance of UNESCO and other related organisations can be sought in the matter. Our own people having the necessary technical training must be encouraged to write text-books in those vocational subjects in which suitable text-books are not available in foreign languages. We have no dearth of such people in our country. They must of course be offered inducement of appropriate remuneration. It must be mentioned in this connection that one can learn many vocational subjects at home if one can find suitable text-books in those subjects. The situation created by the paucity of

ext-books has to be tackled on an emergency basis. The traditional attitude will not solve the problem and hence the objective of the expansion and improvement of vocational education will not be realised if it prevails.

(k) There is great dearth of essential instruments and accessories in the field of vocational education. Effective steps must be taken immediately to invent and make such suitable instruments in our country. For this purpose the 'Equipment Development Bureau must be expanded and activated. We recommend that the question of making suitable equipment and furniture in our polytechnic and technical institutes for use in other educational institutions be seriously considered.

(l) We also recommend that the question of starting a small factory attached to a vocational training institute for introduction of a 'Earn while you learn' scheme be given earnest consideration in order to make vocational education more popular and physical labour more effective. In such a system the expenditure under training will partly be transformed to production. Innumerable boys and girls in our country are forced to leave school at a very early age because of economic want. Many of these boys and girls will be able to resume their education if a 'Earn why you learn scheme' is introduced. We further recommend that in future all vocational training institutes be attached as far as possible to the appropriate industrial or technical organisations.

Vocational education for adults and drop-outs:

9.11. For economic and other reasons a large number pupils leave school without completing secondary education. This unfinished education is of no particular use later in their economic lives and they remain as a burden on their families and on society. There is a special need for provision for training for the drop-outs and the adults in particular vocational courses of varying duration. We specially recommend that a night-shift be opened and Part-time instruction provided for this purpose in our polytechnic and technical institutes, technical training centres, vocational training institutes and other educational institutions where there is provision for vocational education. Such a training scheme is being managed successfully in some of the vocational training institutes and institutes of technical education. This has to be expanded and co-ordinated.

Apprentice course in industry:

9.12. The apprentice course in industry is regarded in most of the industrially developed countries of the world as excellent means of preparing skilled workers. In our country an industrial apprentice scheme was introduced through ordinance in 1964. But it has not been made effective on a wide scale till now. This has to be activated, co-ordinated and made broad-based. For this purpose some modifications in the above ordinance are necessary. More skilled workers have to be produced through this scheme from among those passing out of vocational education system. One great advantage of the above apprentice course is that the trainees receive monthly allowances during the period of training from the industries concerned who also bear all their expenses of training and help them get suitable jobs at the end of their training. We want to lay a special stress on the fact that vocational or technical education remains incomplete without work-experience in factories or technical organisations. For this reason, there is close liaison between industrial concerns and

institutions for technical education in all developed countries. But in our country the pupils do not get any opportunity for work-experience as no such liaison exists, and hence technical education at different levels in our country is not fully effective. We recommend that a high-powered National Apprentice Board be set up to establish such a system, consisting of representatives from the education department, from factories and from technical organisation concerned. The main aim of this Board will be to effect co-ordination between the institutes for technical education on the one hand and factories, technical and commercial organisations, agriculture and other fields of production on the other and to provide for work-experience for pupils undergoing technical or vocational education. It will be necessary to open branches of the Board in different cities and industrial areas of the country. This system will also be helpful in providing jobs to such pupils.

9.13 The financial aspect of vocational education deserves special consideration. We have said before that type of education is very expensive. Our resources are very limited in relation to our needs. The majority of our people, are till now deprived of the benefit of education. There is need for large appropriations of money under education and under development as a whole if we want to give our people minimum education required and remove their economic distress. This is a complex situation. So it should be our special concern to see that the scheme for vocational education is quickly implemented and that the pupils passing out of the system can participate in the country's economic development by entering the working-field without delay,

9.14. The unemployment problem is very acute in our country at present. So we recommend that as an alternative to jobs, pupils with vocational training be encouraged to form co-operatives and start small factories and farms through them in different parts of the country. This will provide them with a means of livelihood as well as increase the country's production. The small industries corporation can give necessary data and advice in this connection and banks provide loans. Such a system is current in many countries. To make such a scheme successful government help will be need in certain fields for supply of raw materials.

9.15. The provision for vocational education in teacher-training, agriculture, fine arts, trade and commerce and medicine has been discussed in the appropriate chapters.

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1. HIGHER EDUCATION - BANGLADESH.

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VOCATIONAL EDUCATION SUMMARY

1. The pupils learn vocational skills and enter their professional careers as skilled workers through the practical application of vocational education. No nation can achieve any mentionable progress in the fields of agriculture and industry and other productive and technical fields without the expansion and improvement of vocational education. It is possible to improve fast the economic condition of the common people through the spread of vocational education. Vocational education is completed in a relatively short period and its effects are therefore seen more quickly. (9.1.)

2. Provision for suitable vocational education must be made at the secondary stage of education—as an integral part of it—so that large numbers of pupils can acquire the necessary skills to enter the working-field. In secondary schools, in vocational training institutes and in technical training centres provision should be made for vocational education in different technical subjects and in agriculture, trade and commerce, teacher-training, fine arts, nursing and para-medical etc. (9.4.-6.)

3. A lot of equipment and accessories and a large number of text-books and teachers will be required for vocational education. For this purpose, the necessary equipment and accessories have to be manufactured in the country, text-books prepared and published and a teacher-training scheme immediately introduced. (9.10.)

4. All vocational and technical institutes have to be brought under the control of the Education Department for their proper co-ordination. (9.10.e.)

5. Openings should be made on a priority basis for admission of the meritorious Pupils—passing out of the vocational education system—to the diploma course. (9.10.f)

6. The opportunity should be widened for poor children to pursue education by introducing vocational education incorporating a 'Earn while you learn' scheme. Vocational training institutes will be more effective if attached to industrial and technical organisations. (9.10.1)

7. The adults and the drop outs at the secondary stage have to be transformed to skilled manpower through provision for part-time vocational instruction and by opening a night-shift. (9.11)

8. Job-opportunities must be created for pupils completing the vocational education course to attract them in greater numbers to vocational education. The apprenticeship scheme must be widely introduced through legislation and thus opportunities for employment for skilled workers in industrial and technical concerns and other fields of production extended (9.12.)

9. The employment problem of the people trained in vocational education can be partly solved by encouraging them to start small factories and farms through co-operatives. (9.14.)

CHAPTER X

TECHNOLOGICAL AND TECHNICAL EDUCATION AT THE DIPLOMA LEVEL.

10.1. The main aim of technical education at the diploma level is to produce such a section of trained man-power as will be able to perform with competence their work in the technical field with their own hands, will be fully aware about basic technical rules and industrial methods and will have the necessary capacity to direct industrial labour effectively. Their curriculum will be such as enable them to comprehend the thinking of the technological and technical degree-holders and to communicate it to the skilled workers and help raise production and produce commodities of high quality in industrial concerns by their efficient direction and supervision of the workers and by using their actual technical competence. Technicians and technical supervisors constitute such man-power of the middle level. They can work as assistants to fully qualified engineers in developmental work, in planning, in building, in supervision and in protection work. They can also serve as engineers after having acquired the necessary experience and knowledge.

Existing arrangement for training:

10.2. At present there is a three-year diploma course current in polytechnic institutes and other related institutes for those who pass out of the secondary education system. In Bangladesh to day about seven thousand pupils are doing the diploma course in twenty polytechnics and similar institutions in the following sixteen subjects:

1. Automobile Technology
2. Civil Technology
3. Electrical Technology
4. Mechanical Technology
5. Power Technology
6. Jute Technology
7. Textile Technology
8. Textile Chemical Technology
9. Electronics Technology
10. Industrial Wood Technology
11. Survey Technology
12. Architectural Technology
13. Leather Technology
14. Printing & Graphic Arts Technology
15. Chemical Technology
16. Farm Technology

About two thousand pupils finish this diploma course every year.

10.3. There was provision for a diploma course in certain technical fields for one hundred and twenty pupils every year at Dacca Ahasanullah Engineering

School at the time of partition in 1947. The diploma course was terminated thereafter the introduction of the degree course in 1958. A leather institute and a textile institute were established in 1950. The first polytechnic institute was set up in Dacca with one hundred twenty pupils in four technical fields in 1955. If we consider the number of polytechnics and of pupils we will see that technical education at the diploma level has expanded remarkably in Bangladesh in the past eighteen years. The first group of technicians to complete this course was the 1958 group. In the first few years they had no difficulty in getting suitable jobs relatively quickly. But in the past few years many technicians have been unemployed and it is estimated that today a few thousand technicians are unemployed in the country. The growing unemployment problem has made the pupils at the polytechnic institutes in increasingly frustrated.

10.4. Back in 1954 when the scheme for setting up polytechnics was accepted it was hoped that many large industrial concerns would emerge in our country and hence many technicians would be needed. It may be mentioned in this connection that the provision for engineering education at that time was very limited in our country. There was only one engineering college in Bangladesh (formerly East Pakistan) where only one hundred and twenty pupils were generally admitted every year. It is true that a few large industrial concerns have been set up in our country over the past 20 years but their number is far from satisfactory. On the other hand during this time 20 polytechnics, three engineering colleges and one engineering and technological university have been set up. In addition, many industrial concerns damaged during liberation struggle and their production capacity has now been significantly reduced as a result of which the demand for technicians and engineers in industrial concerns has also lessened. The scope for employment for skilled manpower has been much reduced in consequence of the economic crisis and slow pace of developmental in work the post-war years.

10.5. The quality of technical education has been lowered, along with general education, in the past few years. It is felt that special reasons for the deterioration in the field of technical education are as follows:

- (a) Quite a few polytechnic institutes have been set up in Bangladesh in the past seven or eight years. These institutes had to be started without necessary equipment and without providing suitable means for the appointment of competent teachers. In the mean time several groups of pupils have completed their courses at polytechnics deficient in instruments, workshops and in competent technical teachers. Again, many more pupils had to be admitted than there was due provision for in the matters indicated above. The number of polytechnics has considerably increased in the immediate past but suitable technical teachers have not been appointed in the required numbers. No suitable provision has been made so far for teacher-training in this field. According to the curriculum of technical education about 60 percent of the pupils are required to have first hand experience in workshops and laboratories, but the time allotted for this is not fully utilised because of the lack of suitable instruments and accessories and of competent teachers.
- (b) To get the maximum benefit out of technical education, a pupil must have a good knowledge of mathematics, chemistry and physics at the secondary level. But it has been seen in practice that pupils

following the humanities course and such other courses—whose knowledge of mathematics and science is very limited—enter the technical institutes as sufficient number of pupils is not available in the science course.

- (c) The want of suitable technical teachers is being felt increasingly in technical training institutes. Most of the teachers lack actual experience in industrial concerns and have no clear idea about the particular kind of skill required in such organisation. In the matter of teacher-selection quality of education, actual experience suitability for teaching and technical quality are not given due importance.
- (d) Meritorious pupils are not attracted to technical education in sufficient numbers as there is no proper provision for technical education at the higher level and for employment or promotion at the end of the course. As a result, less competent pupils get admitted.
- (e) It is essential that a close exist liaison exists between the technical training institutes and organisations employing technicians to make technical education realistic and fruitful, but unfortunately no such arrangement exists in our country. In the developed countries the industrial concerns play an active role in the expansion and improvement of technical education but such organisation in our country were almost inactive about this in the past and they have hardly any connection with technical training institute even now. For this, technical education has been cut off from reality and in many cases is ineffective. Pupils therefore remain ignorant about what particular competence is required in order to work successfully in industrial organisations.
- (f) There is a great paucity of suitable books in the field of technical education. The few such books available in the market are almost all written in English and are so highly priced that they are beyond the purchasing power of the majority of the pupils. And moreover the pupils are unable to comprehend full text-books written in English. It can be easily imagined what great impediments the pupils face in the matter of acquiring technical knowledge and competence for want of suitable books and competent technical teachers.

10.6. Recommendations : The problems demanding immediate attention in the field of technical education at this level and those which must be quickly solved are indicated below :

(a) Improvement in the standard of education :

The following measures have to be taken to improve the standard of technical education :

- (i) Admission to polytechnics and such other institutes must be restricted to those passing out of the secondary education system in the science or vocational group. If such pupils are not available in sufficient numbers those in other group may be admitted as an interim measure but special provision has to be made for coaching them in mathematics and science. Pupils

must be chosen through a selection test. Whether they have actually any inclination for technical education is a factor which must also be considered. In the syllabus for the first year more hours in science and mathematics have to be allotted for pupils with a vocational background and in drawing and in workshop for those with a science or similar background. The syllabus in the second and third years will be the same for all pupils.

- (2) Deficiencies in appliances and instruments have to be made good immediately and no new courses should be started unless teachers and accessories are sufficiently available for them.
- (3) The number of degree engineers and of teachers with the B.Ed. (Technology) degree at polytechnics should be raised to at least 50 per cent. For this, some low grade posts have to be upgraded if necessary. A candidate with a diploma will be eligible for teaching only if he gets a first division. The range of technical knowledge of teachers with diplomas should be extended for successful teaching. For this purpose, the technical teacher training college at Dacca should be extended and improved and thus made more effective. Every teacher must have appropriate work-experience in industrial concerns or technical organisations. No person should be appointed a teacher who has not at least one year's actual technical experience. Provision must be made for higher initial salaries to attract experienced persons to teaching.
- (4) The want of text books has to be removed as an emergency measure by preparing and printing enough text books in Bengali in different technical subjects. It will take many years to solve this problem if we follow the traditional method. Technical teachers at different levels should be encouraged to write such books by giving them attractive remuneration and necessary leave on full pay, and measures have to be taken for the quick publication of these books. It may be mentioned in this connection that the demand for books in different technical fields will increase greatly in the near future.
- (5) Provision has to be made for actual technical experience in industrial and technical concerns either during the course or at the end of it. This may be done through a sandwich course or through the apprentice course as described in the chapter on vocational education. The sandwich course may be introduced at a few polytechnics situated in the industrial areas. This course is prevalent in United Kingdom, United States and in some countries of Europe.

(b) Provision for work :

We have mentioned before that there are a few thousand technicians with diploma in our country who are at present without any employment. Every year about two thousand pupils pass the diploma course. A mentionable portion of them remains unemployed. The unemployment problem among them will become more wide-spread if a large scale development programme is not undertaken in the field of industry. We make the following recommendations for easing the unemployment problem.

- (1) Many technical teachers will be needed to implement the proposed vocational education mentioned in the chapter on secondary

education. The technicians successfully completing the three-years diploma course will be considered eligible for teaching in vocational subjects in secondary schools. But they will require training. The required number may be chosen from among them to undergo a one-year teacher-training course. 40 per cent, time of this course will be spent in teaching methods and 60 per cent, in promotion of technical skill. This training can also be introduced in some well-established polytechnic institutes.

- (2) The vacant posts fit for technicians in the country's industrial concerns, specially those nationalised, should be filled through employment exchange centres or similar organisations.
- (3) Admission to technical institutions has to be regulated on the basis of the estimate prepared by the manpower division of the planning commission regarding the requirements of actual man-power at different levels and in different technical organisations. Admission to courses in which the demand for technicians is limited should be restricted.
- (4) The training facilities existing in the present polytechnic institutes should be used by special organisations like Railway, Civil Aviation, Defence, etc., instead of their opening separate training centres.
- (5) As scope for promotion in government service is limited for technical diploma holders, they naturally feel dissatisfied and discouraged. We feel that the opportunity for promotion for such pupils must be widened on the basis of experience and professional competence.
- (6) The technicians should be encouraged to start small factories in different parts of the country through co-operatives. This will provide them with employment and also increase the country's production. The small industries corporation may help them with advice and necessary data and banks provide them loans. Such a scheme is current in many countries.

Expansion of courses:

10.7. (a) At present there is one three-year course in certain limited subjects current in our polytechnic institutes. We feel that there is considerable need for technicians in other subjects undergoing courses of varying duration. Glass technology, production technology, instrument technology, food technology, are some of the subjects which may be mentioned in this connection. Such courses may be divided into a short-term course and a three-year diploma course according to need. Besides, a part time course for working technicians can also be arranged.

(b) Government have given top priority to agricultural extension work in accordance with modern methods to attain self-sufficiency in food. A large number of agricultural technicians will be needed for the implementation of agricultural extension schemes according to modern methods. The number of agricultural institutes in our country is inadequate to our needs. At present a three-year farm-technology course is current in only two polytechnic institutes. We recommend that provision should be made in other polytechnic institutions also for different agricultural-technician courses. We further recommend that the agricultural technicians should be encouraged to set up farms on the basis of co-operatives.

Teacher-training

10.8. Teacher-training for teachers with diplomas and working at polytechnic institutes is provided in the technical teacher-training college at Dacca. This training is of three years' duration and divided into two categories. On the successful completion of the first year a diploma is given and at the end of two more years, with the successful termination of training, the B.Ed. (technology) degree is awarded. For the purpose of appointment of teachers at polytechnic institutes the B.Ed. (technology) degree is considered equivalent to a full technological degree. There is considerable want of necessary instruments and accessories of competent teachers, of library facilities, of work-shop and laboratory facilities, of class-room accommodation, of residential accommodation of teachers, and of hostel and other related facilities in the technical teacher-training college at Dacca. We recommend that this college be so extended and improved that it may provide diploma courses in teacher-training for teachers of other educational institutions. We further recommend that a short-time refresher course be introduced in this college for teachers of different technical training institutes. The above college is housed in part of the Ceramic Institute Building. Its required extension at its present location is hardly possible. So the college should be shifted to some appropriate place.

Provision for higher education for polytechnic diploma-holders

10.9. We have said at the outset of this chapter that the main aim of the courses at polytechnic institutes is to prepare skilled manpower of the middle level, those who will be able to join the working field as technicians on completion of their training. For the realisation of this aim this has been made a terminal course and not a preparatory one for the degree level. The polytechnic diploma-holders have long been demanding facilities for technical education at the degree level. But since the knowledge gained by them in science and mathematics while studying at the polytechnics is not sufficient for the requirements of the degree course, they are not directly admitted to the engineering degree course.

10.10. Some technicians passing out of the polytechnic are really meritorious and fit for higher education. The government have introduced an interim measure to enable these meritorious technicians to do the degree course. The meritorious technicians are selected through a test and then admitted to a special preparatory course lasting 40 weeks. A committee of specialists has prepared the above mentioned preparatory course after a proper survey of the courses at polytechnics and those in the first and the second year of the engineering degree course. Those who complete this course satisfactorily are admitted to the three-year degree course. After that they become one with regular students and finish the degree course in due time (two years). We recommend that this arrangement may continue for the time being. It would be desirable to evaluate the effectiveness of this course after five years.

10.11. We further recommend that in addition to the above interim measure the students getting a first division in the polytechnic diploma course should be allowed to take the selection test at the engineering colleges and the engineering university and those successful admitted to the first year of the degree course. Those who will enter the degree course through this method should also have facilities for part-time course. This will enable many working technicians to get the facilities of higher education. The duration of the part-time course will naturally be greater than that of the regular course. Such part-time courses are current in many developed countries of the world.

TECHNOLOGICAL AND TECHNICAL EDUCATION AT THE DIPLOMA LEVEL.

SUMMARY

1. The main aim of technical education at the diploma level is to produce such a section of trained manpower as will be able to perform with competence their work in the technical field with their own hands, will be fully aware about basic technical rules and industrial methods and will have the necessary capacity to direct industrial labour effectively. So that production is increased and commodities of high quality are produced. They can work as assistants to fully qualified engineers in developmental work, in planning, in building, in supervision and in protection work and can also serve as engineers after having acquired the necessary experience and knowledge (10.1)
2. In order to produce the above skilled manpower only pupils passing out of the secondary education system in science or vocational group should be eligible for admission to the diploma course (10.6.a).
3. To make technical education at the diploma level more effective, the course and teaching methods must be related to reality. The want of instruments and accessories and raw materials necessary for practical education must be removed. Pupils must be given facilities for training in industrial and technical organisations (10.6 a).
4. The number of degree engineers and teachers holding the B.Ed. (technological) degree should be raised to at least fifty percent. Moreover, the training facilities for teachers must be extended and improved and provision made for them in the industrial and technological organisations for actual work experience. Provision must also be made for higher education for teachers with diplomas and working at polytechnic institutes. No person should be appointed a teacher who has not at least one year's actual technical experience (10.6. a, 10.8).
5. The want of books in the field of technical education should be removed as an emergency measure and Bengali books must be prepared and published (10.6. a).
6. There must be job-certainty for diploma holders. They must be encouraged to start small farms in different parts of the country on the basis of co-operatives and provided loans, if necessary. Technical education has to be regulated according to its need and demand in the country (10.6. b).
7. The scope for promotion in Government service for diploma holders must be widened (10.6. b).
8. It is necessary to start a technical course in agriculture at the diploma level for the improvement of agriculture (10.7).
9. Meritorious technicians must get the opportunity to do the technological course at the degree level. There should also be provision for them for a part-time course (10.9).

CHAPTER XI

MADRASAH EDUCATION AND 'TOL' EDUCATION

Madrasah Education

11.1. Of the 1412 madrasahs in Bangladesh 45 are Kamil, 300 are Fazil, 302 are Alim and 765 are Dakhil. The total enrolment in these madrasahs is approximately 4,00,000 and the number of teachers is about 14,000. There is no inter-relationship between the primary and secondary levels of madrasah education and the general education system in our country. In consequence, madrasah education has evolved as a separate system of education. The present levels of madrasah education are as follows :

Ibtidai or primary four years, Dakhil six years, Alim two years, Fazil two years and Kamil two years. Those passing the Fazil examination can be admitted straightaway to the higher secondary class.

11.2. The curriculum of madrasah education includes, in addition to religious instruction, Arabic language and literature, mathematics, history geography, elements of science, English and Bengali, but the main stress is laid on Islamic learning and the other subjects are considered of secondary importance. Madrasah education is largely one-sided as its main aim is to give all Pupils special instruction in Islam.

11.3. In the perspective of its present condition, madrasah education requires radical reform and necessary reconstruction in accordance with the needs of the age. Our recommendation is that the primary system of education as described in the seventh chapter of this Report must be introduced universally and Bengali should be the medium of instruction at every level. It may be mentioned here that in the proposed curriculum for secondary education there is provision for a second language from class VI. The second language can be either English or Arabic or Sanskrit or Pali. But those who will not read English as a second language will be required to read it as an optional subject from class VII. Moreover, religious instruction has been included in the syllabuses for classes VI to VIII. It may also be mentioned in this connection that in both the proposed vocational and general course at the secondary level religious instruction has been included as an optional subject. The madrasahs are also gradually realising the necessity of moulding the education system in accordance with the requirements of modern life. The main principle enunciated in the memorandum submitted by the Madrasah Education Reform Board in Bangladesh is that the primary level of madrasah education must be coalesced with the national education system and the subsequent levels should also be regulated accordingly as far as possible and in all cases Bengali must be used as the medium of instruction.

11.4. We are in accord with the above principle. Pupils will have the option of doing the three-year vocational 'religious instruction' course after having completed the eight-year primary education course. Those who will follow this course will be required to read the four compulsory subjects in classes IX and X (Bengali, Mathematics, General Science and English). The next levels after the vocational/religious instruction' course will be as three-year degree course and a two-year post-graduate course. These course

will be named and their curriculum and syllabuses determined by the proposed Curriculum and Syllabus Committee. We hope that madrasah education will become an inseparable part of our education system and get activated if our recommendations regarding it are fully implemented.

Hindu and Buddhist 'Tols'

11.5. Religious instruction in Hinduism and Buddhism is given in 'Tols' in the Sanskrit College and in the Pali College.

11.6. There are five Sanskrit Colleges and 87 'Tols' and 'Chatuspathis' for the teaching of Hinduism. Sanskrit language and literature and Priestcraft etc, are taught in such institutions. Their total enrolment is 7000. Admission to these institutions begins from class VII and the instruction is given through three separate courses. The 'Adya' course,.....two years from class VII; Secondary course,four years, after the 'adya' course: Title course,.....four years after the secondary course.

11.7. There are at present 45 educational institutions for the teaching of the Pali language and of Buddhism. The total enrolment is about 1,000. At these institutions, too, three courses are prevalent:

- .. Pali 'adya'.....three years after class VII.
- .. Pali secondarythree years after 'adya'course.
- .. Pali title ..three years after secondary course

11.8. 'Tol' education has to be reformed in conformity with the proposed primary education system consisting of eight classes. The 'adya' course should begin from class IX instead of class VII and its duration must be three years. The pupils following this course must like others, read the four compulsory subjects in class IX and X (Bengali, Mathematics General Science; and English). The duration of later courses will be three years for the degree and two years for the Post-graduate course. The curriculum and syllabus of these courses will be determined by the proposed Curriculum and Syllabus Committee.

MADRASAH EDUCATION AND 'TOL' EDUCATION

SUMMARY

1. Madrasah education requires radical reform and appropriate reconstruction. The same primary education system will be introduced in the madrasahs as in all other educational institutions and Bengali will be the medium of instruction at all levels. Religious Instruction has been included as a compulsory subject in the syllabuses for classes VI to VIII. There will be provision for a second language from class VI such as English or Arabic, but those who will not read English as a second language must read it as an optional subject from class VII.

2. There will be provision at the secondary level for Religious Instruction as part of the vocational course. Religious Instruction will also remain as an optional subject in the general course of this level. Pupils will have the option of doing the three-year 'vocational' religious instruction course after having completed the eight-year primary education course. They will be required to read Bengali, Mathematics, General Science and English as compulsory subjects in class IX and X of this course. The later courses will be a three-year degree course and a two-year post-graduate course (11.3.-11.4).

2.3. 'Tol' education should be reformed in consonance with the proposed eight year primary course. The 'adya' course' should start from class IX instead of class VII and its duration should be three years. In classes IX and X of this course, pupils, like others, will read Bengali, Mathematics, General Science and English as compulsory subjects in addition to religious instruction. The later courses will be a three-year degree course and a two year post-graduate course (11.5.-11.8.).

CHAPTER XII TEACHER-TRAINING

The importance of teacher-training

12.1 The role of a properly-qualified teacher in our national life is of immense importance. The qualitative tone of an education system is determined by the professional competence of the teachers. In our country we have yet to fully realise that teaching is a profession and it requires training as much as any other profession. In fact, building, appliances and any such investment in the field of education will be of little value if appropriate measures are not taken for improving the standard of teachers. As a basic preparatory measure in our total effort to popularise and expand education in our country, the greatest stress has to be laid on increasing the number of properly-qualified teachers. It must be remembered that as the teacher is concerned with building the personality of the pupil, the former must not only acquire the required amount of knowledge but also a special ability in teaching in relation to the pupil's mental inclinations. Above all the teacher must have all the appropriate personal qualities required to build up the pupils as responsible citizen of the country through the particular medium of his instruction. At the same time we must remember that it is difficult to attract competent persons to teaching if there is no security of job and if mental satisfaction of the teachers is not properly catered for. Besides, the modern principles and methods followed in teacher-training in the developed countries of the world have to be adapted to our particular educational needs.

Teacher-Training to-day and in the past

12.2 At the beginning the knowledge of algebra, geometry, astronomy and history was regarded as the main constituent in teacher-training in our sub-continent and hardly any importance was given to teaching-methods. Teacher-training received its due importance for the first time in the 1854-Wood's Despatch the establishment of a normal school at Dacca in 1857 was its direct outcome. Later in 1869 and in 1882, two more normal schools were set up in Comilla and Rangpur respectively. The normal school at Comilla was transferred to Chittagong in 1885, in 1882 the Hunter Commission recommended a one-year training course for graduate teachers at secondary schools. The Dacca Teachers Training College established in 1909. The 1917 Sadler Commission laid special stress on the university's responsibility for the professional training and academic research of the secondary school teachers.

Training of primary Teachers

12.3 Up to 1950, there were two kinds of teacher-training institutes in Bangladesh for primary school teachers. They were previously known as Guru Training Schools and Moallem Training Schools. These institutes were of a low standard—the eligibility for admission was middle-vernacular passed.

Primary Training institutes:

12.4 To improve the standard of primary school teachers four primary training institutes were set up in 1951 as an experimental measure and the minimum educational qualification required for admission was matriculation passed.

The teacher-training institutes of low standard at this level were gradually abolished. At present there are 47 Government managed Primary Training Institutes in different parts of the country. Besides, the P.T.I. course is taught together with the B.Ed. course at the Mymensingh Teachers Training college for Women. Below are given the total enrolment and the number of teachers at the 47 P.T.Is as they stood in 1972-73.

The total enrolment and the number of teachers at different teacher-training institutes in 1972-73.

TABLE 12 a.

Name Institutes.	No. of Institutes.	Level.	No. of pupils.	No. of teachers
1. Primary Training Institute	47	Primary	6,700 (Women—1,000)	580 (Women—20)
*2. College of Education.	6	Secondary	673 (Women—108)	36 (Women—7)
3. Teachers Training Colleges.	6	Secondary	1,550 (Women—425)	98 (Women—24)

*Including Kab., Nazrul College at Dacca

Teacher Training at secondary Level

12.5 Up to 1956, the teachers who taught in classes VI to VIII—in secondary schools received their training in normal schools and the training was of one year's duration. According to the recommendation of the 1952 East Bengal Education Reconstruction Committee normal schools were designated as junior training colleges, although the duration of the course remained the same. Up to 1956 junior training colleges enjoyed autonomy, like Teacher Training Colleges, in matters of curriculum, examination and evaluation and the certificate given by them was called Higher Education Certificate. In 1967 the responsibility for taking the junior training college examination was transferred to the Education Board and the certificate was designated as Higher Secondary Education Certificate. As result the junior training colleges lost their professional distinctiveness, more so as the evaluation of their pupils was now dependent completely on a public examination. It may be mentioned here that before the junior training colleges were brought under the academic control of the Education Boards, their course was a terminal one. On the other hand the enrolment at these college was gradually reduced as the salary and other facilities of the teachers teaching in the lower classes of secondary schools were not attractive enough. The one advantage of junior training colleges coming under the academic control of the Education Boards was that the course become more popular as the successful candidates got the opportunity of being admitted to the first degree course. Nevertheless the desired objective was not realised as this change frustrated the aim of preparing qualified teachers for the lower classes of the secondary schools and encouraged the pupils to go in for higher education. The facilities of junior training colleges such as free tuition, scholarship and hostel accommodation only whetted the appetite of the pupils for higher education. It is needless to mention that the above mentioned course included in the higher secondary education group—met the same fate outside the junior training colleges. From 1972 a three-year Bachelor-in-education course has been introduced in the junior college including Kabi Nazrul college at Dacca re-designated as colleges of education. At present the minimum educational

qualification required for admission to these colleges is a second division in the Higher Secondary Certificate Examination. Apart from this, teachers for the secondary level are trained at the six teacher-training colleges. The duration of the course at these colleges is 10 months and the eligibility for admission is a graduation degree. The total enrolment and the number of teachers at colleges of education and teacher-training colleges in 1972-73 have been shown in table 12 (a).

In addition, the college of Physical Education, the Technical Teacher-Training College and the Institute of Education and Research are at present engaged in the work of teacher-training. The enrolment at the different courses at these institutes in 1973-74 and other data have been shown in Table 12 (b).

TABLE 12 (b).

The enrolment and other data at the Institute of Education and Research, College of Physical Education and Technical Teacher-Training College 1973-74.

Name of institutes.	No. of Institutes.	Name of course.	No. of Pupils.	Duration of course.	Eligibility for Admission.
1. Institutes of Education and Research,	1	(a) M. Ed. (one year)	48	1	B.Ed.
		(b) M. Ed. (two years)	252	2	Graduation
		(c) Ph. D	1	2	M.Ed.
2. College of Physical Education, Dacca,	2	B.P.Ed.	89	1	Graduation
		Diploma in Physical Education	113	1	Higher secondary School Certificate
3. Technical Teacher Training College, Dacca.	1	Diploma in Education (Technology)		1	Polytechnic Diploma.
		B.Ed. (Technology)	50	2	Diploma in Education (Technology)

Professional training and working-teachers

12.6 According to table 12 (c), there was a total of 1,54,000 teachers at the primary schools in 1973-74; of them only 55.3 per cent. is trained. The number of teachers at the secondary level was 82,000. Of them only 19 per cent is trained.

TABLE 12 (c)

The enrolment and the number of teachers at the primary and secondary level in 1973-74.

Level	School	No. of Schools.	No. of Pupils.	No. of teachers.	No. of trained teachers.	Teacher Student-ratio.
1. Primary School Classes-I—V.	Primary	38,000 (for girls 1600)	72,00,000	1,54,000	85,135	1:37
				(female teacher 4,000)	55.3 %	1:47
2. Junior High Schools classes-VI-VIII	Junior High Schools	25,000 (girls-374)	3,00,000 (girls 3,00,000)	17,186	15,606 (619%)	1:23
				(female teacher-2,244)		
3. Secondary Classes-VI-X	High school (classes-VI-X)	5,500 (for girls:500)	15,95,000 (for girls-1,75,000)	64,814	(female teacher-8,100)	

The supply of teachers :

12.7. The difficulty regarding projection :

There are varied uncertainties in our country regarding the number of teachers and of pupils. The elements of uncertainty are:—

- (a) the long-term predilection of population increase;
 - (b) the investment of necessary resources in the field of education;
 - (c) the fixing of a correct time-limit for implementation of universal primary education;
 - (d) the desirable teacher-student ratio and
 - (e) up-to-date and comperative and reliable data relating to education
- Nevertheless, the approximate estimate prepared on the basis of pre-determined manpower requirements and national objective can be considered as suitable for formulating schemes regarding the professional training of our teachers.

Primary level :

12.8. According to our recommendation primary education should be made free universal and compulsory throughout the country from classes I to V betwee 1976 and 1980 and from classes VI to VIII between 1981 and 1983. To realise this objective, 96000 additional teachers will be required for teaching in classes I to V and 45000 from classes VI to VIII in the next five years

The emergency training of teachers at the primary level :

12.9. At present the 47 primary training institutes can train about 8000 teachers annually. Similarly six colleges of education together can provide training for more than 2000 teachers per year. So the method shown in table 12-c. can be adopted for the emergency short-term training for two months for the large number of teachers that will be required to make primary education from class I to class VIII universal and compulsory between 1976 and 1983. The utmost caution should be observed at the time of appointing teachers on an emergency basis. The educational and physical competence of the teachers as well as their predilection should be appropriately determined so that after training they experience no difficulty in getting permanent employment.

TABLE—12.d.

The five-year emergency training programme for teachers for the introduction of free compulsory and universal primary education from classes I to VIII.

Level of Education.	Additional teachers required: (teacher-student ratio 1:40).	No. of Educational Institutes.	No. of trainees per year phased over five years.	Total No. of trainees: (after five years).
1. Classes-I to V.	96000	P. T.I. (47)	$47 \times 85 \times 5 = 19975$	$19975 \times 5 = 99875$
2. Classes VI to VIII.	45000	College of Education (6)	$6 \times 100 \times 5 = 3000$	$3000 \times 5 = 15000$
		T. T.	$6 \times 200 \times 5 = 6000$	$6000 \times 5 = 30000$
		College (6)	6000	30000
		E. E. C. (1)	$1 \times 80 \times 5 = 400$	$400 \times 5 = 2000$

- (a) A Two-month evening course has to be introduced in the 47 P.T.Is for the additional 95 thousand teachers required for teaching in classes I to V. At each P. T. I. a total of 425 teachers divided into five groups (each group consisting of 85 teachers) must be trained and thus each P. T. I. will be able to train 2125 teachers during a period of five years. Likewise all the P. T. Is. together will be able to train during a period of five years a total of 99875 teachers. These trained teachers can also be appointed to meet the shortage of teachers caused by natural wastage.
- (b) A two-month part-time/evening training course should be introduced five times a year in the College of Education, in Teacher-Training Colleges and in Bangladesh Education Extension Centre for the training of 45 thousand additional teachers required for teaching in classes VI to VIII. In this way, the six Colleges of Education, the six Teacher-Training Colleges and the Education Extension Centre will be able to train in five years 15000 (a total of 500 at each college in five groups of 100 each), 30000 (a total of 1000 in five groups of 300 each) and 2000 (a total of 400 in five groups of 80 each) teachers respectively.
- (c) A double-shift has to be started according to need in those local schools whose teachers will be engaged elsewhere following practical lessons as part of their emergency short-time training. As residential accommodation for teachers is not likely to be available in the educational institutions where they will undergo this emergency training, arrangement for their accommodation should be made in the other local schools, in college hostels, in community centres and in local establishments of people interested in education.
- (d) In addition, the 9 refresher course training centres situated in different parts of the country for the short-time training of primary school teachers can be used—together with their teachers—for residential facilities for teachers undergoing the above emergency training. The emergency training course can also be introduced in those selected schools providing the teacher-training course a recommended by us.

The introduction of teacher-training course in secondary schools :

12.10. Teacher-training is one of the courses recommended by us for inclusion in classes IX and X of secondary schools. This course can be introduced in a few selected schools where the required number of trained teachers, both male and female, is available. After the successful completion of this course, a person will be able to teach in classes I to V of primary schools. This will also enable women to adopt teaching as their profession in larger numbers. In all developed countries of the world the majority of teachers at the primary level are women. But in our country they constitute only three per cent of the total. It is needless to mention that women are more suitable for teaching at this stage because of their naturally affectionate disposition than men. Moreover the above course will be able to meet partly the demand for the large number of trained teachers, both male and female, which will be required for the introduction of compulsory primary education in the country. It can be mentioned in

this connection that the 1957 Education Commission also recommended the introduction of the above course. It is interesting to note that in the Soviet Union a three-four year teacher training course for the prospective female teachers at the primary level is current at the end of class VII or class VIII. Besides, the following recommendations of UNESCO, (1) regarding how to increase the number of female teachers at the primary level should be adopted.

- (a) Relaxation of the requirements of age and minimum educational qualification in the teacher training institutes.
- (b) All schools for girls should be exclusively staffed by female teacher.
- (c) The introduction of a short training course for female teachers.
- (d) Pay/Scholarship must continue to be paid to female teachers during training.
- (e) The provision of residential accommodation for female teachers.
- (f) The provision for special pay for female teachers from rural and under-developed areas.
- (g) The employment of retired but physically fit women as teachers.
- (h) The posting of both at the same place if the husband of the female teacher is also in service.

Training of teachers at the secondary level

12.11. A large number of teachers will require to be trained as an emergency measure for the introduction of the new curriculum proposed by us. The responsibility for this training will rest mainly on the Education Extension Centre and the Institute of Education and Research.

The training of teachers in technical and vocational courses

12.12 The training of teachers for vocational education, is an urgent and arduous responsibility. In this connection the following measures have to be adopted.

- (a) A department of education with responsibility for teacher-training should be opened in certain selected professional and technical institutes in the country (Chittagong Govt. College of Commerce, Dacca Textile Institute, The Institute of Leather Technology, Ceramic Institute, Graphic Arts Institute, Govt. Commercial Institute, Home Economics College, Agricultural College, Arts and Craft College, and selected Polytechnic Institutes, etc).
- (b) The elevation of the vocational courses for teacher-training now prevalent in the Bangladesh Education Extension Centre to a degree course after-providing necessary facilities.
- (c) To take the necessary step for the training of teachers meant for vocational education at Teacher Training Colleges, at the College of Education, and at the Institute of Education and Research.

12.13. A one-year diploma course and a two-year degree course are current at the Dacca Technical Teachers Training College for training of teachers of technical institutes. At present the above Technical Teachers Training College faces many difficulties for want of its own building and of a workshop. So the college must be extended and developed by transferring in to an appropriate place.

12.14 There is only one College of Physical Education in the whole of Bangladesh. The College offers two courses : a one-year degree course for graduates and a one-year diploma course for undergraduates. At present the college faces many difficulties. These can be removed as indicated below :

(1) By building a swimming pool without delay, (2) by providing an assembly hall and a projection room, (3) by building a separate gymnasium for girls.

It is desirable to buy land adjacent to the present college and build a separate building for the girls but under the same management. This will make possible the training of teachers, both male and female, in larger numbers and at the same time effect economy as the facilities available under the same management can be enjoyed equally by both the boys and girls. The construction work of the Physical Education College at Rajshahi should be expedited. Besides, two similar Colleges should be set up according to need in other parts of the country.

The current courses at teacher-training institutes

12.15. Although the responsibility of the higher teacher-training institutes is to train teachers for various subjects at the secondary level, they are unable to discharge the responsibility for lack of the required number of teachers and other facilities. As a result of the introduction of multilateral courses in secondary schools many practical subjects—such as special science agriculture, industrial arts, commerce, domestic science, etc, are taught there but there is hardly any provision for training in those subjects at the above institutes. At such institutes the pupil is required to select any two school subjects for training in teaching methods but this selection has till now been confined to such traditional subjects as language, history, geography, mathematics and science. The methods of teaching science at these institutes are the methods of general science, although special science—such as chemistry, physics, biology, optional mathematics is taught at the schools. There is no provision at all at the above institutes for training of teachers in the subjects mentioned above. Only elementary domestic-science is taught as a subject at Mymensingh Women Teachers-Training College. Recently commerce graduates are also getting admission to the training institutes but there is no provision there for teaching such commerce subjects at the school level as typing and shorthand, book-keeping, and commercial correspondence. So the commerce graduates are forced to get trained in teaching methods in such subjects as History, Bengali, etc, for the sake of passing the examination. It may be mentioned here that a pupil is expected to get trained in teaching methods in two such subjects which he has read up to graduation level. For, it is not possible for him to teach subjects with which he is not basically familiar just after learning the teaching methods in those subjects. But the training institutes allow him the option to learn teaching methods in those subjects which he has not read up to graduation-level. Geography can be cited as a special example. Those pupils who actually learn teaching methods in geography had studied geography only up to the level of matriculation. Moreover, there is no provision for training of

teachers in social science at training institutes. One great defect of the current courses at the above institutes is that the syllabuses for professional subjects are orthodox and unrealistic. Again, as foreign books written in a different social perspective are taught at these institutes the trainees cannot utilise their knowledge thus acquired in their actual teaching career.

The extension of facilities for teacher-training

12.16 The following measures should be adopted as soon as possible for providing opportunity to a large number of teachers for regular professional training:

- (a) The overall facilities at primary training institutes—such as classroom, hostel accommodation, library, laboratory, residential accommodation for teachers, etc., should be so extended as to make possible the necessary expansion of these institutes and in future permanent structures with corrugated-iron roofs and provision for vertical extension should be built for education institutions instead of semi-permanent structures for reasons of economy.
- (b) A few primary training institutes exclusively for women should be set up and provision made for their hostel accommodation in the other P. T. Is.
- (c) A P.T.I. should be started in Dacca city which has no P.T.I. now.
- (d) The facilities at teacher-training colleges and at the Institute of Education and Research should be extended and a department of education opened without delay at Rajshahi university to be later raised to an Institute of Education, Research.
- (e) The principles of teaching should be made up-to-date and constantly adapted to the requirements of our society; the properly qualified teachers at the teacher-training institutes should be granted necessary leave to write text books as there is very great dearth of suitable books and journals in Bengali in teacher-training subjects.

12.17. The prospective teachers should be trained to make various educational implements with their own hands after they have acquired the necessary theoretical knowledge. But in many cases it is not possible to give such training in a satisfactory manner for lack of suitable teacher of workshops and of necessary implements. So in most cases the pupils submit educational implements—such as charts, models and equipment—buying them from the market instead of preparing them with their own hands in order to pass examination. We therefore recommend that suitable provision should be made at the teacher-training institutes for the pupils to make these educational implements and handicrafts with their own hands through adequate provision of building and workshop, and employment of properly qualified teachers.

New horizon in teacher-training

12.18. The ten-month training course for graduate teacher at secondary schools was introduced in the sub-continent about a century ago. In the developed countries of the world, including England, a three-year training course simultaneously subject-based and profession-based has been current

now for quite a few years. The main aim of this course is to enable to respective teachers to acquire professional knowledge and at the same time to get trained in two special school subjects. Because of the longer duration of the course the teachers not only acquire the desired competence as a result of their training but they also develop an attachment to their profession. For this purpose, the 1957 Education Commission had recommended the introduction of a three-year degree course in teacher-training after an eleven-year secondary education system for teacher at the secondary level. We agree with their recommendation. From 1972 the five junior training colleges in the country have been transformed to Colleges of Education with provision for a three-year degree course in teacher-training. We endorse this timely decision of government. According to us these colleges, have great possibilities before them, specially in consideration of the urgent necessity for training teacher in science and in technical and vocational subjects at the secondary level. But it is matter of great regret that these colleges at present face great difficulties in regard to building, library, laboratory and hostel accommodation. We therefore recommend that for the sake of expansion and development of teacher-training, the above colleges should be raised to full-fledged degree college and that government should take urgent measures to solve their problems. Such teacher-training institutes should be set up in larger numbers in a country like ours. We also recommended that a three-year teacher training course—like the one prevalent in the colleges of education should be gradually introduced in our teacher-training colleges and the inadequate ten-month course abolished.

Training while working;

12.19. The necessity for training for working teacher, in the field of professional education is as great as the need for pre-profession training. The general practice is to arrange for a short-time training every five-years for fully training teachers and educational administrators so that they continue to be familiar with new methods and abreast of their subjects. As a very large number of teachers in our country do not have pre-profession training, the need for short-time training for them is very great.

Primary level:

At present there is no special provision for training for working teachers at this level. There was provision for short-time training at the nine refresher course training centres, set up long ago, for mainly non-matriculate teachers and teacher without training. The need for these centres arose because the minimum educational qualification for admission to primary training institutes was determined to be matriculation-passed. In matters of teacher, class-room, office accommodation, staff and other implements, their condition is highly unsatisfactory. So it is not at all possible to effectively supervise a regular training course for primary school teachers at these centres. We therefore recommend that after using these centres for the emergency training of primary schools teacher previously mentioned, the centres attached to the P.T.I.s should be absorbed P.T.I.s concerned. The responsibility for training the working primary school teachers must primarily rest with the proposed Academy of Primary Education. Besides, the P.T.I.s also have to take appropriate measures and play an effective role in this regard.

12.20. Secondary level:

The first realistic step taken for the training of working teachers and educational administrators at the secondary level was the setting up in 1959

of Bangladesh Education Extension Centre. A brief summary of the centre's activities from 1960 up to now (May, 1974) will be found in *Table. 12.f*. The centre should be properly extended and its activities should cover sub-divisions and thanas. In addition, a new education extension centre should be set up in Rajshahi division. Two sub-centres need to be established in Chittagong and Khulna divisions. Urgent steps need to be taken to make possible effective teacher-training by providing necessary facilities to all teacher-training Colleges, including the education extension centre. The universities too should come forward for the training of university and degree college teachers (including the principals) through summer schools, seminars and work-shops, etc. These training courses should be made popular by granting additional increments, advance pay, travelling allowances, etc. to the participating teachers and educational administrators on the basis of semesters.

TABLE. 12.e.

A brief summary of the different training activities from 1960 to March, 1974 at the Bangladesh Education Extension Centre.

Activities:	No. of activities.	No. of teachers and educational Administrators.
Short-term:		
1. Educational Adm. (school, inspector at college)	68	2843
2. Science and Mathematics (school and college)	95	1991
3. Vocational Course; Agriculture, Commerce, Home Economics, Industrial Arts, etc.	126	2218
4. Bengali, English, Social Science and other subjects.	204	4562
Long-term:		
1. Agriculture	10	129
2. Technical, Industrial Arts and Commerce	5	40

National Training Advisory board:

12.21. It is necessary to set up a National Training Advisory Board for the appropriate co-ordination and supervision of different training programmes organised by different institutions. Many teachers are not keen on training as this is not compulsory now. To counter this, there should be a contract between teachers and the employing agencies concerned at the time of their appointment that they will be under an obligation to attend a regular training course and the agencies concerned will arrange leave for them for this purpose. Simultaneously the education department has also to be active in this matter.

The training of teacher without professional training:

12.22. Many working teachers at both primary and secondary levels are without any professional training. The following measures should be taken in relation to the training of these teachers in the next ten years.

- A special short course for those under 40 and having a minimum of five years teaching experience.
- A short-time training course for those teachers who are over 40 and have a minimum of five-year teaching experience.
- Full part-time or correspondence course for those under 40 and having less than five years teaching experience.

Short-time correspondence course for teacher-training

12.23. It is a very time-consuming process to train the large number of untrained working teachers in our country through a regular course. So part-time or correspondence course in teacher-training must be introduced for them as soon as possible. The responsibility for this should be immediately given to a few selected P.T.s, Teacher-Training College, the College of Education, the Education Extension Centre and the Institute of Education and Research.

Educational Research

12.24. The reason why our education system faces so many complex problems and we are baffled in our attempts to find solutions for them is the lack of real educational research in our country. We make the following recommendations to remove this lack without delay :

1. A National Educational Research Council should be immediately set up in our country on the model of the Academy of Pedagogical Science in the Soviet Union. An Advisory Committee consisting of representatives from different teacher-training institutes will assist this Council. The Council will co-ordinate the different schemes and activities relating to educational research and will recommend for necessary apportionments of money for crucial projects of institutional research of national importance. In addition, the Council will publicise the different research projects undertaken by or for it.
2. The different aspects of educational research—such as examination and the method of evaluation, wastage at different levels of education, educational-economy, student-unrest, school building, educational schemes and projects, education for the physically and the mentally handicapped, survey of educated manpower, curriculum, counselling and guidance, text books and educational implements must be encouraged on a priority basis.
3. The required number of teachers books and journals and other implements together with the necessary amount of money must be provided for research work at all the teacher-training institutes.
4. There must be provision for teaching the scientific method of research at each of the institutes which award Bachelor, Master and Doctorate degrees.
5. National awards must be instituted for research of high standard and outstanding merit.
6. It must be ensured that the institutes having the responsibility of formulating curriculum and preparing text books are abreast of the knowledge derived from modern research in these field and the research projects of these institutes relating to their particular activities must be encouraged.
7. Educational institutions should be encouraged to give special importance to 'action research' or applied research and to publicise the outcome of their research through newspapers and journals and seminars and discussions.

Raising the standard in teacher-training institutes

12.25. It is not at all possible to improve the standard of teacher-training without first improving the standard of the institutions engaged in professional training.

Primary level

12.26. The following measures should be adopted for the development of primary training institutes:

- (a) These institutes should be regarded as colleges.
- (b) There has been no change in the courses followed at these institutes after they were set up twenty-years ago. These courses must be appropriately changed without delay.
- (c) The educational qualification of instructor at these institutes is now equivalent to that of the secondary school teachers a graduation degree with B.Ed. This educational qualification is not at all satisfactory. This should be raised to graduation with B.Ed. and a Master degree in training or in a school-subject. The pay scale of teachers so qualified should be equivalent to that of college teachers at government arts and science colleges. It is desirable to give them also two initial advance increments.
- (d) More class-rooms, a separate arts and crafts-room development of library and laboratory facilities at these institutions are also urgently necessary.
- (e) There should be provision for accommodation at campus for all pupils and teachers. Specially, a hostel for female pupils must be built on a priority basis.
- (f) A larger number of scholarships with an increased rate and provision for loans must be provided for the pupils. One-fifth of the loan will be liquidated after each five-years of service. Each pupil will be compulsorily required to teach for three-years in a primary school before entering a higher course.
- (g) The present one-year P.T.I. course, because of its inadequacy must be immediately raised to two-years.
- (h) There should be provision for admission to the Bachelor in Education course for the trained teachers having taught in a primary school for at least three years through a full or part-time or correspondence course.
- (i) An Academy of Primary Education and a Board of Primary Education should immediately set up in the country. The responsibility of the Academy will be :—
 - (1) To arrange for training and refresher courses for primary school teachers and P.T.I. instructors, (2) the formulation of curriculum and the writing of text books and their evaluation for the P.T.I.s, and (3) investigation and research regarding primary education. The proposed Board will be under the Academy and will help in conducting the P.T.I. examination. The Board will also award certificates to the candidates passing the P.T.I. examination.

Secondary level

12.27. At present the teacher-training institutes at this level face tremendous pressure for admission. As a result their existing facilities prove to be inadequate in relation to the number of pupils. They should no longer admit more pupils without providing the required number of teachers and adequate facilities in class-room, library, laboratory, hostel and scholarship, etc. Otherwise, their standard of training is bound to deteriorate fast.

In this connection it may be mentioned that the teacher-student-ratio in our teacher-training institutes is highly unsatisfactory. In our opinion this ratio, apart from the Principal and the Vice-Principal, should be 1:15.

12.28. The present educational qualification of teachers at teacher training college is a Master degree in a school subject together with a B-Ed. degree. But in fact this should be a Master degree in teacher training as well as a Master degree with Honours in a school subject. Apart from this, a few teachers should also have a Doctorate degree. All the teachers should preferably have experience in teaching. Their salary should be equivalent to that of similarly qualified university teacher. At present the prospect of promotion for qualified teacher at these institutes is very limited. So it is necessary to create immediately posts in senior education service in large numbers at these institutes as well as at the Education Extension Centre. There are no posts of professors now at these institutes, although many teachers as well-qualified as the university teachers are to be found there. Posts of professors should therefore be created at these institutes as well as in the other government colleges. Provision for a large number of scholarships at an increased rate and for loans should be made for the pupils and two advance increments for suitably qualified teachers. The majority of the teachers at the Institute of Education and Research and at the Education Extension Centre, should preferably have a doctorate degree.

The Post-Graduate level

12.29. No one with a Bachelor degree in training should be admitted to the Master degree course in training if he does not have teaching experience of at least three years. Similarly no one, who has no teaching experience of at least five years, should be admitted to the doctorate course. The Master or the Doctorate degree course should not be allowed to continue at any higher teacher-training institutes if there is not a sufficient number of suitably qualified teachers there. Only meritorious pupils should be admitted to the Master and Doctorate degree courses in training so that the standard of teacher-training can compare favourably with that of any subject taught at the university.

12.30. The Institute of Education and Research was set up in 1960 under Dacca University for the pursuit of higher knowledge and research in teacher-training. At first a research-based M.Ed. degree course was introduced there, now there is also a doctorate degree course. A one year M.Ed. course and a two-year doctorate course are both prevalent at the Institute now, in addition to a two-year diploma course in industrial arts. Recently a ten month diploma course similar to the B.Ed. course in teacher-training has also been introduced. The Institute was set up for experiments and high quality research in education. But there has not been much progress in the realisation of this aim so far. So the research programme at the Institute must be more activated. We at the same time feel that certain changes in the Institutes curriculum are also desirable. The Post-graduate degree course should be of a sufficiently high standard and related to the requirements of society. So only meritorious teachers with the B.Ed. degree and having at least three-year experience of teaching and educational administrators should be admitted to the M.Ed. course. The two-year M.Ed. course now current for pupils who do not hold the B.Ed. degree should be immediately abolished. Only experienced, competent and intelligent pupils should be admitted to the Doctorate course. Although the two-year course in industrial arts was originally introduced for training teachers at secondary schools in that subject, the course has lost much of its effectiveness as no teacher-training subject has been incorporated in it. The main aim of the pupils doing this course, in spite of the free tuition and government scholarship and residential accommodation enjoyed by them is to get admitted to the M.Sc. course or seek employment elsewhere instead of serving as teachers in secondary school. We recommend that the two current diploma courses be abolished without delay and a three-year B.Ed. degree course in teacher-training in different school subjects be introduced instead. The above course can easily be introduced with the help of the other departments of the University. In addition, other courses such as a diploma course in counselling and guidance for experienced B.Ed. teachers and educational administrators should be introduced at this Institute. There should also be provision for a training course for educational administrators through a part-time or a correspondence course. In addition, the Institute must take the responsibility for examination and its evaluation, counselling and guidance and constant and fruitful research on the different problems of our education system. This will require provision of more staff and larger appropriations of money.

Association of Old Students

12.31. It is necessary to start an association of old students at every teacher-training institute to make the teacher-training programme progressive

and dynamic. It would be easier to find solutions for the various educational problems through exchange of ideas between old students (including those now employed as teachers) and the teachers at these institutes.

Inter-changeability of posts and sharing of experience :

12.32. The programme of teacher-training institute should be related to reality and connected with the actual teaching at schools. For this purpose, the Headmasters and other teachers of schools, the professors at teacher-training institutes and inspecting and supervising officers should be able to share their experience with one another and inter-change their posts. The assistant headmasters and headmasters of secondary schools should also be able to exchange their posts with those of the officers in the directorate or the inspectorate and professors at teacher-training college with other professors.

Cumulative Record :

12.33. There must be a cumulative record for every pupil at the teacher training institutes and he must be made familiar with its method. The trainees also must maintain such records of their pupils while giving experimental lessons.

Practical lessons :

12.34. The importance of practical lessons in teacher-training is immense, but there is a noticeable slackness in this regard in our teacher-training institutes. We feel that there should be full opportunity for prospective teachers to acquire appropriate ability in direct teaching. At the beginning, the professors will give model lessons in their own subjects before the assembled pupils and teachers. Similarly, every pupil must give lessons in a fixed subject which will be discussed and criticised by the other pupils and teachers. After this preliminary preparation the pupil will give an experimental lesson in the class-room under the direction of professors and the regular class-teacher. For this, provision should be made for a fixed allowance for the class-room teacher. The duration of practical lessons should be three months in primary training institutes and training colleges six months in the colleges of education.

12.35. There should be a national association of teachers of all teacher-training institutes for professional advancement, for the overall development of teacher-training, for the preservation of professional ethics and for public relations.

Attracting meritorious pupils to teaching :

12.36. At present the meritorious pupils are not keen on teaching as a profession. The educational qualification of the pupils under training at a particular institute have been shown in table 12.(f). It is not possible to improve the standard of teaching, without competent teachers. So the teachers at the secondary schools must make special efforts to attract meritorious pupil to teaching.

TABLE 12.(f)

Sample of the educational qualification of the pupils under training at Dacca Teachers'-Training College (1973-74).*

Educational qualification.	1st Division.	2nd Division.	3rd Division.	Total.
B.A. ....	..	49	154	203
B.Sc.	7	51	69	127
B.Com. ....	..	17	31	48
B.A. Honours.	..	2	..	2
B.Com. Honours.	..	..	..	..
B.Sc. Honours.	..	..	..	..
M.A. ....	..	6	1	7
M.Sc.	1	3	..	4
M.Com. ....	..	..	..	..
Total ..	8	128	255	391

*Including those who passed the compartmental examination.

The training of teachers at the pre-primary level and for the handicapped :

12.37. At present there is no provision for training of teachers at the pre-primary level and for the physically and the mentally handicapped. We, therefore, recommend that there should be provision in the department of education at the Institute of Education and Research and, at our University for training teachers for the physically and the mentally handicapped and inspectors or supervisor for pre-primary education. In addition, the Mymensingh Teachers'-Training College should arrange for the training of inspectors, supervisors for pre-primary education. Some selected P.T.Is. should also introduce a one-year training course, for teachers, both male and female at the pre-primary level.

Mymensingh Teachers'-Training College :

12.38. This college was founded in 1948, when it was known as Primary Training College, to serve as an institute for staff-training. Its aim was to train prospective instructors for the P. T. Is. and inspectors for primary education and to carry on research about the different aspects of primary education. Up

to a few years after the establishment of primary training institutes, this college had the responsibility for conducting the final P.T.I. examination and for general supervision of the P.T.Is. But as the number of P.T.Is increased it became increasingly difficult for this college to discharge its particular responsibility of conducting the P.T.I. examination and supervising the P.T.Is. for want of the necessary number of officers. So this responsibility was transferred to the Deputy Director of Public Instruction concerned. It is needless to mention that it was not possible for the college to carry on its allotted research work for want of qualified teachers in the required numbers, for want of books and for lack of money. We recommend that provision should be made at this college for supervising research regarding primary education and all necessary facilities for this purpose made available to it.

Extra Curricular Activities in Teacher-Training

12.39. The aim of teacher-training is not only to promote knowledge of the relevant subjects but also to enable the pupil acquire wide general knowledge. So to ensure that the school is able to maintain a fruitful relationship with society as a whole through broad-based work-programme, it is necessary to make the prospective teachers aware of the full importance of this relationship. For this, a teacher-guardian association should be set up at every school and opportunity provided to the teachers to acquire experience in holding the following 'days' and to take an active role in adult education:—

Primary School Day

Secondary School Day

Rural Youth Day

Prospective Farmers Day

Prospective Teachers Week

Prospective Domestic-Science-Trainees Week

Prospective Nurses Week

Education Week

New Farmers Week

National Libraries Week

National Childrens Books Week

National Fire-Extinguishing Week

National Youth-Scientists Week.

Appropriation of money for Teacher-Training

12.40. It is not possible to train the large number of teachers required for the country without appropriating the required amount of money for teacher training. The appropriations money over the past few years under this head are shown in Table 12.1g). We recommend that an adequate amount of money be allotted to teachers training because of its immense importance in our whole education system.

TABLE 12.(g).

The Expenditure for teacher-training as part of the annual financial appropriation for education :

Financial year.	Total amount of money appropriated for education (in millions)	Amount of money Allotted for teacher-training (in millions)	Percentage.
1948-49	24	2.1	8.90
1959-60	79	1.2	1.50
1967-68	371	5.6	1.50
1969-70	211.937	4.02	1.90
197 -71	355.622	3.16	0.90
1971-72	366.916	4.83	1.30
1972-73	437.202	5.66	1.30
1973-74	534.448	6.83	1.20

A National Advisory council for Teacher-Training

12.41. To advise the Ministry of Education in all matters of teacher-training a statutory National Teacher-Training Advisory Council should be set up. Representatives from the following organisations will be the members of this Council :

- Education Ministry
- University Grant Commission
- Department of Education
- Universities
- Education Boards
- Institute of Education and Research
- Teacher-Training Colleges
- College of Education
- Primary Training Institutes
- Bangladesh Education Extension Centre
- Academy of Primary Education
- The Teachers Associations concerned.

One of the functions of the Council will be to make an on-the-post enquiry about how the teacher-training institutes are functioning, every few years, to see that the required standard is maintained.

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TEACHER TRAINING

SUMMARY

1. The role of a properly qualified teacher in our national life is of immense importance. The qualitative tone of an education system is determined by the professional competence of the teachers. In fact, building, appliances and any such investment in the field of education will be of little value if appropriate measures are not taken for improving the standard of teachers. As basic preparatory measure in our total effort to popularise and expand education in our country, the greatest stress has to be laid on increasing the number of properly-qualified teachers. Besides, the modern principles and methods followed in teacher-training in the developed countries of the world have to be adopted to our particular educational needs. (12.1.)

2. The following measures have to be adopted for training the large number of teacher which will be required to make the primary education from class I to class VIII universal and compulsory between 1967 and 1983:

- (a) A two-month training course should be introduced at the 47 P.T.Is. Each P.T.I. should arrange this course five times (each time for 85 teachers) a year. In this way the 47 P.T.I. will be able to train about 10,00,00 teachers in five years.
- (b) A similar training course for graduate teachers should be introduced at the colleges of education, teacher-training colleges and at the Bangladesh Education Extension Centre. The six colleges of education, the six teacher-training colleges and the Education Extension Centre should be together able to train about 45 thousand teachers in five years.
- (c) An emergency training course must also be introduced at the refresher course training centres and at those selected schools where the teacher-training course will be available. (12.2.9.)

3. A vocational teacher-training course has to be started in few selected secondary schools (classes IX, X and XI). This will enable women to adopt teaching as their profession in larger numbers. (12.10.)

4. To introduce the Proposed new curriculum, an emergency training course has to be started for large number of teachers. The responsibility for this training will rest mainly on the Education Extension Centre and the Institute of Education and Research. (12.11.)

5. Necessary measures have to be taken by all professional and technical institutes and teacher-training colleges to train teachers of vocational subjects at the secondary level. The vocational teacher-training course now prevalent at the Education Extension Centre should be raised to the degree level. (12.12.)

6. The Technical Teacher-Training college at Dacca should be transferred to a suitable place and arrangement made for the construction of its own building and work-shop and the development and expansion of its curriculum. (12.13.)

7. The Physical Education College at Dacca should be adequately extended and improved. It is desirable to build a separate building for girl students there. The construction work of the Physical Education College at Rajshahi has to be expedited and two more Physical Education Colleges should be established in other parts of the country according to need, (12.14.)

8. The courses at Teacher-Training Institutes should be reformed, and made up to-date. (12.15.)

9. The following measures have to be taken immediately to provide opportunity to a large number of teachers for professional training :

- (a) A few P.T.Is. must be set exclusively for women and hostel accommodation provided for them at the other P.T.Is.
- (b) A. P.T.I. should be set up in Dacca city, which has no P.T.I. now.
- (c) The over all facilities at the P.T.Is. should be so extended as to make possible their necessary expansion.
- (d) A department of education should be set up immediately at Rajshahi University and gradually raised to an Institute of Education Research. The facilities at teacher-training colleges and the Institute of Education and Research must be extended.
- (e) Text-books in Bengali have to be prepared for teacher-training institutes. For this, qualified teachers, necessary educational implements, work-shop and adequate money have to be provided. (12-16-17.)

10. It is necessary to solve early the various problems faced by the five junior training colleges now raised to colleges of education and which provide a three-year degree course in teacher-training. As the present ten-month course at teacher-training colleges is extremely inadequate, it must be gradually replaced by a three-year training course. (12.18.)

11. The responsibility for training the working primary school teachers must primarily rest with the proposed Academy of Primary Education. In addition, the P.T.Is. can also make suitable arrangement for this. (17.19.)

12. The existing Education Extension Centre should be further developed and its activities extended for providing adequate training to the working secondary school teachers. It is necessary to set up a new Education Extension Centre at Rajshahi Division. Two sub-Centres should also be opened in Chittagong and Khulna Divisions. The Institute of Education Research and Teacher-Training Colleges will also be required to make suitable arrangements for this training. Those participating in this training should be awarded certificates, additional increments, advance pay and travelling allowance on the basis of semesters to make it popular. (12.20.)

13. It is necessary to set up a National Teacher-Training Advisory Committee to co-ordinate and supervise the different training programmes arranged by different institutions. (12.21.)

14. Appropriate arrangement for training must be made for teachers without any professional training. For this purpose, a part-time or correspondence course can be introduced. The responsibility for this training should be given to a few selected P.T.Is Teacher-Training Colleges, Colleges of Education, Education Extension Centre and the Institute of Education and Research. (12.22-23.)

15. It is necessary to set up a National Educational Research Council to co-ordinate and supervise the different schemes and activities relating to educational research, (12.24.)

16. The following measures should be taken for raising the standard of teacher-training at the primary level:

- (a) The primary training institutes have to be raised to the college level and their courses appropriately changed.
- (b) More class-rooms have to be provided and library and laboratory facilities increased at these institutes.
- (c) Provision must be made for accommodation of pupils in the campus and for hostel accommodation for female students.
- (d) A larger number of scholarships with provision for loans should be made available to the pupils.
- (e) The present one-year P.T.I. course should be raised to a two-year one.
- (f) Opportunity should be provided to suitably qualified teachers having taught for three years in a primary school for admission to the B.Ed. Course. (12.25-26.)

17. The teacher-student ratio at the teacher-training institutes is at present highly unsatisfactory. This should be apart from the Principal and the Vice-Principal, 1:15. (12.27.)

18. The educational qualification of the teachers at the teacher-training institutes should be raised and more senior educational service posts, including posts of professors, created for degree-level teacher-training institutes. (12.28.)

19. Only those teachers with three years teaching experience at higher teacher-training institutes should be admitted to the M.Ed. course and these with five years teaching experience to the Doctorate Course. (12.29.)

20. The present work-programme at the Institute of Education and Research should be reconstructed after adoption of suitable measures in accordance with the country's requirements. (12.30)

21. A degree course in teacher-training subjects, together with a separate department, has to be started at our universities. (12.31.)

22. Each teacher-training institute must be compulsorily required to establish a direct connection neighbouring schools through an appropriate Education Extension Programme. (12.32.)

23. A wide use of the Radio and Television is desirable in all extension work connected with teacher-training. (12.33)

24. An association of old students should be started at every teacher-training institute to make the teacher-training programme progressive and dynamic. (12.34.)

25. Sharing of experience and exchanging posts between school teachers and teachers at teacher training institutes on the one hand and the officers of the inspectorate on the other are necessary to make the work-programme of teacher-training institutes realistic. (12.35.)

26. A cumulative record of the pupils should be maintained and the principles of practical lessons suitably modified to raise the standard of instruction at the teacher-training institutes (12.36-37.)

27. There should be a National Association of all teachers belonging to teacher-training institutes for their professional advancement. (12.38.)

28. The authorities concerned should try hard to attract meritorious pupils beginning from the secondary level, to teaching.(12.39.)

29. The responsibility for training teachers for the handicapped and training inspectors for pre-primary education must be taken by the Institutes of Education and Research and the teacher-training colleges. A one-year course should be started at a few selected P.T Is for the training of teachers both male and female, at the pre-primary level. There should be provision for supervising educational research regarding primary education at Mymensingh Teacher-Training College. (12.40-41.)

30. Teachers should be given the opportunity to acquire experience in holding special 'days' and 'weeks' and to take part in organisational work relating to education so that a meaningful relationship is established between the school concerned and society as a whole. (12.42.)

31. Adequate money should be provided to teacher-training because of its immense importance in our education system. (12.43.)

32. A National Training Advisory Council should be set up to advise the Ministry of education in all matters relating to teacher-training. (12.44.)

CHAPTER XIII

HIGHER EDUCATION AND RESEARCH

The aim and objective of higher education

13.1. The progress and development of a modern society depends to a large extent on the nature and standard of higher education. For, the role of higher education is to prepare competent knowledgeable and far-sighted people for assuming various higher responsibilities, to create such an educated group in who the attachment to work, love for learning, freedom of thought, a sense of fairness and the humanitarian instinct are fully developed; to open up new horizons of knowledge through research and to analyse economic problems and indicate their solutions.

13.2. It is necessary to-day to make higher education suitable for a large number of pupils in many different disciplines. The necessity for the spread of higher education becomes greater with the increase in population. Likewise the standard of higher education increases with the development of society. It is, therefore, necessary to extend the scope of educational courses, to provide for instruction and training for a larger number of pupils, and to raise the standard of education and maintain it.

13.3. Higher education has also an added responsibility, apart from providing instruction in some particular branches of knowledge. Higher education helps in building up a truly educated man. That is, higher education creates an awareness among the truly educated about the importance of tireless activity, of an uninterrupted acquisition of learning of active effort, of honesty of a sense of justice of freedom of thought and of social problems and also impels them to find suitable solutions for the problems which face them. It can be stated in brief that higher education plays a crucial role in the acquisition of learning and in the formation of character.

13.4. A suitable system of higher education not only meets the present requirements of society, but also provides a direction for national progress and necessary inspiration to achieve it. Higher education helps to extend the limits of knowledge for examining and explaining the different aspects of human life and of nature. Higher education also helps in setting the goal for and formulating national planning through practical application of knowledge for solving the every-day problems of life.

13.5. No country has been able to achieve progress quickly without an educational system of high standard. The capacity for work of our people is our greater national resource. Our economic and social progress is dependent upon how we utilise this national resource for our development. The significance of this is that provision must be made for higher education for every one, to whatever level of society he may belong, who has proved his ability to be benefited by it. We must discover our talents and create an appropriate environment for their full development.

13.6. Research plays a special role in higher education. So due importance must be given to research simultaneously with giving teaching our full attention. Research makes teaching productive, makes substantial addition to knowledge and enriches human life through its discoveries in important fields of science. Whenever we think of educational development we must think both of teaching and research. The fundamental principle of higher education is based upon this dual role.

Higher education at present

13.7. Our main consideration now is to examine the teaching at Dacca, Rajshahi, Chittagong and Jahangirnagar Universities and the undergraduate and post-graduate courses taught in the approved colleges of the first three Universities.

13.8. Our higher education faces a great crisis to day as a result of the long colonial rule. The higher education prevalent today is unable to meet the requirements of society because it is not related to social realities. In our country higher education is today merely a passport to government service. So the effectiveness of this education ceases with the provision for a job or when the possibility for it is completely gone. What remains for the majority is the course of unemployment. The existence of unemployment among the highly educated in a society where about 80 percent is illiterate shows the complete ineffectiveness of our whole education system.

13.9. The education system at the higher level has recently greatly expanded in our country. New colleges are being set up without providing necessary facilities and existing colleges extended. This thoughtless and unsystematic expansion has resulted in the fast deterioration of educational standards. In the institutes of higher learning, there is want of the necessary number of teachers of the required apparatuses and instruments in the laboratory and of adequate facilities in the library. It is, therefore, not surprising that the standard of higher education is deteriorating.

13.10. The total number of pupils at the under graduate level is about 1,25,000 in the whole country. Of this number, 35 thousand belong to science, 30 thousand to commerce and the rest to Arts. But this proportion is not at all commensurate with the actual requirements of society and of our national life. Such a suicidal state of affairs in the field of education must cause infinite anxiety to any society.

13.11. For the point of view of standard and quality, the present system of higher education in our country must cause the greater worry. The number of pupils in the approved colleges is far larger than that at the university. But the standard of the majority of these colleges is lamentably low. A recent survey shows that in 1970 the teacher-student ratio at Dacca university was 1:22, whereas in the approved college it was 1:50. Not only this, the amount spent for each pupil in the approved colleges was only Taka 220 whereas it was Taka 900 at the Dacca university.

13.12 The present method of higher education in our country has several defects and deficiencies. First, this method encourages cramming instead of approved ways of acquiring knowledge. Secondly, only examination results are taken into account to determine the pupil's qualitative excellence:

hence only the cramming capacity of the pupil is actually assessed. Thirdly, as the number of meritorious pupils actually benefitted by higher education is very limited, it is not possible to generally maintain high standards at this level. Fourthly, as very few teachers do any research work, the knowledge derived from research cannot be properly related to teaching. Apart from this the unsuitable educational environment, the want of educational implements and the unsatisfactory teacher-student ratio are actual impediments in the way of acquiring the right type of higher education. As a result, the present standard of higher education in our country is very low indeed.

13.13. As the present school education system is not related to the requirements of society, it puts a great pressure upon the standard of higher education. As the pupils passing out of the secondary education system do not have much else to do, they unnecessarily crowd the institutes of higher education. Moreover the majority of them belongs to the arts group. This situation is hardly found in the prosperous and developed countries of the world. On the other hand the recent setting up of colleges of low standard and the expansion of existing colleges to meet the tremendous pressure for admission have both adversely the standard of higher education. To raise the standard of higher education and prevent wastage, a highpowered Investigation committee-consisting of members from the education Ministry, University grants Commission, the Universities, Education Boards and Colleges should be set up immediately to make an on-the-spot inquiry about the actual condition of the approved colleges. The number of pupils, the number of suitable teachers, teacher-student ratio, school building and class-room laboratory, library, hostel, residential accommodation for teachers the playing field and other related matters should form the subject of the inquiry. In addition, the Committee will be required to investigate the position arising out of the introduction of honours and post-graduate courses in certain degree colleges. It is needless to mention that effective steps should be taken regarding these colleges on the basis of the findings of this Committee to ensure the improvement of higher education.

13.14. It will appear from what has been said above that the complete reconstruction of our higher education is an imperative necessity. We have discussed the steps to be taken and the arrangements made for realisation of the objective of higher education in subsequent paragraphs of this chapter.

Subjects of study

13.15. Higher education is intimately connected with the national economy with the future of the nation. So our institutes of higher learning must be co-related to our national economic planning in the perspective of requirements for educated manpower. The economic aspect of our life is a matter of vital importance. We must therefore pay greater attention to the economic problems of our country. We have to make a full survey, in particular, of rural economy and the problems relating to agricultural economy. The geography of dry, fertile and moist areas has to be studied carefully. In the field of natural science, geology, mineralogy, and aquatic animal life must be studied with special care. Besides, the possibility of using solar energy and the energy from the winds and oceanic waters for our industrial development has to be investigated. We must be properly aware of contemporary events in the fast changing world of to-day. We need such men for the newspapers, the radio, the cinema and for public

relations who will not only know how to collect news and present it skillfully but will also be well-informed about matters of general interest.

Besides, we also require trained men in public relations. So a separate department and institute should be set up for the communication media. Administration, industrial management, social science, domestic science and social work should all be given proper attention. Considerable neglect is shown in our country to certain subjects whose study is not economically remunerative. Philosophy and Psychology can be cited examples. We must realise that we need philosophers and writers as much as we require chemists and mathematicians. The need for the former will always remain. At the university level, our national language Bengali must be taught properly and its study greatly intensified. Improved teaching methods and more research will be required for the proper teaching of our national language. At the same time we must make provision for the study of the main modern languages. Our institutes of higher learning, including universities, must as a whole pay greater attention to social problems.

13.16. According to our recommendation a few thousand degree holders in library science will be required for our colleges and universities and for the management of our libraries. The present facilities in this regard are extremely inadequate. There is Master degree course and a Post-graduate diploma course in library-science only at Dacca University. A Master degree course and Post-graduate diploma course should be started in all general universities to meet the demand for librarians for our colleges and universities.

13.17. The syllabuses in certain arts and science subjects in the field of higher education have remained unchanged for many years now and in many cases require to be made up-to-date. It has to be ensured that the curriculum and syllabuses in the field of higher education do not remain unchanged for long. The universities specially have to reconsider their curriculum and syllabuses in the light of new knowledge as it emerges. We must be careful to see that we are able to make significant contributions to modern knowledge and research and that the outside world finds our educational standards acceptable.

Eligibility for admission and the degree course

13.18. One of our main national aims is to build up a society free from exploitation. The door to higher education must be kept open for pupils belonging to all levels of society. Pupils for higher education must be carefully selected. Intelligence, educational ability, experience of productive and social-welfare work and results of the selection test should be important factors in determining eligibility. Those pupils who will prove themselves able to be benefited by higher education must be allowed to continue it irrespective of their financial condition. A meritorious boy belonging to a lower-middle class family should not face any difficulty in pursuing the higher education because of his poverty. The colleges and universities must together devise the fairest way of selecting pupils for higher education. The pupil's past academic performance, his personality and his mental predilection have all to be taken into account. The special aptitude of a pupil for one or more subjects of higher education should be objectively assessed to determine his suitability for higher education.

13.19. A pass course and an honours course at the first degree level may both be provided in degree colleges. At the universities, however, only the honours course should be allowed at the first degree level. It will be necessary

to introduce a three-year degree course of high standard for the pupils passing out of the experimental eleven-year secondary education system. The duration of the pass degree course will be two years and of the honours degree course three years. The pass course must be such as to enable the pupils to derive fruitful knowledge regarding certain related subjects. All the subjects must be given equal importance. Ordinarily, the pass course will consist of three subjects. The university authority will determine the number of subjects from which these three may be chosen. The honours course will be specially for those likely to be benefited by the further study of that particular subject at the post-graduate level. The honours course will comprise one major subject and two subsidiary subjects. The progress of a pupil has to be determined on a firm basis at the end of the first year. There should be provision for the transfer of a pupil to the pass course from the honours course at the end of the first year.

13.20. The duration of the Master degree course will be one year in case of those holding an honours degree and two years in case of those holding a pass degree. The Master degree course should consist of only one subject. A pupil will be allowed to do the master degree course in that subject only which he has read in the first degree course. One holding an honours degree can only do Master degree course in the subject which he has read as a major subject in the honours course. If one with a degree in the pass course is desirous of doing the Master degree course in a particular subject, he will not be eligible unless he has secured a second class in that subject in the degree pass examination.

13.21. There will be provision for a Ph.D. degree course after the Master degree course. The duration of the Ph.D. course will be usually three years. The candidate for a Ph.D. degree will be expected to submit an acceptable thesis to his supervisor and the external examiner and show full knowledge of the subject concerned together with an original approach. While determining the suitability of the thesis for a Ph.D. degree, it must be ascertained whether the candidate knows the languages necessary for the efficient direction of research in his own particular field and whether he is fully familiar with this field. An approved standard for determining the necessary competence and methodology in all cases relating to research degree (Ph.D., D.Litt., D.Sc.) will be of great help. As a result, such degrees will have equal value throughout the country and their standard can be easily established in relation to the outside world. Copies of the accepted thesis should be circulated to all the universities of the country in the interest of both the candidate and the university concerned.

13.22. A fullfledged and effective system of science education cannot be conceived without proper co-ordination between scientific and technical education. On the other hand, to check the mechanical approach associated with over specialisation and to achieve some co-ordination between different branches of learning, provision should be made for teaching of humanities as well as of science subjects as required in our universities for those engaged in research work.

13.23. Every university must develop as a self-sufficient unit. There should be faculties of agriculture, medicine and technical education at every general university for the proper development of technological and applied science. Similarly facilities should be created for training and research in the

different branches of science and in economics and soil science at the Engineering and Technological University and at the Agricultural University. Of course every university can have its own distinct character. But in spite of it, it must attain self-sufficiency as indicated above, so that every pupil gets the benefit of comprehensive and inter-related knowledge in different subjects from contacts with the teachers and other students.

13.24. Honours and post-graduate courses should be introduced in a few related subjects through a well-balanced curriculum in our technical and professional universities to meet the growing demand for higher education and at the same time to effect economy. For example, honours and post-graduate courses in Botany, Zoology and Soil science can be introduced in the Agricultural University and such courses in Physics, Mathematics in the Engineering and Technological University.

13.25. Part-time courses must also be introduced, in addition to the regular full-time courses, for the benefit of those not going to the university. For this purpose evening courses should also be introduced. The part-time and evening courses should also be tried in vocational education as well as in technical education. Forty-five per cent of the pupils in the Soviet union acquire higher education through part-time courses. For the spread of higher education through part-time courses a scheme like the open university in the United Kingdom may also be tried.

Examination

13.26. The present examination system in the field of higher education faces mounting criticism. In the opinion of many, several of the weaknesses of our education system can be ascribed to the defective method of examination. For meritorious pupils, doing well in the examination becomes more important than the acquisition of knowledge. The menace of examination has rendered teaching and research at the university ineffectual. The pupils are exclusively concerned with the public examination and not with the internal tests as the latter have no say in determining results. They therefore feel no compulsion to give due attention to the lectures of their teachers or to tutorials or to counselling and guidance. So we feel that the internal tests should be given some value in determining results and in supplementing the public examination.

13.27. Of course every university will be free to determine in detail the own examination and evaluation methods as well as those of the approved colleges. A more detailed discussion of this subject will be found in the chapter on 'examination and evaluation methods'

Research

13.28. Research plays a crucial role in higher and university education. Research is not only of great importance to a developing economy but also helps the teachers to acquire familiarity with modern learning. Research not only extends the frontiers of knowledge but also makes for greater competence in teaching. Teachers are able to preserve their mental liveliness mainly through research. Research is also of great value in providing the necessary inspiration and impetus to students. A country which aspires to be progressive and powerful must make necessary provision for original and applied research.

13.29 Therefore, the universities must take effective measures to strengthen the departments where teaching and research receive equal importance. Necessary provision for research must also be made in the degree colleges together with universities. Teachers and students have both to work together in all research projects. Our universities should make bigger effort to build up an effective system of teaching and research in certain important arts and science subjects at the post-graduate level. In the process they must ensure that no unnecessary measures are taken or competition generated or the few available competent teachers misused. If we look at it from the national point of view, it would be better to build up one or two strong departments instead of starting several departments in a particular subject as the latter are likely to languish on account of unavailability of the required material and money.

13.30. The universities should mainly carry on original research. But it must be adapted to the requirements of the country as far as possible without affecting the standard. Greater stress can be laid according to necessity on a particular subject for the purpose of research at the university without hampering its total research activity. Our universities must institute research in all fields connected with national development. The necessity of research in agriculture and Zoology is very great as one of the urgent necessities of Bangladesh is discovery and utilisation of natural resources. Oceanography must receive proper importance in our search for new sources of food-supply for our ever-increasing population. National economy, public administration and industrial management are certain other vital subjects in which there is great necessity for research. The universities themselves will determine the subjects in which research should be carried on. But it must be ensured that no research in particular subject is unnecessarily repeated.

13.31 Research in natural science, medicine, food and agriculture is of national importance as it also concerns organisation outside the university. At present this responsibility is discharged in our country by organisations like Scientific and Industrial Research Council, Atomic Energy Commission etc. The work of these organisations is mainly limited to applied research. The university on the other hand is chiefly concerned with original research. Up to now our universities have relatively neglected original research and been dependent for it on foreign universities and organisations to a large extent. The research programme of a country is determined by its special requirements and its distinctive outlook. We face various problems today. We require our own educationists and researchers for our national development. We must at the same time remember that original research cannot be neglected if we want to catch up with the more developed countries of the world. In fact, the industrial development and economic progress of a country are dependent on original research.

13.32. Such facilities should be provided in the M.A., M.Sc and M.Com. courses as will enable a pupil to develop his ability to research. Provision must be made at every university for meritorious pupils to carry on research work. The pupils holding M.A. or M.Com. or M.Sc., degree and showing special competence and the promise of originality should be awarded fellowships and higher fellowships should be given to those holding the Ph.D. degree and whose ability has been demonstrated. For this purpose, an adequate number of fellowships and higher fellowships should be provided.

It would not be prudent to start any research work at the university without first making sure of the necessary facilities. No research work at the level of Ph.D. should be started in any department where necessary facilities, including effective supervision, are not available according to the view of the Board of Study concerned. The Study Board mentioned above should see in this connection how far the actual facilities regarding teachers and appliances are available in the field where actual research work at the level of Ph.D. is already operative. A Committee of Vice-Chancellors should be set up to co-ordinate the curriculum at the post-graduate level as obtaining in their own universities. The opinion of the university's own teachers and specialists may also be taken in this connection. After surveying the curriculum in the higher field of education at each university, the committee will determine the number of fellowships and higher fellowships and co-ordinate them.

Laboratories:

13.33. Higher education is not possible without scientific implements and laboratories. Every science department in all colleges and universities should therefore have a laboratory attached to it. Similarly, essential scientific implements have to be provided by all means. But the university concerned must choose its special field in science at the post-graduate level in which it wants to excel, this selection is necessary so that all universities are not required to collect expensive scientific implements in all subjects. At a higher level the university laboratories should be selective. Much of the applied research has to be done in the professional and research institutes. Scientific implements must be made available to the pupils engaged in primary and basic research. If these implements are in addition to those usually available in laboratories then their supply has to be regulated in accordance with a specific arrangement as part of a clearly-formulated scheme. The money usually allotted for this purpose is found hardly adequate, for the growing pattern of scientific development creates the need for new appliances and apparatuses. Of course it is also true that it is possible to explain the fundamentals of scientific research through old instruments. Nevertheless, adequate provision should be made in our colleges and universities for the basic implements required for a particular type of research. In this matter, however, economy must be practised. The correct use of cheap and local instruments for this purpose should be determined. The yardstick of what is essential for a laboratory should be the judgement of the teacher concerned regarding what is imperatively required for making the pupils familiar with basic scientific facts. But the instruments should never be merely decorative. Only essential instruments required for successful scientific research should be made available.

Libraries:

13.34. There should be a well-stocked Library—opened as long as possible attached to every college and university. The longer the library is kept opened the greater will be the opportunity for the pupil to work there during his free time. The library is almost like the heart-beat of a University and how effectively the library is contributing to the advancement of the pupil's knowledge can be determined from the number of books and journals in stock, the number of officers and the way in which the books and journals are utilized by the pupils. The number of books and journals in most of the libraries attached to our colleges and universities is very limited and those actually available are not always suitable for the times. The annual allocation for the purchase of book, magazines and journals.

must be increased. The selection of books has to be very carefully made. The process of selecting books is an exacting one. Only the demand for greater allocation will not meet the situation. For this purpose, what is required is the availability of teachers abreast of their own subjects who will be able to give the correct advice to the librarian as to the best means of utilising his limited resources. The utility of a library will depend on the extent to which the teacher will be able to motivate and encourage his pupils to use it. Our libraries are not so effective because the pupils regard education as merely a matter of reading the text books and committing 'key' and note books to memory. If the teacher wants to show his pupils the right method of acquiring knowledge then he must develop in them the habit of reading and of spending their leisure time in the library. A open-shelf system should be introduced so that the habit of reading is encouraged and the pupils can read books whenever they feel so disposed. A way has to be devised to make available rare and valuable books to those pupils genuinely requiring them. We believe that if the teachers themselves go to the library frequently they will be able to set an example and to improve the standard of knowledge of their pupils.

Affiliating Universities:

13.35. The number of intermediate and degree colleges in Bangladesh is at present about 600 and their total enrolment will be in the neighbourhood of 4,00,000. Of this, the number of degree colleges approved by Dacca, Rajshahi and Chittagong Universities is about 300 and the number of intermediate colleges approved by Dacca, Rajshahi, Comilla and Jessore Education Boards is approximately 300. The Intermediate sections of degree colleges are under the academic control of Education Boards and subject to their approval. The present enrolment at the degree college is over one lakh and that of the intermediate section of degree colleges and degree colleges taken together about three lakhs. Ordinarily most of the Intermediate colleges are very active in trying to get the approval of the university authorities for being raised to the degree level. A far greater number of intermediate colleges are now awaiting the approval of the four Education Boards. This situation has created a very difficult problem for the Universities and Education Board in Bangladesh. We will now discuss the problem faced by the university in this matter and try to indicate its solution.

13.36. The Dacca, Rajshahi and Chittagong Universities are themselves baffled by their own problems and they are unable to give due attention to the standard of education in the approved colleges and the various problems faced by them. The universities no longer find it possible to direct such matters as the admission of students, the appointment of teacher and the conduct of examination in the approved colleges and of supervise their economic and administrative affairs. As a result, the standard of education in the college is fast deteriorating and this in its turn becomes a contributory cause for student unrest.

13.37. As the number of college is fast increasing without any well-co-ordinated scheme and the stress on humanities is far greater than on science or agriculture or medicine or technological and technical education, our present system of education is not in harmony with our economic structure and not able to meet our national requirements. If this situation continues it will not only endanger the system and standard of education but also jeopardise the country's economic development and its overall progress.

13.38. The development in the field of education and promotion of learning will be considerably hampered if the pupils doing honours and post-graduate courses are allowed to crowd the more favourable-placed universities. The present system of honours and post-graduate education is responsible for the far greater expenditure on per pupil at our universities than is the case in colleges. There should therefore be a well co-ordinated arrangement for honours and post-graduate education in different parts of the country. Of course this problem will not be solved by starting more universities in different parts of the country on the model of the existing ones.

The present communication system of the country, the situation relating to transport, the geographic location of the different regions, the actual necessity and demand, and above all the economic condition of the people are factors militating against the setting up of more universities of the model of the existing ones. Before setting up a new university, all the facilities required for a residential one must be assessed and provided for. This difficulty can be met by starting a few colleges of high standard in different parts of the country with continuing provision for honours and post-graduate courses.

13.39. The teaching at colleges is not directly related to that at the universities. In fact, the universities have little to do even with the neighbouring colleges in the matter of teaching. The universities give affiliation to the colleges and approve their expansion. They also frame the curriculum and syllabuses for approved colleges and conduct their final examination. As the university teachers are generally busy in setting question papers and acting as head examiners for the final public examination of approved colleges, their own teaching and research is often adversely affected. More over the university's existing supervision system of approved colleges is far from satisfactory. The approved colleges are not inspected even once a year. No such system has been devised so far which can accurately assess the standard of the colleges at least once a year. In the context of the public examinations held in the past few years, many have grown doubtful about whether their examination results can be regarded as a yardstick for the actual standard of education in the college. It therefore appears that the universities are not only unable to check the deterioration in the standard of education in the colleges but on the other hand the efficiency of their own teachers is affected because they have to remain busy in matters connected with holding the final public examination of the colleges.

13.40. Our recommendation in this context is that the approved colleges under Dacca, Rajshahi and Chittagong universities should be brought under such a body which will be able to devote its full attention to the problems of the colleges and seek measures to solve them. Our considered view in this matter is that an affiliating university should be set up in each of the four administrative divisions of the country. The number of degree college in Bangladesh is about 300 and their total enrolment is approximately one lakh and the number of intermediate colleges is 600 and their total enrolment about four lakhs. In addition, apart from the residential universities and the educational institutions up to the secondary level, all other institutes for example, technological, medical and agricultural institutes should be brought under the control of the affiliating universities. This is necessary for inter-relating and co-ordinating the different levels of our education system. This will not be possible if the affiliating universities as recommended by

us are not set up. If the affiliating universities are unnecessarily burdened, the results are bound to be unfavourable.

13.41. It would be relevant to mention the thinking of the Calcutta University Commission (1977—1979) in this connection. As the total enrolment of the colleges under Calcutta University exceeded 26000, the Commission felt that the enrolment had become unmanageable for a single university. The Commission had therefore recommended the building up of a few colleges outside Calcutta as potential University Centres. In addition, they had recommended the establishment of a residential university at Dacca. The condition of Berlin University at that time was similar as its total enrolment had reached the five digit. Although all the colleges were located in Berlin the authorities felt that the total enrolment had reached unmanageable proportions. The question as to what should be the total enrolment of a university and how many colleges should be actually under its control must be given due attention.

13.42. The affiliating universities recommended by us will be in a position to give their wholehearted attention to the problems of the approved colleges. They must try hard once they are set up, to raise the standard of the curriculum and the syllabuses and to improve the method of examination in the affiliated colleges. If this is done, the college authorities will also achieve greater autonomy. Dacca, Rajshahi and Chittagong Universities will thus be able to concentrate fully on teaching and research. This will raise the standard of education in the country.

13.43. All the approved colleges under the existing universities and the new colleges that will be approved will be under the proposed affiliating universities as well as all technological and technical and agricultural and medical institutes above the secondary level. At present the number of arts colleges is constantly increasing as there is no overall educational planning. The facilities for education in vital fields like technology, agriculture and medicine are dwindling. The proposed affiliating universities will be able to take care of this problem. They will be in a position to make an equitable distribution of the educational institutes and if necessary establish new ones in different parts of the country.

13.44 It is not possible to provide in all the colleges under the affiliating university the distinctive facilities of a residential university, such as the acquisition of knowledge under the direct supervision of teachers and a collective life at the campus. On the other hand, it is not possible to make all the universities needed for the country fully residential. Nor will it help to solve the complex problem faced by the universities which are at once teaching and affiliating if more such universities to meritorious pupils to study at a residential university in different parts of the country, but the highest enrolment permissible at each residential university must be previously fixed. Provision for honours and post-graduate courses exist as stated before, in a few selected colleges of high standard under the affiliating universities in respect of the other pupils. According to the above arrangement it is possible to transform the present teaching and affiliating universities to fully residential and teaching universities and to transfer the approved colleges under them to the proposed affiliating universities.

13.45. The apprehension that the affiliating universities will be heavily under the influence of the approved colleges is without any foundation. There is also no basis for the fear that the standard of education in the

approved colleges under the affiliating universities will be lowered. Such existing facilities in the teaching and affiliating universities as the Syndicate or the Executive Council, the Senate or the Court, the Academic Council, the Offices of Deans, the Curriculum and Syllabus Committees, the Examination Committee, the Discipline Board and other related bodies and associations must of course be made available to the proposed affiliating universities. Members for these associations should be drawn not only from the affiliating universities themselves and the colleges under them, but also from other universities (specially teaching universities), from the government and from other appropriate outside organizations. There is therefore no basis for the thought that there is no possibility of the standard of education being lowered in the approved colleges under the teaching and affiliating universities and that there is every such possibility in the approved colleges under the proposed affiliating universities. It is of course true that there will be no positive arrangement for teaching at the affiliating universities but it must be pointed out that the present approved colleges under existing affiliating and teaching universities do not get the benefit of the facilities for teaching at those universities. The different associations of the proposed affiliating universities (whose constitution has been indicated above are not likely to be influenced or directed by the approved colleges for the furtherance of their narrow and regional interests.

13.46. From whatever angle the issue may be considered, the conclusion is inescapable that the four proposed affiliating universities are an immediate national requirement. The sooner these universities are set up the quicker will be the improvement in the regard to the management of higher education in our country.

13.47. The setting up of the proposed affiliating universities will not be a new step in the sub-continent. In fact, the first three universities of the sub-continent (Calcutta, Bombay and Madras) were set up as affiliating universities. There was no direct provision for teaching at these universities even up to half a century after they were setup. The Bangladesh University Grants Commission has also recommended the establishment of the affiliating universities. The Inter-University Board and the Standing Committee of Vice-Chancellors in Bangladesh have both expressed their opinion in favour of the establishment of such universities. It is therefore apparent that the Bangladesh Education Commission, the University Grants Commission, the Inter-University Board and the Standing Committee of Vice-Chancellors are all in agreement about this.

13.38. The main objective of the proposed affiliating universities one in each of the four administrative divisions of Bangladesh will be as follows.

- (a) All general colleges, technological and technical institutes agricultural and medical institutes in their respective areas must be approved by them and brought under their control so that the necessary co-ordination in different fields of our education system is made possible ;
- (b) To make suitable arrangement for inspection and supervision of the institutions under their jurisdiction to ensure that all the essential requirements are met and the required standard of education is maintained ;
- (c) To frame the curriculum and syllabuses for the educational institutions under their control according to need ;

- (d) To conduct the final examination, at all levels, of the educational institutions under their control, to evaluate the method of examination and to award degrees and diplomas to the successful candidate;
- (e) To provide such facilities for honours and post graduate courses in the colleges in their respective areas which will both effect economy and make the degrees awarded by them comparable with those given by the teaching universities;
- (f) To take all necessary measures for maintaining the required standard of education at all levels in the educational institutions under their jurisdiction; and
- (g) To see that the standard of teaching in the educational institutions under them is gradually raised and the standard of education in these institutions is not in any case lower than the national standard but is actually helpful in further raising it.

13.49. There will be a Vice-Chancellor, a Registrar, a Controller of Examinations and other Officers at each of the proposed affiliating universities. They must also have provision for required number of Deans and for Faculties of Arts, Social Science, Science, Commerce Law, Agriculture, Education and Medicine, etc. The required number of suitably qualified inspectors of colleges must also be appointed.

13.50 A syndicate or Senate, an Academic Council, the required number of Officers of Deans, Curriculum and Syllabus Committees as required, an Examination Committee, a Discipline Board, and Inspecting Committee and an Affiliating Committee must be set up at each of the four proposed affiliating universities. Members for these bodies will be drawn, as previously stated from the affiliating universities themselves, from the approved colleges under them, from other universities (specially the teaching universities), from government and from other appropriate outside organisations. These bodies and associations should be so constituted as to ensure the effective supervision of the university concerned and the efficient management of its affairs and the raising of the standard of teaching in the approved colleges.

13.51 The proposed affiliating universities will be financially self-sufficient. The source of their income will be the affiliation fee, the registration fee, the examination fee and the certificate fee etc. The approved colleges at present under Dacca, Rajshahi and Chittagong universities will be transferred to the affiliating universities. The income from these colleges will go to the affiliating universities. In addition, according to our recommendation all educational institutes—apart from the residential universities and those up to the secondary level—will come under the affiliating universities. The income of the affiliating universities will thus be increased. The income of the affiliating universities will also increase with the increase in the number of pupils. The affiliating universities will therefore be able to bear their own expenses and will be in a position, after a few years, to give financial assistance to the approved educational institutes under them.

A New University

13.52. It is desirable that all kinds of educational facilities should be made equally available to people in different parts of the country in consonance with its overall development. It can be said regarding the

education system at the primary and secondary levels that its facilities are on the whole evenly distributed in our country. As higher education, specially university education, is primarily dependent upon government initiative, government have special responsibility to see that the opportunity for higher education is equitably available to all who can be benefited by it. At present the total number of universities in Bangladesh is six; of these four are general, one agricultural and one engineering and technological. There are four administrative divisions in Bangladesh: Chittagong, Dacca, Rajshahi and Khulna. Of the above six universities, four are in Dacca division one in the Rajshahi division and one in the Chittagong division. No university has been set up so far in the Khulna division. The necessity of more than one university in the Dacca Division for historical and other reasons cannot be denied. But one-fifth of the population of Bangladesh lives in the Khulna division, and we visualise the necessity of a university in that division in the near future.

University Colleges.

13.53. Some educationists are of the opinion that a few selected colleges should be upgraded to university colleges to decrease the pressure on the universities for admission and to provide greater facilities for higher education to those likely to be benefited by it. The university colleges, as envisaged by them, will award degrees and act as miniature universities.

13.54. The above proposal is designed to free the existing universities from the intolerable pressure on them for admission. There is provision for honours course in quite a few colleges of the country. Recently, the Master degree course has also been opened in certain colleges and it is doubtful whether this can now be discontinued. We must seriously ponder the consequences of upgrading a few selected colleges to degree-awarding university colleges. We do not think that this is feasible at present in the perspective of the standard of teaching and the position relating to honouring of examinations in the past few years. We therefore, recommend that honours and Master degree courses should be introduced in colleges of high standard under the affiliating universities and that the honours and Master degree courses which are already prevalent in such colleges must be continued. The question of whether these colleges can be upgraded to university colleges can be reconsidered ten years after the establishment of the proposed affiliating universities. Even then the university colleges must not be allowed to award degrees directly. Each of these colleges will frame rules and regulations for admission and the curriculum and syllabuses in regard to their own college and will independently conduct the relevant public examinations. The affiliating universities will actually award degrees and generally supervise these colleges. The immediate establishment of university colleges is not possible in our country for paucity of properly qualified teachers. We must first of all provide such teachers in sufficient numbers to our teaching universities and to those colleges where honours and Master degree course are already prevalent.

13.55. In view of the situation stated above, it would not be wise to simultaneously undertake such difficult tasks as to make the existing universities fully residential, to set up the proposed affiliating universities under which there will be colleges with provision for honours and Master degree courses and the upgrading of certain selected colleges to university colleges.

13.56. Our considered view regarding this is that it would not be prudent to set up new university colleges or to give this status to a few selected colleges in the next ten years. This question can be reconsidered during the third five-year plan and ten years after setting up of the proposed affiliating universities.

Colleges.

13.57. The colleges play an important role in our education system and we hope that they will continue to do so in the near future. But we feel that no new college should be established without first making adequate provision for the facilities needed. Unfortunately, many colleges have been set up without fulfilling the conditions for affiliation or approval laid down by the Universities and Education Boards. The Universities and Education Boards have shown negligence in this matter either because of the mounting pressure on them or for the sake of popularity. It is harmful for the nation and the student community as a whole to give approval to colleges which do not have the necessary facilities in regard to teachers building and class-room space and library, etc. These factors have to be fully considered and if necessary affiliation or approval should be postponed and in extreme cases totally withdrawn.

13.58. The non-government colleges are faced with multifarious problems. The government have not been able so far to give adequate financial assistance to these colleges. Many non-government colleges have been established as merely a prestige symbol and not to meet genuine educational requirements. Once these colleges are set up those responsible for their management show no eagerness to improve their financial condition. Government have spent most of the limited money available for education on government colleges and on their expansion instead of on their consolidation.

13.59. We would like to see the non-government colleges playing a useful role in the field of national development. For this reason, immediate steps must be taken for their improvement. No new colleges should be given approval without providing satisfaction to the Education Boards and the Universities concerned that they are able to largely meet their expenses from their own resources. The college authority must take necessary measures for an adequate reserve fund deriving a fixed income to give the teachers a feeling of security. The Universities and the Education Boards must keep a watchful eye over the maintenance of the required standard after the colleges have been affiliated or approved. The provision for occasional inspection of the colleges is essential. If the report of the inspecting officer is unfavourable, the University or the Education Board should not hesitate to withdraw their approval of the college concerned.

13.60. We consider the appointment of qualified teachers in colleges a matter of very great importance. The expenditure regarding education is constantly increasing because of inflation and the ever-increasing cost of living. Therefore, this increased expenditure should be met equitably from student fees, from the grants made to the colleges authority, from donations and from financial assistance rendered by government. If the cost of living goes on increasing, the increased cost should be met in the manner indicated above. If the colleges are not run as merely commercial organisations we can reasonably expect that the college authority will be able to collect the required money from the above sources.

13.61. Government should give adequate financial assistance to non-government college. Only a large number of pupils will not meet all the needs of an educational institution; an educational institution can prove its utility only through providing adequate facilities to its pupils for the acquisition of learning. These non-government colleges which are well management and are able to meet their expenses largely from their own resources should get adequate financial support from government. The college teachers should co-operate with the college authorities in the matter of getting donation and financial assistance from the public. This will not be a difficult task if the teachers are able to set a high standard of teaching and the college concerned can established an effective relationship with its immediate social circle.

13.62. Government grants should not be given merely on the basis of the size and enrolment of the college. Other more important factors such as the approved educational programme, the ability of the teachers and the reputation of the colleges concerned should be given proper consideration. We have laid a special stress in this report on the necessity for scientific and technical education and the qualitative improvement of whole education system. The nature of courses prevalent in a particular college should therefore be considered before any grant is made to it. Nothing can be more harmful from the national point of view than squandering of limited government resources on colleges which are not in position to fulfil essential education requirements. Government grants should be given for a period of three to five years so that the colleges concerned can accordingly determine their development programmes. Simultaneously the management of non-government colleges should be strengthened.

TECHNOLOGICAL AND TECHNICAL EDUCATION AT THE DEGREE LEVEL.

SUMMARY

1. The progress and development of a modern society depends to a large extent on the nature and standard of higher education. For the role of higher education is to prepare competent knowledgeable and far-sighted people for assuming various higher responsibilities, to create such an educated group in which the attachment to work, love for learning, freedom of thought, a sense of fairness and the humanitarian instinct are fully developed; to open up new horizons of knowledge through research and to analyse economic problems and indicate their solutions. (13.1-13.6)

2. Our higher education to-day faces a great problem. As this education is not related to social realities it is unable to meet the requirements of our society. In our country higher education is to-day merely a passport to government service. So the effectiveness of this education ceases with the provision for a job or when the possibility for it is completely gone. What remains for the majority is the course of unemployment. The existence of unemployment among the highly educated in a society where about 80 percent is illiterate shows the complete ineffectiveness of our whole education system. The education system at the higher level has recently greatly expanded in our country. New colleges are being set up without providing necessary facilities and existing colleges extended. This thoughtless and unsystematic expansion has resulted in the fast deterioration of educational standards. (13.7-13.9)

3. The total number of pupils at the under graduate level is about 125,000 in the whole country. Of this number, 35 thousand belong to science, 30 thousand to commerce and the rest to Arts. But this proportion is not at all commensurate with the actual requirements of society and of our national life. Such a suicidal state of affairs in the field of education must cause infinite anxiety to any society. From the point of view of standard and quality, the present system of higher education in our country must cause the greatest worry. The number of pupils in the approved colleges is far larger than that of the university. But the standard of the majority of these colleges is lamentably low. The present method of higher education in our country has several defects and deficiencies. First, this method encourages cramming instead of approved ways of acquiring knowledge. Secondly, only examination results are taken into account to determine the pupils' qualitative excellence; hence only the cramming capacity of the pupil is actually assessed. Thirdly, as the number of meritorious pupils actually benefited by higher education is very limited, it is not possible to generally maintain high standards at this level. Fourthly, as very few teachers do any research work, the knowledge derived from research cannot be properly related to teaching. Apart from this, the unsuitable educational environment, the want of educational implements and the unsatisfactory teacher-student ratio are actual impediments in the way of acquiring the right type of higher education. As a result, the present standard of higher education in our country is very low indeed. (13.10-13.12).

4. It will appear from what has been said above that the complete reconstruction of our higher education is an imperative necessity. We therefore, feel that the following measures should be taken, along with other suitable measures, to realise our objective in the field of higher education.

5. As the present school education system is not related to the requirements society, it puts a great pressure upon the standard of higher education. As the pupils passing out of the secondary education system do not have much else to do, they unnecessarily crowded the institute of higher education. Moreover the majority of them belongs to the arts group. This situation is hardly found in the prosperous and developed countries of the world. On the other hand the recent setting up colleges of low standard and the expansion of existing colleges to meet the tremendous pressure for admission have both adversely affected the standard of higher education. To raise the standard of higher education and prevent wastage a high powered Investigation Committee—consisting of members from the Education Ministry, University Grants Commission, the Universities Education Boards and Colleges should be set up immediately to make an on-the-spot inquiry about the actual condition of approved colleges. (13.13-13.14.)

6. Higher education is intimately connected with the national economy and with future of the nation. So our institutes of higher learning must be co-related to our national economic planning in the perspective of requirements for educated manpower. The economic aspect of our life is a matter of vital importance. We must therefore pay greater attention to the economic problems of our country without affecting the academic standard. (13.15.)

7. The syllabuses in certain arts and science subjects in the field of higher education have remained unchanged for many years now and in many cases require to be made up-to-date. It has to be ensured that the curriculum and syllabuses in the field of higher education do not remain unchanged for long. The universities specially have to reconsider their curriculum and syllabuses in the light of new knowledge as it emerges. (13.19.)

8. One of our main national aims is to build up a society free from exploitation. The door to higher education must be kept open for pupils belonging to all levels of society. Pupils for higher education must be carefully selected. Intelligence, educational ability, experience of productive and social-welfare work and results of the selection test should be important factors in determining eligibility. (13.18.)

9. A pass course and an honours course at the first degree level may both be provided in degree colleges. At the universities, however, only the honours course should be allowed at the first degree level. It will be necessary to introduce three-year degree course of high standard for the pupils passing out of the experimental eleven-year secondary education system. (13.19.)

10. A fullfledged and effective system of science education cannot be conceived without proper co-ordination between scientific and technical education. On other hand, to check the mechanical approach associated with over-specialisation and to achieve some co-ordination between different branches of learning, provision should be made for teaching of humanities as well as of science subjects as required in our universities for those engaged in research work. We consider it desirable that honours and post-graduate courses should be introduced in a few related subjects through a well-balanced curriculum in our technical and professional universities to meet the growing demand for higher education and at the same time to effect economy. Similarly every general university should have faculties of agriculture, medicine and technical education. Likewise honours and post-graduate courses in Botany, Zoology and Soil Science can be introduced in the the Agriculture University and such courses in Physics and Mathematics in the Engineering and Technological University. (13.22-13.24.)

11. A few thousand degree holders in library science will be required for our colleges and Universities and for the management of our libraries. The present facilities in this regard are extremely inadequate. There is a Master degree course and a post-graduate diploma course in library-science only at Dacca university. A Master degree course and a Post-graduate diploma course should be started in all general universities to meet the demand for librarians for our colleges and universities. (13.16)

12. Part-time courses must also be introduced in addition to the regular full-time course, for the benefit of those not going to the University. For this purpose evening courses should also be introduced. The part-time and evening courses should also be tried in vocational education as well in technical education. For spread of higher education through part-time courses a scheme like the open university in the United Kingdom may also be tried. (13.25)

13. The internal tests should be given some value in determining results and in supplementing the public examination. (13.26-13.27)

14. Research not only extends the frontiers of knowledge but also makes for greater competence in teaching. Teachers are able to preserve their mental liveliness mainly through research. Necessary provision for research must also be made in the degree colleges together with the universities. Teachers and students have both to work together in all research project. The universities should mainly carry on original research. It must seen that a particular research project to which special importance can be given without affecting the overall standard is not repeated elsewhere. Research must be adapted to the requirements of the country as far as possible without affecting the standard. Provision must be made for a sufficient number of fellowships with liberal terms at the university to attract meritorious pupils to research work. (13.28-13.32.)

15. It is essential for all colleges and universities to have the required number of laboratories. (13.33)

16. Every college and university should have a well-stocked library attached to it. (13.34.)

17. Our universities are themselves baffled by their own problems and they are unable to give due attention to the standard of education in the approved colleges and the various problems faced by them. As a result the standard of education in the colleges is fast deteriorating and this in its turn becomes a contributory cause for student unrest. The present large number of colleges in the country and their huge enrolment have created a formidable problem of the Universities and the Education Boards. It is therefore, necessary to transform the existing universities to fully residential universities and to set up an affiliating university at each of the four administrative divisions of the country for purpose of affiliation supervision, framing the curriculum and syllabuses, conducting examinations and awarding degrees. It is essential to bring all the educational institutes apart from teaching and residential universities and those up the secondary level, under the control of the affiliating universities. (13.35-13.51.)

18. As one fifth of the population of the country lives in the Khulna division, a new university should be set up there. (13.52.)

19. The question of whether a few colleges of high standard can be upgraded to university colleges, can be considered ten years after the setting up of the proposed affiliating universities and after making careful survey of the actual academic performance of the colleges concerned. Even then the university colleges should not be allowed to award degrees directly. They can be given the responsibility for framing their own rules and regulations for admission and their curriculum and syllabuses and for independently conducting relevant public examinations. The affiliating universities will actually award degrees and be responsible for the general supervision of these colleges. (13.53.-13.56.)

20. No new college should be given affiliation or approval which does not provide the necessary facilities for effective teaching. If necessary affiliation or approval should be postponed and in extreme cases totally withdrawn. (13.57.)

21. Every college should have a reserve fund of a fixed amount. The college authority is to take appropriate measures for opening bank accounts under different heads of income and for an adequate general fund to give the teachers a feeling of security. (13.58.-13.59.)

22. Government grants should not be given merely on the basis of the size and enrolment of the college. Other more important factors such as the approved educational programme, the ability of teachers and the reputation of the colleges concerned should be given proper consideration. Government grants should be given for a period of three to five years, so that the colleges concerned can accordingly determine their development programmes. Simultaneously the management of non-government colleges should be strengthened. (13.60.-13.62.)

CHAPTER—XIV

TECHNOLOGICAL AND TECHNICAL EDUCATION AT THE DEGREE LEVEL

14.1. The objective of technical education at the degree level is to create a group of highly educated and practical-minded workers with a scientific attitude who will be able to apply scientific principles for the welfare of man through their professional knowledge, who will be able to develop and use the natural resources of the country and to solve problems arising out of the control of natural forces and, who will find it possible to increase the production of raw materials in the country through the invention of new methods and appliances and to appropriately use the raw material and the labour force, who will be able to increase industrial production and to solve different technical problems and who will be able finally to raise the standard of living and improve the country's economic condition.

14.2. The economic development of Bangladesh, the raising of our standard of living and the progress and development of our social life mainly depend upon the increase in production of all kinds and upon the expansion of facilities for meeting our daily needs. For this purpose we need a large number of able technicians and technologists in our country. The country's technological and technical education assumes an added importance in relation to the need to repair and make effective our economic and industrial infrastructure so heavily damaged during the liberation struggle.

14.3. There is an Engineering and Technological University at Dacca and a technical college each in Rajshahi, Khulna and Chittagong Divisions and an Agricultural University with faculties of agriculture and technical and technological education at Mymensingh for technical education at the degree level. The Engineering and Technological University offers a four-year degree course in Civil Engineering, in Electrical Engineering, in Mechanical Engineering, in Chemical Engineering, in metallurgical engineering etc. and a five-year degree course in architecture. There is provision therefore for the admission of 420 pupils at the degree level. There is also provision for post graduate teaching at the same University in civil engineering, in electrical engineering, in mechanical engineering and in chemical engineering and in water resources. The agricultural university can admit 80 pupils to its four-year agriculture-technology course at the first degree level. At the post graduate level there is provision there for the admission of 30 pupils. The technical colleges at Rajshahi and Chittagong can both admit 180 pupils to the degree course in civil engineering, in electrical engineering and in mechanical engineering. The Khulna Technical College has so far admitted no students, although it has provision for admission of 120 pupils to the degree course in civil engineering, in electrical engineering, and in mechanical engineering. At present about 700 pupils complete the first degree course if fully operative the total number of pupils completing the first degree course will be raised to 800.

Recommendations :

14.4. The following measures should be adopted to remove the defects and deficiencies of technological and technical education at the degree level and to raise its standard.

(a) It is essential to establish full harmony between technological education and the country's economic development programme. The admission to technological and technical institutes should be regulated by the actual need for technicians of various sorts in our industrial and technical organisations. For this purpose, the manpower division of the Planning Commission should determine the present and future requirements of technical manpower at different levels and supply dependable data.

(b) At the time of selecting pupils for the technological institutes, the pupil's knowledge in science and mathematics should be tested and his predilection for technological education, if any, assessed. For this purpose a predilection test may be held while selecting pupils for admission to the different levels of technical education.

(c) It is as much necessary to make arrangement for obligatory practical training in the country's technical and industrial organizations adequate accommodation and appliances to the technical and technological institutes for the purpose of making technical education fully effective. This practical training should form an inseparable part of the syllabus. The arrangement for practical training can be made by government in all nationalized industrial concerns. Arrangement for practical training can also be made for the pupils during the summer vacation. To make this training effective and fruitful there must be adequate provision for supervision of the pupils by the teachers in the industrial organisation concerned.

(d) The teachers should be encouraged to acquire greater theoretical and practical knowledge in their own subject. They should be aware of the problems and the requirements of the country's industrial concerns. They should therefore be permitted to work as technical and technological consultants to our industrial and technical organizations. The teachers will be able to make their teaching more effective through familiarity with the various technical problems of the country and this will have the added benefit of bringing the industrial concerns and the technical institutes closer together and of lessening the need for dependence on foreign experts for solution of our technical problems.

(e) Immediate measures should be taken for better management of our technical institutes and for raising the standard of technical education. There is paucity of properly qualified teachers and appliances in our technical institutes. The technical institutes are facing considerable difficulty under the present administrative arrangement in the matter of appointing teachers and other officers and in purchasing the necessary instruments and apparatus. We therefore feel that these institutes should be raised to the status of autonomous organisations. The regional universities will control all matters relating to education. These institutes will remain as the constituent colleges of the University and the faculty of technical education in the university should be divided and expanded into several faculties. The technical teachers training college must also be raised to the status of a self-governing institution.

(f) If we are unable to ensure creativity in the field of technical and technological education, the results are bound to be disastrous. For this reason, special stress has to be laid on creativity in the syllabus of all technical subjects. The developed countries of the world all agree that one of the ways in which greater interest in scientific knowledge and research can be created is through giving mathematics, science and scientific

methods a special importance. It is also desirable to create a suitable environment in every necessary field for the solution of the country's various technical problems.

(g) A few optional subjects should be introduced in the syllabuses of third and fourth years at the first degree level. There should also be provision for training in applied science for those who want to begin their working life after completing their first degree course in the field of technological education. On the other hand, those pupils who are desirous of doing the research based post-graduate degree course must do general science and certain technological subjects as their optional subjects.

(h) There is considerable dearth of highly educated technologists for teaching at the degree and post-graduate levels in developmental and research subjects. Greater attention should be paid at the Engineering and Technological University to the syllabus relating to higher technological education and research for the larger interest of the country. If necessary, the question of restricting the number of pupils at the first degree level has to be considered. The Engineering and Technological University should develop as a centre of higher technological education and research, leaving the responsibility of training technologists at the first degree level mainly to the technological colleges.

(i) Greater stress should be laid on the standard rather than on the quantity in the field of technical education. It is necessary to regulate admission, in consonance with the number of teachers and essential implements and apparatuses available, to realise the above aim. We feel that the teacher-student ratio should not be more than 1:10 on the average at the degree level of technical education.

(j) Provision for the degree course in a few more fields is necessary for the overall development of the country, in addition to the technological and technical degree courses already available. Jute and Textile Industries can be cited as examples of the new fields in which technological degree courses need to be introduced. Jute and Textile Industries are the backbone of our economy. We must therefore be able to supply technicians and technologists of high competence for the successful development of these industries. These industries are now being run by the technicians and technologists educated up to the diploma level and by some foreign-trained personnel. We need many technicians holding at least the first degree to run these industries well. But sending the necessary number of technicians for training abroad will be highly expensive. So we further recommend that a four-year degree course in these subjects be introduced immediately for the pupils passing out of the higher secondary with mathematics, physics and chemistry education system. As the required class-room, laboratory and workshop facilities together with necessary appliances for this course are already available at the Bangladesh Textile Institute, these courses may very well be introduced there. We further recommend that the above category of students be admitted to the present diploma course and those showing merit be chosen for the degree course as needed.

(k) It is desirable to provide an opportunity for research and honours and post-graduate courses in mathematics, physics and chemistry at the Engineering and Technological University.

14.5. The way to raise the standard of technical education has been indicated above and we have also shown how this education can be made more effective. But we must remember that there are quite a few impediments

in the way of taking the necessary steps in this connection. The main impediment is, of course, the paucity of properly qualified teachers for it is difficult to get such technicians and technologists interested in teaching as a career. It is necessary to offer various inducements to such pupils to attract them to teaching. Besides, new and old teachers already at work should be given training by turns. Due importance has to be given to familiarity with improved methods of teaching and to creating enthusiasm for research. We consider it desirable for the Engineering and Technological University to set up such a Training Course:

14.6. There should be provision for appropriate and timely promotions for attracting better qualified people to teaching in the fields of mathematics, physics, and chemistry at our technical and technological institutes. These teachers should receive the same status and pay as the other teachers of the institutes.

14.7. We have already mentioned that the main aim of technical and technological education is to create dedicated, far-sighted, idealistic and diligent technologists for the overall development of the country. The syllabus at each level of technical and technological education should include materials to foster a socialistic attitude in the minds of the pupils. The history of socialism, socialistic economy, industrial structure under a socialistic system are subjects which should be included in the syllabuses. Educational tours in the agricultural and industrial areas of the country and discussions with the working people for the purpose of getting familiar with their problems should be arranged through these institutes.

14.8. A 'Technical Education Advisory Board' should be set up to evaluate the technical education system at different levels and to determine in which fields and at what levels a widening of the system is necessary. This Board should be constituted with representatives from the different industrial, technical and technological organizations and employing agencies, from the Technical Education Board, from the Engineering and Technological University, from the Agricultural University, from the Education Ministry and from the Ministry of Industries.

14.9. The technologists face many problems in the actual working field relating to the formulating of schemes and their implementation to administration, to management, to supervision, to accounting, and to industrial management and relations. If they are unable to solve these problems their effectiveness is decreased and the resources used are wasted. The limited knowledge which they acquired in these fields in colleges or at the university is inadequate to the actual requirements. New and improved methods are constantly invented in the different fields of technological science through experiments in the developed countries of the world. Technologists usually do not get the time or opportunity to get familiar with these methods in their actual working field. So special provision is made for in-service training for these purposes in the developed countries of the world. Our technologists must also be provided the benefit of such in-service training, but unfortunately this has been lacking in our country so far.

The Kaptai Engineering Academy set up in 1964 has some provision for such training for engineers, technologists and other officers working at WAPDA, but its effectiveness is severely limited for the paucity of qualified teachers and necessary appliances. We recommend that this Academy be raised to an In-Service Training Centre for the technologists of our country.

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TECHNOLOGICAL AND TECHNICAL EDUCATION AT THE DEGREE LEVEL

SUMMARY

1. The objective of technical education at the degree level is to create a group of highly educated, practical-minded workers with a scientific attitude who will be able to apply scientific principles for the welfare of man through their professional knowledge, who will be able to develop and use the natural resources of the country and to solve problems arising out of the control of natural forces, who will find it possible to increase the production of raw materials in the country through invention of new methods and appliances and to appropriately use the raw materials and the labour force, who will be able to increase industrial production and to solve different technical problems and who will be able finally to raise the standard of living and to improve the country's economic condition. (14.1.)
2. It is essential to establish fully harmony between technological education and the country's economic development programme. The admission to technological and technical institutes should be regulated by the actual need for technicians of various sorts in our industrial and technical organisations. (14.4-a)
3. It is necessary to make arrangement for obligatory practical training in the country's technical and industrial organisations for the purpose of making technical education fully effective. (14.4-c)
4. The engineering and technological university should pay greater attention to the post-graduate course and to research for the development of the country's resources, for the solution of the different technical problems, and for producing technologists of high competence. Greater stress has to be laid on the standard rather than on the quantity in the field of technical education. (14.4-h and i)
5. It is desirable to start honours and post-graduate courses in mathematics, physics and chemistry at the Engineering and Technological University. (14.4-g)
6. Degree courses in Jute and Textile Industries should be started immediately for the purpose of producing suitably qualified technicians and technologists for the management of the country's largest industries. The colleges should be raised to self-governing institutions for this purpose. (14.4-e)
7. It is necessary to improve the management of our technical colleges and the technical teacher-training centre and to raise their standard of teaching. For this purpose, these colleges should be raised to self-governing institutions. (14.4-e)
8. The country will be benefited and our dependence on foreign specialists will decrease if the technical and technological teachers are allowed to work as technological consultants to our industrial organisations to solve the various technical problems. (14.4-d)
9. A Technical Education Advisory Board should be set up to evaluate technical education at different levels in the country and to make government aware of its requirements. (14.8.)
10. Provision should be made for professional training for working technologists. (14.9.)

CHAPTER XV

SCIENCE EDUCATION

The Importance of Science Education

15.1. No one can deny the importance of science in the modern world. Science has become intimately connected with our daily lives. The dependence of the human society on science is constantly growing. Man is becoming increasingly dependent on science for the solution of problems relating to such basic necessities of life as food, clothing, accommodation, medicine, etc. So all developed countries pay special attention to science. The developed countries of the world are getting more prosperous through wide-spread use of science.

15.2 The main aim of science is to expedite the overall development of society, and not merely to make a particular group of men powerful through application of knowledge derived from the unveiling of the secrets of Nature. That is why human life is so directly involved with science. This involvement becomes meaningful only if scientific knowledge is used for the benefit of society. Science education should be so channelised as to attract the pupils to its beneficial aspects. The curriculum for science education should be so framed as to help achieve this aim from the primary level right up to the university level. Science education has progressed tremendously in the various countries of the world, but we lag considerably behind in this field. It is necessary to rectify this immediately. We must make science education more wide-spread and of a standard comparable with that in the more developed countries of the world.

Science at the primary level

15.3. From class III to class V; at the primary level, the pupils must be taught about cleanliness, personal hygiene and their immediate environment (such as trees and plants, insects, animal soil and rocks, rivers, weather, rain etc). Besides, they must be made familiar with the implements used in our everyday life, with temperature, with sound, and with electricity and magnetism, etc. It must be remembered while framing the science syllabus at the primary level that (a) our economy is agriculture-based and therefore the pupils must have a respectful attitude towards agriculture, (b) and that most of the people in our country, specially rural areas, suffer from malnutrition. Therefore it has become imperative for every one to have some knowledge of nutrition. For this reason, we have laid a special stress on nature-lessons, agriculture, hygiene, and on nutrition in syllabus for science throughout the primary level. Biology must be taught from class V. We feel the necessity of raising the standard of science education in our country. It must be specially noted while framing the syllabus of science that we must catch up with the more developed countries of the West as well as of the East in respect of science education. Otherwise our standard of science education will suffer and our pupils going abroad for higher training will have to stay there for a longer period and thus there will be a great strain on our limited reserve of foreign exchange.

15.4. There must be a well-integrated course of the different branches of science at classes VI, VII and VIII and biology, physics and chemistry should receive priority in this course. But this course should be so devised as to enable the pupils to learn the application of science in their daily lives. For this purpose due provision must be made from class V onwards for suitable experiment and the standard of mathematics, physics and chemistry should be such as to compare favourably with that in the more developed countries of the world.

15.5 It is necessary to provide the required implements, chart and models in all primary schools to make our science education effective from the beginning. The text books at this level must be written in a simple language and enriched with attractive illustrations. A detailed discussion of this will be found in the chapter on syllabuses and text books.

Science at the secondary level

15.6. All pupils belonging to arts and commerce groups must read general science—which should provide basic knowledge of the different branches of science—as a compulsory subject at the secondary level.

15.7 The pupils belonging to the science group must read physics, chemistry and mathematics as compulsory subjects and also take three optional subjects. The following subjects will be optional in classes IX and X; advanced mathematics, biology, geometrical and technical drawing, astronomy, food and nutrition, meteorology, fundamental economics, home management, dress and clothing, general agriculture science, animal husbandry, geography, history or civics.

15.8 A special course of science should be introduced in classes XI and XII. Every pupil belonging to the science group must read four subjects from among the optional subjects which must include physics, chemistry and mathematics. The fourth subjects can be chosen from among the following biology, psychology, geography, astronomy, meteorology, economics; nutrition, statistics, technological drawing, workshop practice, military science and hygiene. In respect of mathematics, calculus and general statistics should be included at this level. The mathematical examples should be realistic and suited to the times. These examples should also have applicability in the other branches of science.

15.9. Most of our science books have become out of date with the rapid expansion and improvement of science. It is essential to introduce new thought-processes in our science-course. It may not be possible to introduce a highly developed science syllabus in our country immediately. Nevertheless all efforts must be made to raise the standard of science syllabus at the secondary and higher levels so that we can attain equality in this matter with the developed countries of the world in the near future.

15.10. New methods in science teaching are constantly invented in all advanced countries. In these countries instruction is imparted in the different branches of science through basic principles right from the secondary level and all incoherent ideas are severely discouraged. In Chemistry lessons for example, the application of Valency is taught from the beginning. Similarly the inclusion of modern concepts in statistics, of group theory in Algebra and of Vector in Geometry and the application of Matrices, etc, in the modern

syllabuses of Mathematics have all helped in transforming the teaching of science and in imparting fuller knowledge. In our country we must experiment with the different methods of teaching and evaluate them to determine a suitable new method in our science education and to make the teaching of science easier and more developed.

15.11 Text and library books, appliances and apparatuses in our schools and colleges have been so damaged during the war of liberation that most of them have hardly any such facilities now. Scientific instruments and books have to be supplied to educational institutions so affected. This will be rather an expensive affair but we estimate that adequate foreign assistance will be forthcoming in this matter. There is at present considerable sympathy for war-ravaged Bangladesh in all countries of the world. We, therefore, believe that if we can submit well thought out proposals for assistance in this regard, these will be given due consideration by the United Kingdom, the United States, Russia, Canada, the Federal Republic of Germany and India.

Science education at the degree and higher levels

15.12 Great changes are noticeable in the field of higher education in our country after liberation. Quite a few new colleges have been set up in the past two years and honours and master courses introduced in some colleges which have not been given required facilities in respect of books and educational implements. Even in our universities there is a shortage of equipment required for practical classes and research. Besides, the schools, colleges and universities were all damaged during the war of freedom, and some of them suffered terrible losses in library books and in laboratory equipment. That is why a great crisis prevails to-day in the field of higher education in Bangladesh. If the new colleges do not have the necessary educational implements they will not be able to show satisfactory results. So urgent measures must be taken to ease the crisis in the field of higher education. It might be necessary to downgrade some of these colleges on the basis of an extensive investigation and collection of data. First, we must try to urgently fill the gap in respect of education implements in those colleges which have been set up already so that they can meet the challenge of higher education successfully. Qualified teachers, the necessary educational implements and apparatuses must be supplied to strengthen the colleges where post graduate and honours course in science subjects have already been introduced. Quality is much more important now than quantity. The syllabuses of subsidiary subjects should be determined in consonance with the honours course and the results of the honours examination and of those in subsidiary subjects should be co-ordinated. Courses, at the college level, may be introduced in the following branches of science: physics, zoology, botany, geology, soil science, statistics, mathematics, food and nutrition, pharmacology, etc.

15.13. The colleges as well as the universities are unable to attain the required standard in science education because of the unsatisfactory teacher-student ratio and paucity of the required educational implements. In order to raise the standard of higher education, admission of students has to be regulated on the basis of merit and the actual requirements of the country.

15.14. Original research should receive special importance at the university. Wherever possible applied research has to be carried on in the field of applied science. The subjects of applied research should be determined in accordance with national needs and interests.

15.15. The university concerned must arrange for a suitable refresher course from time to time to enable the teachers to move in step with the fast development in the field of science.

15.16. Immediate steps must be taken for the preparation of science books in Bengali and also for translating them into Bengali as required as the medium of instruction in higher education will be Bengali. This difficult task must be accomplished as soon as possible with the combined efforts of the teachers and with adequate financial assistance from government. A detailed discussion on this will be found in the chapter entitled "curriculum and syllabuses".

SCIENCE EDUCATION

SUMMARY

1. The importance of science in the modern world is immense. The developed countries of the world are achieving greater prosperity through wide-spread use of science. The main aim of science is to expedite the overall development of society. For this, science must establish a direct connection with human life. This connection can be established only through the successful application of science to the welfare of society. Science education must be so channelised that the pupils are attracted to its beneficial aspects. Science education should have this as its main aim right from the primary stage (15.1-15.2.)
2. In the science syllabuses of classes III to V, at the primary level, nature lessons, agricultural science, hygiene, and nutrition should receive special importance and biology should be introduced from class V. (15.3.)
3. There should be an integrated course of different branches of science in classes VI to VIII and biology, physics and chemistry should get priority in this course. (15.4.)
4. Necessary appliances, charts and models must be supplied to all primary schools to make science education effective. The text books at this level must be written in a simple language and enriched with attractive illustrations. (15.5.)
5. Physics and chemistry must be read as compulsory subjects at the secondary level. All pupils belonging to the arts group must read general science as a compulsory subject. (15.6-15.7.)
6. The science syllabus at the secondary and higher levels must be particularly strengthened so that we can catch up in this matter with the more developed countries of the world in the near future. (15.9.)
7. Science teaching must be made easier and more improved by introducing new methods of teaching in our science education system. (15.10.)
8. Books, educational implements and apparatuses in most of our schools and colleges were heavily damaged during the liberation struggle and as a result most of these institutions are woefully short of such implements. Scientific instruments and apparatuses and science books must be supplied on a priority basis to the schools and colleges so affected. (15.11.)
9. Qualified teachers, necessary apparatuses and other educational implements must be provided to strengthen the colleges where honours and master courses in science subjects have already been introduced. (15.12.)
10. The university concerned must arrange for a refresher course from time to time to enable the teachers to move in step with the fast expansion in the field of science. (15.15.)

CHAPTER XVI

AGRICULTURAL EDUCATION

16.1. The influence of agriculture over the economic and social life of Bangladesh is very wide-spread. Therefore, the overall development of our economic and social life depends on the development of agriculture. The development of agriculture depends to a large extent upon the supply of implements but appropriate use of these implements and profitable agriculture production become possible only when our farmers are well-trained in modern agricultural methods. The farmer is at the heart of the development of agriculture. The relevant statistics from different countries reveal that the most important factor in the development of agriculture is the skill of the farmer, and all other factors—such as investment of capital, plentitude of agricultural resources or other particular implements are of secondary importance. The development of agriculture depends on acquiring relevant skills of a high order and on their successful application. It is needless to mention that to make this possible agriculture must have a well-marked and appropriate place in our education system. One of the main aims of agricultural education is to transform the large manpower employed in agriculture into an alert, capable and productive work-force. For this purpose, our education systems has to be made universal on one side and permeated with the influence of agriculture on the other.

16.2 Agriculture, of course, does not mean merely field-produce, but also animal husbandry, pisciculture, planting and preservation of fruit-bearing trees and the marketing of all agricultural produce. Agricultural science, animal husbandry and pisciculture are all related technological and technical education and partly come within the scope of economics. Agriculture is at once science, a professional training and trade. Its scope and field are far-reaching. Modern agricultural education takes care of all these aspects.

The present condition of agricultural education

16.3. (a) There is no arrangement for agricultural education at the primary level in our country. But there is some provision for the supply of data regarding trees and plants and soil and weaver through nature-lessons. But as the syllabus is not attractive and as there is at present a dearth of qualified teachers, this type of instruction has no lasting effect on the pupil's mind.

(b) There is a separate syllabus for agricultural education at the secondary level but it is not at all effective. The chief reason for its ineffectiveness is the dearth of qualified teachers and of necessary educational implements. This type of education is hardly prevalent in government schools. Besides agricultural education has not yet been introduced as part of vocational education. It would be no exaggeration to say that there is at present no provision for agricultural education at the higher secondary level.

(c) A few agricultural technicians used to be trained in this country under the supervision of the agricultural department. For the purpose, there were also six training institutes. These institutes used to award certificates to pupils

having passed the S.S.C. examination and successfully completed the two-year training course provided by them. These institutes are now serving as extension training centre for workers in rural areas already in government service. As a result, the supply of agricultural technicians has stopped and government and semi-government agricultural organisations are being deprived of their services.

(d) For agricultural education at the degree level there is a separate university and a college in Bangladesh. At the Agricultural University nearly 500 pupils are admitted every year in the six faculties of agriculture-agricultural economy, agricultural technology, pisciculture and animal husbandry and veterinary science. There are both degree and post-graduate courses at the Agricultural University. 120 pupils are admitted every year to the degree course at Dacca Agricultural College. Agricultural education at this level is quantitatively insignificant and not realistic enough to promote agricultural development and to meet the requirements of the country.

16.4. We make the following recommendations for the appropriate reflection of agricultural training in our national education system.

Agricultural education at the primary level

16.5. The syllabus at the primary level must include general data relating to agriculture. For this purpose agricultural data should be furnished through the language syllabus in classes I and II, and primarily through science and biology and secondarily through geography, Bengali, and even mathematics in the other classes. Our objective at this stage should be to make the impressionable young pupils aware about, and attached to, Nature and their environment. For this purpose, their natural curiosity has to be fully utilised and arrangement for nature-lessons made in field, gardens and farms under the supervision of experienced teachers. Besides, an active effort must be made to stimulate the interest of the pupils in leaves, seeds, birds, fish and in agricultural implements.

Ours is mainly an agricultural country. At every stage of education therefore the pupil must be made aware of the great importance of agriculture in our economic and social life. Simultaneously they must be encouraged to participate in agricultural extension work and hold school-based exhibitions and publicity ventures so that the attitude of negligence and scorn now prevalent towards agricultural work is eradicated.

Agricultural education at the secondary level

16.6. (a) We recommend the inclusion of (1) production and preservation of grain, (2) pisciculture, (3) poultry farming and animal husbandry, (4) repair of agricultural implements and (5) food preservation and nutrition in vocational agricultural education. The aim of this education should be to make a pupil acquire through actual manual work all the necessary skill in a particular field so that after completion of his training he can, on the basis of this, earn his own livelihood.

(b) Agricultural science and animal husbandry have been included among the optional subjects of the science group in our general education system so that the pupils belonging to this group can get opportunity to acquire agricultural knowledge.

(c) We have already said that there is no proper provision for agricultural education at the higher secondary level, although the importance of agricultural education at this level is very great. So a suitable course in agriculture has to be introduced at this level for the pupils in the science group passing out of the secondary education system. Those having obtained vocational agricultural training at the secondary level should also be eligible for this course. Mathematics, physics, chemistry and subjects relating to agricultural science must be included as compulsory subjects in this course. It is possible to start this course, after supplying the necessary educational implements, in the colleges at the higher secondary level having facilities in land and pond for agricultural extension work. We recommend that this course should be introduced at every government college.

Agriculture education for those leaving school

16.7. In our country a large number of pupils are forced to leave school without completing their studies for economic and other reasons. They become a problem not only for their guardians but also for society as a whole. This unfinished education is of no practical value and they become a burden to their families. There is no provision in our country for such people to be gainfully employed. If a section of these people is transformed to skilled manpower through training in vocational subjects related to agriculture, they can become self-reliant and earn their own living with self-respect. Such training must have provision for learning on the post different skills of agricultural technology. There is a training and development centre at every thana in Bangladesh. The problem mentioned above can be partly solved if this centre can be supplied with suitable educational implement and a few trained teachers. Of course this system cannot provide for the training requirements of all the people needing such training. We therefore recommend that the thana training centres be expanded and raised to agriculture-technology training centres. We firmly believe that this scheme will be widely popular. We have recommended the inclusion of vocational courses relating to agriculture in the evening courses in the proposed agricultural polytechnics. Besides, evening training courses relating to agriculture can also be introduced in schools and colleges already having the necessary educational implements.

Agricultural technicians (diploma level)

16.8. We have already mentioned that at present we have no arrangement for the training of agricultural technicians. The six agricultural schools which were in existence up to a few months ago are now being used as extension training centers for rural employees of the agricultural department. No new agricultural technicians are now being trained in the country and as a result there is a great shortage of them in government and semi-government organisation like Agricultural Development Corporation, Water Development Board, Sugar Mills, Rice Research Institute, Jute Research Institute, Tea Expansion Board, Atomic Energy Commission, Agricultural University, Ministry of Forests and Fisheries, Ministry for Co-operatives and Rural Development, Agricultural Bank, etc. Immediate measures must be taken for the training of such technicians in the required numbers.

(b) Pupils belonging to the science group (including agriculture) or those belonging to the vocational agricultural group should be considered eligible for the training course for agricultural technicians. The duration of this course will be three years. There will be a basic training programme for two years and one year's special training in different branches in conformity with the

actual work-provision. A diploma in agriculture will be awarded to the successful candidates. In this connection it needs to be mentioned that a three-year farm technological diploma course is current in the two polytechnic institutes at Mymensingh and Comilla. Considering the urgency of trained agricultural technicians to meet the requirements indicated above we recommend that suitable diploma and certificate courses be introduced at each polytechnic institute until it is possible to set up an agricultural polytechnic in each administrative division.

(c) Even if our recommendations are immediately implemented it will take a few years to get the required number of agricultural technicians. We, therefore, recommend that a one-year special training course be introduced at a few selected polytechnic institutes for the pupils in the agricultural group passing out of the higher secondary stage to meet our urgent requirements for agricultural technicians.

Higher agricultural education

16.9. The present arrangement for higher agricultural education in our country is quite inadequate to our requirements. Priority should therefore be given to higher education relating to agriculture so that the necessary number of agricultural graduates are trained as soon as possible. If we look at the examples of eastern countries like Japan, Taiwan, Phillipines and Korea, we will see that a large number of highly educated people in the field of agriculture is required for any significant agricultural development.

16.10. One single agricultural college with an annual enrolment of one hundred and a solitary agricultural university which can admit only five hundred pupils per year are hardly adequate to meet the present requirements of our country in the field of agriculture. There must be provision for admission of at least 2,000 pupils per year to the agricultural degree course. For this purpose, the Agricultural University should be extended and degree courses in afforestation and home economics should be introduced there. Besides, every general university must have an agricultural faculty attached to it and an agricultural college should be set up in each of the four administrative divisions. In addition, a course in agricultural technology may be introduced in our technical colleges.

16.11. (a) The proposed agricultural college in Rajshahi division should preferably be set up in Dinajpur district. It may be mentioned in this connection that our first five-year plan has provision for setting up an agricultural college in Dinajpur. The soil and geological conditions of the northern areas are different from those of the other areas of Bangladesh. The whole northern region specially Dinajpur, is well-known for its rice and sugar cane—each of high quality. Besides, there is great prospect for the production of sugar beet, sunflowers, soyabins and cotton in this region. It is essential to make due provision for higher training and research in this area for the development of agriculture. We, therefore, recommended that the proposed Dinajpur agricultural college be set up as a priority measure during the first five-year plan. There should be provision for higher research and training in the different fields of agriculture at this college. This college may be given financial and administrative control for facilitating research and made a constituent college of the Rnajshahi university. Plenty of space will be available for this purpose close to the Jute and Sugarcane Research Institute in Dinajpur. So the selection

of site for the college will be no problem. 700 acres of land should be set apart for this college now, so that later it can be raised to an Agriculture and Science University without much difficulty.

(b) In the proposal agricultural colleges in Chittagong and Khulna divisions provision should be made for agricultural training and research suited to these regions. For example, the science of aquatic animals preservation of forest resources and the development of pisciculture, production and preservation of fruits, the expansion of the tea industry, the development of rubber plantation, production of coconuts, cocoa and cotton should form part of the syllabus at the proposed Chittagong Agricultural College.

16.12. The minimum educational qualification for admission to the agricultural degree course should be one equivalent to the present higher secondary certificate in agricultural science or general science. Degree should be awarded in agricultural science, pisciculture, agricultural technology, domestic science, animal husbandry, veterinary science, agricultural economics, soil science relating to rural areas, forestry, etc. The duration of the degree course will be four years and that of post-graduate course one year. Theoretical knowledge and research both should be part of the degree and post-graduate course. There should be a committee of at least three teachers drawn from the main and subsidiary subjects to direct the pupil's research.

16.13. There should be honours and post-graduate courses in Botany, Zoology and Soil Science at the Agricultural University.

Teacher-training

16.14. All primary school teachers must learn agriculture as a compulsory subject in the primary training institutes in order to acquire the ability to teach matter connected with the subject from classes I to V. The educational qualification for teachers teaching agriculture as a subject at the secondary level should be a degree in agriculture or a diploma in agriculture with one year's special training or a degree which includes soil science and biology with one year's training in agriculture. The educational qualification of those teaching the vocational agricultural course at the secondary level or the agriculture diploma course should be a degree in agriculture with one year's special training. At least 50 per cent. of the teachers for the agricultural diploma course should be degree-holders. The one year special training course mentioned above can be arranged at the Agricultural University of the Agricultural College. The necessary help required for the particular teaching methods of this course can be obtained from the teacher-training colleges. One teaching agriculture at the degree level should have preferably one year's post-graduate training. For his purpose, a one year post-graduate course should be introduced at the Agricultural University.

16.15. The agricultural education system in different countries is under the control of the Ministry for Education. India, Japan, United States can be cited as examples. If all recognised education systems are brought under the control of the Education Ministry, co-ordination and better management in these fields can be more easily achieved. As agricultural education is not regarded as the primary obligation of the Agriculture Ministry, the progress of agricultural education in our country has been hampered because of various impediments. We further recommend that all agricultural schools and colleges and all agricultural extension training centres should be brought under the control of the Education Ministry.

AGRICULTURAL EDUCATION

SUMMARY

1. Ours is mainly an agricultural country. The influence of agriculture over our economic and social life is very great. A large number of agricultural technicians and technologists and agricultural experts will be required for the proper development of agriculture. For this purpose, agricultural education must be firmly established at all stages of our education system and made an integral part of it. (16.1.)

2. An awareness about the importance of agriculture in our social and economic life has to be created among the pupils right from the primary level. The pupils should be encouraged to participate in agricultural extension work to eradicate the attitude of negligence and scorn to all agricultural work still prevalent in our society. (16.5.)

3. The scope of agricultural education has to be broadened at the secondary level. Provision must be made for vocational agricultural education in classes IX to XI. (16.6.)

4. The pupils leaving school in rural areas without completing their studies must be provided facilities for on-the spot training aimed at developing particular agricultural skills. (16.7.)

5. Diploma and certificate course in agricultural subjects have to be introduced at Polytechnic Institutes for agricultural technicians. (16.8.)

6. Agricultural education has to be expanded and improved at both the degree and post-graduate levels. For this purpose, an agricultural college has to be started in every administrative division. The proposed college for the Rajshahi division should preferably be set up in Dinajpur district. Provision should be made for the subsequent upgrading of this college to a full-fledged Agriculture and Science University. The proposed agricultural colleges for Chittagong and Khulna divisions must have provision for research in agricultural subjects of particular importance for these regions. A faculty of agriculture has to be opened at every general university and the Agricultural University at Mymensingh appropriately expanded. Greater stress has to be laid on agricultural research. (16.10 and 16.11.)

7. There should be honours and post-graduate courses in Botany, Zoology and Soil Science at the Agricultural University. (16.13.)

8. Provision must be made for training and for refresher courses for agricultural teachers at primary, secondary, diploma and degree levels. (16.14.)

9. For the expansion and improvement of agricultural education, the whole agricultural education system should be brought under the control of the education Ministry. (16.15.)

CHAPTER XVII
MEDICAL EDUCATION

17.1. The present system of medical education in Bangladesh is unsatisfactory and it is not related to the health problems of the country. This system is also unable to meet the needs of public health. In the present arrangement, an excessive stress has been laid on hospital-based and curative medical education. Community medicine has been neglected and the problems arising out of it have not been taken care of. The training obtained before registration and the beginning of the degree level is also unsatisfactory. The scope and standard of the present medical education system have to be broadened and raised to meet the requirements of public health.

17.2. There is a great dearth of doctors, nurses, medical technicians and other health-workers in our country. This makes the application of a broad-based health scheme difficult. The number of medical teachers and specialists is also quite inadequate to our actual needs.

17.3. The truth of what we have said above is borne out by the following statistics. The total number of the country's medical specialists of all kinds is at present only 247. There is only one doctor for 10,700 people. The dentists number only 32 and there is only one nurse for 1,00,000 people. Besides, there is also great shortage of medical technicians and para-medical workers in every field of medical education.

17.4. A rough estimate can be formed about our minimum requirements of doctors and other paramedical workers in the next five years from the table below :

TABLE 17 (a)

Number of doctors and specialists with post-graduate training required for Bangladesh according to the first five-year plan.

Subjects.	No. of specialist required up to 1976.	The present number of specialists with post-graduate training.	The present number of doctors undergoing post graduate training.	The shortage of specialists with post-graduate training.
Anatomy	47	9	8	35
Physiology	31	12	3	16
Bio-Chemistry	23	4	1	18
Pharmacology	30	13	3	14
pathology	114	20	9	81
Microbiology	26	8	3	15

Subjects.	Not of specialist required up to 1976.	The present number of specialists with post-graduate training.	The present number of under-going post-graduate training.	The shortage of specialists with post-graduate training.
Virology	7	..	..	7
Parasitology	4	..	1	3
Medicine	137	32	38	67
Surgery	131	39	14	73
Gynaecology	85	21	11	53
Pediatrics	40	8	14	13
Ophthalmology	46	21	6	19
Ear, Nose & Throat	30	7	4	10
Orthopaedic Surgery	10	1	4	5
Anaesthesia	85	6	19	60
Blood Transfusion	29	5	7	17
Radiology	85	20	9	55
Radio-therapy	30	10	7	13
Physio-therapy	8	2	..	6
Radioisotope	8	1	2	5
Dermatology	9	2	7	..
Dentistry	92	..	4	23
Psychiatry	17	5	8	4
Neurosurgery	8	..	..	8
Neuromedicine	8	..	..	8
Neuroradiology	8	..	..	8
Neuroanaesthesia	8	..	..	8
Cardiac surgery	8	..	..	8
Cardiac medicine	8	..	..	8
Cardiac physiology	8	..	..	8
Cardiac anaesthesia	8	..	..	8
Urology	8	1	..	1
Hematology	1	..	..	1
Blood diseases	2	..	..	2
Gastroenterology	2	..	..	2
Entomology	2	..	..	2
Epidemiology	2	..	1	1

Besides, at present there are only 7000 doctors holding the first degree in the country but we need at least 13000 similarly qualified doctors by 1980. We must therefore, immediately train 6000 more doctors.

TABLE 17.(b)

An approximate estimate of para-medical workers required during the first Five-Year Plan (1973-78).

Para-medical workers.	Actual number in 1972-73.	Approximate estimate of paramedical workers available during the first five-year plan.	The objective for 1977-78.
Health visitors	980	1,240	2200
Compounder phermadists	1,500	2,000	3500
Laboratory technicians	270	1,500	1770
X-ray technicians	130	370	500
Blood-bank technicians	20	250	270
Radio-therapy technicians	10	250	260
Physio-therapy technicians	20	250	270
Dental technicians	20	250	270
*Female health visitors	800	3,200	4,000
Nurses	250	500	750
Miscellaneous family welfare workers.	..	2,500	2,500

*These workers will soon be designated as family health visitors.

TABLE 17.(c)

The number of nurses:

	The number in 1974.	The required number in 1980.
The number of nurses (both male and female) holding the first degree and now working.	549	3,000
The number of junior nurses now working.	50	This course has been discontinued.
The number of nurses with post-graduate training (teaching and supervision).	40	360

The different categories of junior nurses, female health visitors, female family planning visitors, have now all been amalgamated in the "family health visitors" scheme. The family health visitors will supply all the old workers in these fields.

17.5. It will appear from table 17.(c) that there is a great gap between our requirements of doctors, specialists and para-medical workers in the next five years and the number actually available now.

17.6. It is very difficult to so mould the present medical education system as to make possible the immediate training of a very large number of para-medical workers. But it is hardly possible to introduce any broad-based public health system without such workers. Urgent measures must, therefore, be taken to remove the abovementioned gap.

17.7. Eighty per cent of the country's population lives in the villages. But our public health-system in the rural areas is altogether inadequate. Greater stress is laid on curative medicine in the present medical education system and as a result preventive medicine and community medicine have been neglected. Consequently, the medical trainees are hardly aware of the medical problems in the rural areas and of the basic requirements of public health. The doctors, therefore, often face a difficult situation when they are called upon to treat patients in the rural areas. This is the main reason why the doctors are often reluctant to go to the rural areas.

17.8. The present programme and training in the field of medical education are unrelated to the actual needs and problems of the country. Our present medical education system has developed on the foundation of an alien medical system but not on the foundation of our country's medical problems. So, the present medical education programme needs an immediate change. This programme prepared on the problems and health requirements of our country, the doctors will be able to fully utilise their training. If our doctors continue to be trained in the diseases and health problems of other countries, the apprehension is that they will soon be converted into a exportable commodity.

17.9. We must turn our attention to the health problems in rural areas, to preventive medicine, to family planning and to social science relating to diseases if we are really keen on meeting the health requirements of the country's populace.

17.10. If our medical trainees are made aware of the actual health problems of our society from the very beginning of their education and if some provision is made in the medical education system for the trainees to go to the rural areas and get first hand knowledge of the health problems there, it might be possible to attract doctors to the rural areas in future. The same principle can be applied in relation to the other health workers. That environment and surroundings can contribute to diseases is a fact which our medical curriculum should take due notice of. Our medical education system has to be related to social realities so that it can train competent and intelligent health-workers committed to the idea of social service.

Aims and Objectives

17.11. The aims and objectives of medical education should be, in our opinion, as follows:

- (1) To train sufficient number of doctors fully conversant with the health problems of the country's populace and with the diseases

peculiar to this region and willing to pay due attention to social welfare and to succouring the sick and the infirm.

- (2) To train the required number of nurses and other health-workers, both male and female, as soon as possible without affecting the standard.
- (3) To provide facilities for nurses and health-workers for higher training in their own subjects to create in them a greater interest in their work.
- (4) To so expand post-graduate medical education and training as to make available the required number of medical teachers and consultants.

17.12. *Eligibility for admission to the M.B.B.S. course:* Admission to medical college must be regulated on the basis of merit and predilection. The candidates must have passed the present H.S.C. Examination with physics, chemistry, biology and mathematics or the public examination at the end of the proposed class XI with at least a second division. We have assumed that the standard of the proposed 11-year school system will be comparable to the standard of the present 12-year education system. Besides, a suitable devised test must be held to determine the candidates predilection towards medical education and social service.

Course and training programme

17.13. At present the course and training programme in the field of medical education are largely dependent on text-books and are unrelated to the actual health problems of the country. Both the course and the training programme should be so devised as to encourage familiarity with the country's real health problems and the special diseases peculiar to it. Greater attention should be paid to such subjects of growing medical importance as bio-chemistry, microbiology, community medicine, behavioral science, nutrition, etc. The duration of the M.B.B.S. course should be full five years. The course should be divided into two sections: a two-year pre-clinical course and a three-year clinical course.

The following subjects should be taught in the pre-clinical course: Anatomy, physiology, bio-chemistry, psychology, social science, and elements of bio-statistics. Anatomy, physiology and bio-chemistry should be taught for at least two years during the course. But the above subjects should be shortened to suit the requirements of practical training. The teaching of psychology, social science, and elements of bio-statistics should be confined to the first year. Elements of bio-statistics should be taught under the supervision of teachers of community medicine. The duration for which a particular subject will be taught should be determined carefully in accordance with the importance of the subjects concerned.

The subjects for the clinical course

17.14. Third to fourth year: (a) Pharmacology; (b) Microbiology; (c) Pathology; (d) Preventive medicine; and community medicine. (e) Toxicology and forensic medicine; (f) Medicine, (g) Surgery. Fourth to fifth year: (a) Medicine; (b) Surgery; (c) Female diseases and maternity science; (d) Preventive medicine, and community medicine.

Anatomy

17.15. Anatomy should be taught in the first and second years. Human anatomy and the structure of the nerves, embryology and hematology should be included in the syllabus. Lectures, discussions, demonstrations and practical work must all be used for the effective teaching of the above subjects. The pupils must get familiar with human anatomy through dissection. Every pupil must be required to dissect a whole human body. At present theoretical discussion is given greater importance and practical demonstrations are neglected. This trend has to be reversed.

17.16. *Physiology*: The teaching of physiology should be completed at the end of the second year. The physiology of the human being and the different aspects of its application should receive due importance in the syllabus for the subject. Theoretical education should be supplemented as far as possible by experiments with human and animal bodies. Besides educational discussions and demonstrations should also be frequently held. Physiology education relating to the increase in human species must get priority and should be properly evaluated. A dependable knowledge of bio-chemistry is essential for mastering modern medical science. There is a separate and self-contained unit of bio-chemistry in the medical institutes of all advanced countries. There should be a separate department of bio-chemistry in our medical institute also. There must be provision for the teaching of the basic principles of bio-chemistry. Besides one must get familiar with the inter relation between bio-chemistry and disease. The cause of the origin of a disease is related to the chemical changes wrought by it in the human body. It will, therefore, be difficult for the pupils to determine the origin of disease without knowing the natural chemistry inside the human body. Food and nutrition have been neglected in medical education so far. Due importance must also be given to these subjects. The teaching of bio-chemistry should begin in the first year and end in the second. At the end of the second year the performance of the pupils in bio-chemistry must be evaluated.]

Behavioural science

17.17. The importance of behavioral science is increasing in the modern world. Indeed, the success of a health worker depends to a large extent on his knowledge of human anatomy and of the co-relation between human mind and environment. So, due importance should be given to familiarity with psychology and social science on the part of the medical pupils. These subjects should preferably be taught in the first year and the evaluation mentioned above can be made at the end of the first year.

Preventive and community medicine

17.18. In a developing country like ours the main aim of any health-scheme should be the prevention of diseases. That is why greater importance should be attached in the syllabus of the M.B.S. course to preventive and community medicine. This course will be more effective if it is taught in the last three years.

Community medicine

17.19. The management of public health, and statistics and schemes relating to population should be included in the syllabus. Practical training should receive greater attention if necessary by shortening theoretical teaching. Public health programmes and on-the-spot training must be given due importance and the total evaluation made at the end of the fifth year.

Pathology

17.20. General pathology, advanced pathology, hematology, and clinical pathology should be included in the syllabus. The teaching of these subjects can be completed in the third and fourth years. Appropriate knowledge of how different diseases bring about chemical changes in the human body and jeopardise the normal functioning of the human body is essential. For this purpose, the pupils must attend clinico-pathological conferences, post-mortem examinations and seminars in addition to formal lectures and taking part in practical classes. Pathological teaching should lay a greater stress on the common diseases in our country and the necessary educational implements should be chosen with that aim in view.

Micro-biology

17.21. Microbiology has made considerable progress in the past few decades. An adequate knowledge of microbiology is necessary to understand how contagious and infectious diseases are spread and how they can be controlled. As this particular science has developed considerably over the years, this should be detached from pathology and taught as a separate subject. Again, the main stress has to be laid on the diseases which are more prevalent in our country and the educational implements chosen with that aim in view.

Bacteriology, immunology, and paramyotology, should be taught in the third year and virology and mycology in the fourth year.

There should be provision in the fourth year for the pupils to acquire direct familiarity with microbiology relating to the diagnosis of diseases. The pupils will thus be able to evaluate the results of different microbiology experiments and will also acquire knowledge of the application of this particular science.

Toxicology and forensic medicine

17.22. The present syllabus is adequate but more practical training is indicated. The pupils should be present in more medico-legal *post mortem* examinations.

Pharmacology

17.23. The chemical components and the attributes of different drugs, the change the drugs undergo inside the human body and their effects and influence on the working of the human body and on different diseases (general pharmacology, pharmaco-dynamics, pharmacotherapeutics) should be instituted in this subject. This subject should be taught in the light of the teaching of pharmacology, of bio-chemistry and of other related subjects. This will discourage the tendency to memorise and help the pupils to understand the actual working and the effects of the drugs. To make this easier for the pupils experiments relating to the drugs should be made before them and they should be encouraged to make such experiments themselves. The educational implements should be so chosen that knowledge about commonly used drugs can be easily acquired.

Medicine

17.24. The following subjects should be included in medicine:

- (a) general medicine,
- (b) pediatrics
- (c) psychiatry and
- (d) skin and venereal diseases.

The main aim of medical education in Bangladesh should be to meet the health requirements of the country. There should, therefore, be more intensive teaching regarding the common diseases in the country. The diseases which are rare in this country should form part of the general teaching so as to enable to pupils to know about diseases prevalent in other countries. Medicine should be taught in relation to the actual medical problems of the country. Teaching by the sick-bed and about diseases and related matters should receive more importance than heretofore as well as clinico-pathological conferences and meetings and seminars. The pupils must compulsorily receive training in the out-door department of the medical centre in the nearest village to make them familiar with how medical treatment should be given in rural surroundings.

To make the pupils aware about mental diseases and how to treat them, every medical college hospital should have an out-door department for mental diseases and provision of beds in the hospital for mental patients. Many of these diseases spring from mental problems and many are but the physical manifestations of mental problems. General practitioners come across many such patients in their daily practice. That is why the pupils must have an adequate knowledge of mental and psychomatic diseases and the facilities for training in these subjects should match those in other subjects.

Theoretical and practical training, clinical sessions, clinico-pathological conferences, seminars, etc., should be arranged in the third and fourth years of the medical course. Practical training should receive greater importance. Practical classes, clinical sessions and seminars should be compulsorily included in the syllabus and properly evaluated.

Surgery

17.25. The following subjects are included in surgery:

- (1) General Surgery, (2) Operative Surgery, (3) Special branches of Surgery, such as Ophthalmic Surgery and Ear, Nose and Throat Surgery.

Surgery should be taught keeping in view the actual surgical problems of the country. For this purpose, direct teaching about patients fit for surgical treatment should be provided and operative surgery receive greater importance. Proper stress should also be laid on familiarity with the different implements of surgical treatment and how these should be used. Clinical sessions, symposia, clinico-pathological conferences, etc., should also form part of surgical education. The pupils should be made familiar with particular aspects of surgical treatment in an appropriate social environment. For this purpose, the pupils in the surgical

out-door department should spend half of their working time in a neighbouring rural health centre. There they should be taught the different aspects of surgical treatment in a realistic social environment.

Pupils in every branch of surgical treatment should receive on-the-spot training. The pupils may be allowed to take part in minor operations, which general practitioners are often required to perform, under the supervision of their surgical teachers. For the proper diagnosis of the emergent condition in certain diseases and how to tackle it, the pupils should be compulsorily required to take part in the work of the appropriate emergency department.

There should be separate provision for teaching of ophthalmic surgery and ear, nose and throat surgery. The greater part of teaching in these subjects should be confined to on-the-spot training.

Medicine and surgery can be simultaneously taught through integrated conferences and seminars on certain diseases.

Radiology

17.26. The pupils should be made sufficiently familiar with the different methods of diagnosing diseases, so that they are able at once to diagnose common diseases and evaluate diseases through radiograph.

Female diseases and maternity science

17.27. Female diseases and maternity science should be taught in the fourth and fifth years of the medical course. The teaching in these subjects should be as far as possible related to the basic medical subjects and to the teaching of medicine and of surgery.

On-the-spot training and direct teaching should receive greater importance. For this purpose, the pupils must be given practical training in the out-door department of female diseases and in delivery rooms. If maternity treatment is carried on in a realistic social environment, the gynaecologists will get familiar with various kinds of female diseases and with complications relating to child birth. For the proper treatment of these diseases, the pupils must have practical experience.

The pupils should also be made familiar with every phase of birth control and every method of human procreation for this purpose. Statisticians, demographers and those connected with biological work should be given training in these matters, in addition to the medical specialists. Greater stress should be laid on practical medical training in rural areas. An integrated course of female diseases and maternity science, of general medical and surgical education, and of child diseases and social medicine should be introduced for this purpose.

It is being felt for many days now that on-the-spot training in female diseases and in maternity science is not receiving the importance it deserves. The duration of practical training for the pupils in the out-door department of female diseases should be extended in accordance with the importance of this subject. Lectures and demonstrations in diagnostic, radiology, anaesthesia and practical blood transfusion should be supplemented by on-the-spot training in these subjects.

List of subjects for the proposed medical degree course**(a) Pre-clinical course :**

- 1st year .. 1. Anatomy
2. Physiology
3. Bio-chemistry
4. Psychology and social science.

- 2nd year .. 1. Anatomy
2. Psychology
3. Bio-chemistry

(b) Clinical course :

- 3rd and 4th years ... 1. Pharmacology
2. Pathology
3. Microbiology
4. Preventive medicine
5. Toxicology and forensic medicine
6. Medicine
7. Surgery
- 4th and 5th years .. 1. Medicine
2. Surgery
3. Female diseases and maternity science
4. Preventive and community medicine.

- 4th and 5th years .. Field service (three months)
M.B.B.S. Degree.
Practical training (one year) (in the subject of one's choice on the basis of merit—six months, in other subjects by turns—six months).

Post-graduate medical education

Diploma,	Degree.	Membership exami- nation.	Fellowship examina- tion.
Special subjects;	In basic subjects; M. Phil Clinical subjects; Master Degree.	College of physicians and surgeons.	of physicians and surgeons.

Field service

17.28. Medical education should be so arranged as to benefit the larger section of the population living in the villages. For this purpose, the pupils must get familiar with the medical problems in rural areas. A fixed portion of the training-time of the pupils must be spent in a rural medical centre under

the supervision of their clinical teachers. At that centre, there should be provision for training in an integrated course of medicine and surgery of female diseases and maternity science and of community medicine. During this period of their training, the pupils must take part in preventive vaccinations and inoculations and in other health programmes related to the requirements of the rural areas. The minimum duration of the integrated course should be three months. To make the rural health programme effective the resources of the medical centre or centres nearest to the medical college concerned should be fully utilized. Arrangement should be made for the accommodation of the teachers and pupils who will be working at these centres.

The method of evaluation

17.29. The existing method of evaluation is defective and it cannot correctly determine the pupil's merit. For the proper assessment of the pupil's merit and knowledge, a new evaluation method has to be introduced.

The most desirable thing, of course, would be the constant evaluation of the pupils, but this is hardly possible at present because of the unsatisfactory teacher-student ratio. So long as a satisfactory teacher-student ratio cannot be achieved, the present method of evaluation has to be appropriately modified and used. Written examination should be reduced to the minimum and must be objective and designed to indicate the solution of problems. A far greater stress has to be laid on *viva voce*, practical and clinical examinations. The questions for the *viva voce* test must be previously determined so that the test does not vary from pupil to pupil.

There should be provision for the award of medals, testimonials, etc., for extraordinarily meritorious pupils.

Interneeship

17.30. The duration of interneeship should be one year. Of this period, six months should be devoted to the specially chosen subject on the basis of merit and six months to other subjects by turns.

Medium of Instruction

The medium of instruction: the introduction of Bengali as the medium of instruction at all levels of education should be our objective, although as an interim measure the help of English may be taken. For this purpose, text books and journals relating to modern medical research and of a sufficiently high standard are essential. Our medical education is related to international medical science and, therefore, the technical terms should not be unduly charged. This must be kept in view while preparing medical text books.

The management and control of medical institutes: At present the medical institutes are under the control of three separate organisations—government, the university and Bangladesh Medical Council. The appropriation of money, the selection of teachers, the admission of students and general management are under the control of government. Besides, the hospitals attached to medical colleges are used for general medical treatment. This has resulted in a deficiency of suitable educational implements and in an added pressure on the teachers. For, they are required to serve as consultants also in respect of ordinary patients. In this particular situation, the teachers are not able to give due attention to their primary duty, that is, teaching and research. The medical colleges suffer on the one hand from a disadvantageous teachers-student ratio and on the other from an excess of patients in the hospitals attached to them. Moreover lack of

financial autonomy has created several big impediments in the way of successful teaching. The medical colleges must be given financial autonomy so that they can largely concentrate on teaching and the management of hospitals attached to them moulded according to the requirement of teaching. The hospitals attached to medical colleges should not serve as general hospitals. The aim of general hospitals is quick cure of the patient and his speedy discharge. But the aim of a hospital attached to a medical college should be something very different. Such a hospital should admit only selected patients so as to facilitate the teaching of the different branches of medical science. A full and complete investigation of each case is necessary to make the pupils familiar with different aspects of medical science. This separation and autonomy will require an investment of a good deal of money and other resources, so that this may be gradually implemented. All medical colleges, like the technological and other educational institutes, must be brought under the control of the Education Ministry.

17.31. Although the medical colleges will be self-governing in matters of management, they must be brought under the control of the university concerned in all educational and academic matters. For this purpose, all medical colleges should be treated as constituent colleges of the university and the present medical faculty of the university should be expanded and divided into several faculties.

Inter-Medical College Board

At present the M.B.B.S. course is taught in medical colleges under different universities, but there is arrangement at present for mutual consultation regarding the curriculum and syllabus or administrative matters. The standard of the M.B.B.S. course may, therefore, vary from university to university. We, therefore, recommend that an Inter-Medical College Board should be set up without delay for the purpose of co-ordinating the academic activities of all medical colleges in the country. Each principal of a medical college and one representative from the Medical Council should be members of this Board. Principals of medical colleges will act by turns as chairman of this Board. The headquarters of this Board should be in Dacca.

Post-graduate medical education and training

17.32. The provision of more facilities for post-graduate medical education and training and for its expansion is necessary to meet the shortage of medical teachers and consultants in our country. The facilities for training in the post-graduate medical institutes should also be extended. A few selected medical colleges can be encouraged, on the basis of their resources, to introduce the master degree course in certain subjects. It is quite clear from our experience of post-graduate medical education and training in different countries that the standards suffer and many practical difficulties arise for lack of a central co-ordination board. Such a co-ordination board can be found in many developed countries of the world and we strongly feel that this is also an urgent necessity in our country.

To increase the facilities for doing the post-graduate medical course, pupils already having the necessary competence and training should be allowed to take the post-graduate examination. It would be imprudent to give post-graduate medical education no more importance than medical education at other levels. We must make sure that an environment suitable for successful post-graduate medical teaching and research and the ancillary facilities and implements.

are made available. Doctors with a post-graduate degree should be given preference at the time of appointing teachers for medical colleges and a post-graduate qualification should be regarded as an essential pre-requisite in this matter in the near future.

Institute of Post-graduate Medicine and Research

The institute post-graduate medicine is one of our important national organisations. This institute was set up in one part of the Dacca Medical College at Building in 1965. The institute was subsequently shifted to its present site. The institute has the following departments: Medicine, Surgery, Female diseases and Maternity Science, Anatomy, Physiology, Pharmacology, Bio-chemistry, Nephrology, Cardiology, Urology, Neurology, Psychiatry. The work programme of this institute has to be expanded and the institute itself sufficiently improved so that it can make its due contribution to the following:

- (a) Post-graduate medical training
- (b) Diagnosis and treatment of diseases which cannot be treated in other hospitals
- (c) Research regarding health problems
- (d) Exchange of teachers at the international level
- (e) Provision for evening training course for general physicians
- (f) Provision for training for medical teachers every five years.

Such a national institute must be located in the capital, as in other countries because of the many facilities available in the metropolitan area. The co-operation of other medical colleges and hospitals of libraries and of various research centres and the exchange of medical knowledge at the international level are essential for effective post-graduate medical education.

Medical assistants

17.33. There is at present a great dearth of trained and competent physicians and of para-medical workers for the proper management of the public health system in our country. As medical education is time-consuming and as it is not possible to train a sufficient number of teachers in the near future, it would be definitely worth-while to train a large number of medical assistants to partly meet the above shortage. The idea of medical assistants and technicians is quite popular in the Soviet Union, in the United States of America and in China. These medical assistants render considerable help to the doctors with whom they are attached. This is specially true in rural areas. At the end of the 11/12 year education system, the medical assistants should be taught about the practical aspects of medical science through a two-year training course.

The training course for medical assistants should be started at medical institutes other than medical colleges because of the shortages of teacher, the want of necessary appliances and of accommodation in the present medical colleges. Besides, the training course for the medical assistants and the degree course in medicine are two entirely different things. The medical assistants should specially be conversant with the general medical requirements in rural areas. The training course for medical assistants can be started, keeping the above aim in view, in the district hospitals.

Dental training

17.34. The provision for admission of students and of educational and training facilities in the field of dentistry is on the whole satisfactory, but at present there is a great shortage of dentists in the country. It is, therefore, necessary to establish more dental colleges and to provide greater facilities for dental training. As an interim measure, however, the dental department attached to the medical colleges should be expanded and the trainees in medical science should be provided basic dental training so that they can treat common dental diseases.

Nursing

17.35. The public health system of a country is indicative of the level of progress made by it. We must, therefore, take effective measures for extending public health facilities among the common people, specially in rural areas. The training of health workers and the effectiveness of the public health system are inter-related and inter-dependent. We consider the following programme essential for those under training as nurses:—

- (1) There should be a clear demarcation at every level in the work of the trainees and of the role appropriate to each level.
- (2) In the training of nurses and in the provision of jobs for them, the trainees should have an effective say.
- (3) The training of those showing special competence in the field of nursing should be expedited.

The training of nurses and the provision of jobs for them should be gradually determined in accordance with the quality of nursing displayed at different levels. The following designs should make the whole thing clear. When a trainee successfully crosses a particular level, his or her competence as a nurse increase. As there are different fields of nursing, the appropriate curriculum should be determined on the basis of a proper analysis of the actual working field.

Designs of the proposed training for nurses

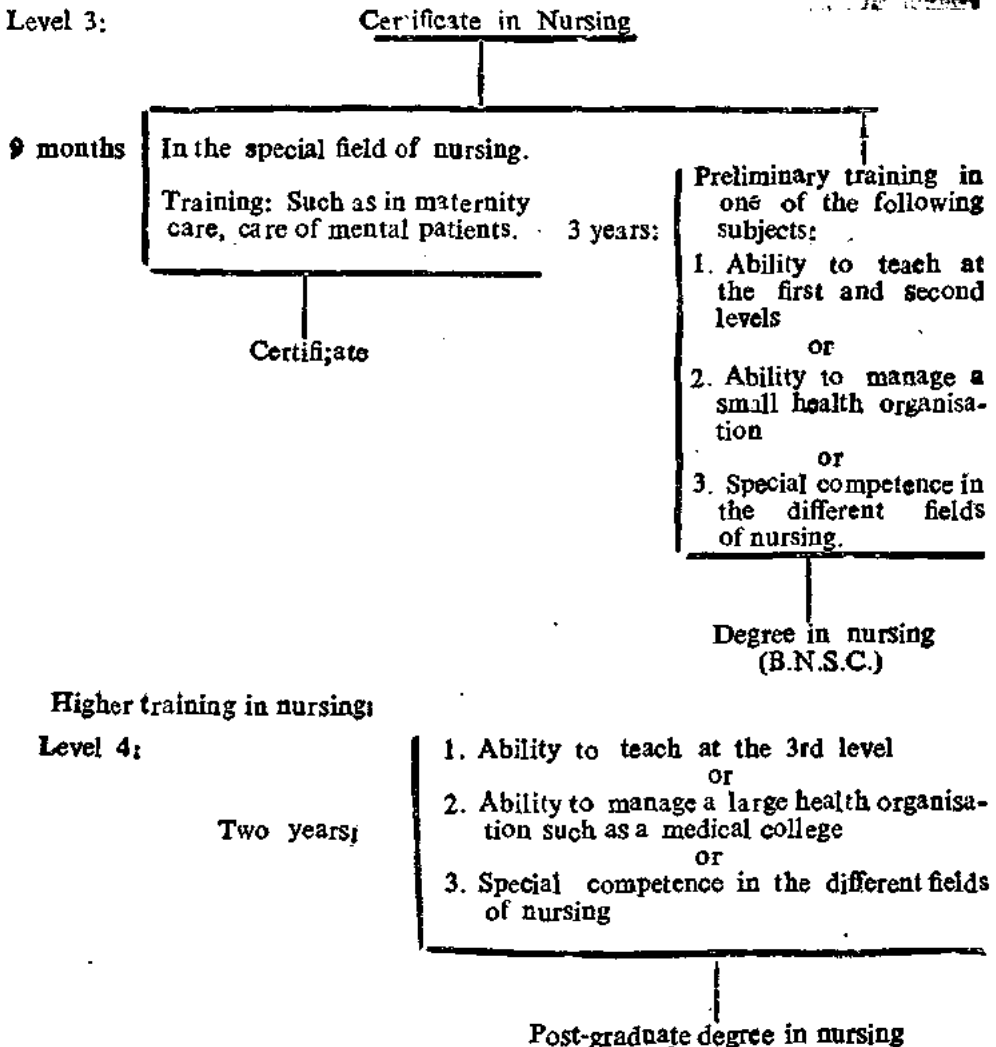
Level 1: Classes IX and X:	The Selected field of nursing,	Subject.
	18 hours per week	1. Anatomy and physiology.
	Practical and vocational courses.	2. Community medicine, family health and science
		3. The techniques of nursing.
		4. Theoretical Physics and Chemistry as related to nursing.

According to us it is essential to prepare text books in Bengali to implement the training programme mentioned above: A vocational nursing course can be started in those schools which have the required number of teachers and are close to district hospitals.

Level 2: Proposed Class XI	Subjects.	Duration.
	<ol style="list-style-type: none"> 1. Complexities of human body-structure. 2. The techniques of nursing. 3. On-the-spot training and the solution of problems depending on common sense. 	One year

Registered Nurses

The following advanced level is necessary for higher and special training in nursing. This level will begin after obtaining the certificate in nursing (the certificate which enables the nurse to get registered).



The public examinations for the third and fourth levels should be conducted by the university.

Para-medical education and Training

17.36. The proposed design of para-medical education:

- Level 1:** Classes IX&X. Practical and vocational training for 18 hours per week in previously determined para-medical subjects.
- (a) Related to general science.
 - (b) Training in hygiene and environment a cleanliness.
 - (c) Contagious diseases & public hygiene.

Level: 2 Training in any one of the following:

1. Radiology-technician course.
2. Radio therapy-technician course.
3. Dental-technician course.
4. Course for compounders.
5. Course for public health visitors.
6. Blood bank-technician course.
7. Instruments-curator.
8. Laboratory-technician course.

Duration.....one year (eleven), (including theoretical and practical training)

Certificate in medical techniques.

We recommend that facilities for higher education in other branches of medical science, as in nursing, should be made available. The following design will give some idea about the higher education we have in mind.

Level 3;

Duration of the courses:

Three years¹

¹ Basic skill in the following

(1) Teaching ability for the first and second levels.

(2) Knowledge of special fields.

b. Sc. Degree in medicine

Level 41

- | | |
|---|------------------------|
| 1. teaching ability for the third level.
2. Knowledge of special fields. | Duration
two years. |
|---|------------------------|

M.Sc. Degree in Medicine

The education and training programme for para-medical worker should be equivalent to that in the other branches of science, such as agricultural science and technological education.

We also feel that the medical technicians, like the nurses, should be offered monetary and other benefits in conformity with their particular kinds of experience. Otherwise they will have no incentive. Higher education for medical technicians should be provided in the existing medical institutes.

17.37. We have mainly discussed modern medical science in this report. The other methods of treatment, such as Homoeopathic, Unani and Ayurvedic medicine, are outside the scope of this report. We, however, feel that a special committee should be set up by government to evaluate the above methods of medical treatment.

MEDICAL EDUCATION

SUMMARY

The present system of medical education in our country is unable to meet the requirements of public health. In the present system, hospital-based curative medical education has received disproportionate importance and as a result preventive medicine and community medicine have been neglected and the social problems arising therefrom have not been given much importance. At present there is a shortage of doctors, nurses, medical technicians and other health workers in the country. The number of medical teachers and consultants is also inadequate to our needs. The scope and the standard of the present medical system have, therefore to be broadened and raised to meet the requirements of public health. Preventive medicine and community medicine have to be given due importance, side by side with curative medicine, to make the present medical education system capable of meeting the requirements of public health. There should be provision for training of the pupils in a rural health centre so that they can get familiar with the social realities and take part during their training in activities related to preventive medicine. (17.1-17.10)

2. The present course and syllabus are excessively dependent on text-books and not related to the actual health problems of the country. These should be so modified as to be related to the country's actual health problems and its more common diseases. (17.13.)

3. Behavioral science is gaining greater importance every day. Indeed the success of a health worker depends to a large extent on his knowledge of the inter-relation between the human body and the human mind and the environment. Proper stress has, therefore, to be laid on the pupil's familiarity with psychology and social science. (17.17.)

4. The main aim of any health scheme in a developing country like ours should be the prevention of diseases. With this aim in view, preventive and community medicine should be given greater importance in the syllabus and work programme of medical education. (17.18.)

5. The management of public health and schemes and statistics relating to population should form part of the syllabus. Practical training should be given due importance if necessary by shortening theoretical learning. For this purpose, on the spot training and an appropriate public health programme must be given due weight. (17.19.)

6. The main aim of medical education is to meet the country's health problems. Therefore, there should be special provision for teaching regarding the more common diseases of the country. It is necessary to make provision for a brief period of training in a rural health centre to enable the pupils to learn about medicine in a social environment. To make the pupils aware, and to teach them, about mental diseases, there should be an out-door department for mental diseases in every medical college and provision of beds for mental patients in the hospital attached to them. (17.24.)

7. The teaching of surgery must be related to the actual surgical problems of the country. For this purpose, direct teaching about patients fit for surgical treatment and about operative surgery should be given due importance. In every branch of surgery there should be provision for on-the-spot training for the pupils. This can be done if the pupils are allowed to participate in operations through providing help to the surgeons. (17.25.)

8. The duration of the course relating to female diseases and maternity science should be two years. The teaching of this course should be related to the basic medical subjects and co-ordinated with the teaching of medicine and of surgery. On-the-spot training should also receive greater attention. (17.27.)

9. Medical education in our country should be so designed as to adequately benefit the village community. For this purpose, the pupils must get familiar with the medical problems in rural areas. A fixed portion of the pupil's training time should be spent in a rural health centre under the supervision of his teachers. (17.28.)

10. Written examination should be reduced to the minimum and be objective and designed to indicate how the problems can be solved. The greatest stress has to be laid on viva voce, practical and clinical examinations. The questions relating to the viva voce examination should be previously determined to ensure that the test does not vary from pupil to pupil (17.29.)

11. Interneeship should be divided into six months for a particular subject of one's choice and six months for other subjects by turns. (17.30.)

12. Medical colleges should be made self-governing and counted as constituent colleges of the regional university concerned. There should be hospitals attached to these colleges. All medical institutes should be brought under the control of the Education Ministry. An Inter-Medical College Board should be set up for mutual consultation and understanding regarding the curriculum and syllabus and administrative matters of the different medical colleges. (17.30-17.3.)

13. Post-graduate medical education has to be expanded to produce the required number of medical teachers and consultants. National medical institutes, like the institute of post-graduate medicine and research, should be located, as in other countries of the world, in the metropolitan area which offers unique facilities. The co-operation of all medical institutes and hospitals, of libraries and various research centres and the exchange of medical knowledge at the international level are essential for effective post-graduate teaching. (17.32.)

14. Provision should be made for the training of medical assistants, so that they can help the doctors in their every day work. For this purpose, a two-year medical course—following a twelve years education system should be introduced in the district hospitals. The practical aspects of medical science should receive special importance in this course. (17.33.)

15. There is a dearth of dentists in the country. This can be met by opening more dental colleges and expanding the present facilities for dental education. (17.34.)

16. There should be a clear demarcation of each level, and the role appropriate to it, in the work of persons undergoing training in nursing. In the training of nurses and the provision of jobs for them, the trainees must have an effective say. The training of those showing special competence should be expedited. (17.35.)

17. Provision should be made for para-medical education and training. (17.36.)

18. A special committee should be set up to evaluate Homoeopathic, Unani and Ayurvedic medicine. (17.37.)

CHAPTER XVIII

COMMERCIAL EDUCATION

18.1. The importance of commercial education in a modern state is immense. The knowledge of daily general administration, of commerce and trade, of banking and insurance, of exports and imports, of industrial relations, of production-cost, of transportation and marketing of commodities and of advertisement can be acquired only through commercial education. Technical skill is greatly impeded in factories and industrial concerns and in the field of agriculture if skilled manpower in the field of commerce is not available at its different levels. It is not possible to carry on managerial work and to expand commerce and trade or to effect industrial development without proper spread and development of commercial education. The importance of commercial education is increasing every day in all countries of the world precisely because the development of the things mentioned above is dependent on it. Commercial education, therefore, occupies an important place in the education system of all developed countries.

The aim, of commercial education is to prepare skilled manpower in the three following categories:—

- 18.2. (a) **Office assistants:** They should be able to work fast and without mistakes and be dependable. Office assistants, typists, stenographers, accountants, book keepers, record keepers, selling assistants, etc., belong to this category.
- (b) **Supervisors:** The supervisors themselves must have many of the qualities of the assistants whose work they are required to supervise. Besides, they should be able to guide and direct the assistants not only with competence and consideration but also be able to explain to them the principles of management. Persons holding supervisory and management posts belong to the above category.
- (c) **Managers at higher levels:** These persons should be fully familiar with the economic and commercial principles and able to formulate principles relating to production and development. The directors of commercial and industrial concerns belong to this category.

18.3. Every one belonging to the above three categories should be specially trained in his particular field. All must read a general course relating to the management of office and must at the same time acquire a particular skill in a special field such as typing or stenography or accounting so that they can do the work of assistants with competence. Those showing qualities of leadership, diligence and special competence should be generally eligible for managerial and supervisory posts. The commercial directors at the highest level should have complete knowledge and full understanding of the basic principles relating to money and economics. The commerce and economic courses in our universities should be so framed as to encourage the inventive skill and initiative of our future industrial and commercial managers and directors.

The present condition of commercial education

18.4. (a) There is provision for the teaching of commercial methods and correspondence, of commercial arithmetic and book-keeping, and of typewriting and commercial geography in classes IX and X of the commerce group in a few secondary schools, but this teaching is far from satisfactory for want of suitable teachers and typewriters. The present method of teaching is completely theoretical and the pupils get no opportunity of acquiring any practical experience. As a result, they do not develop the necessary competence to enter the working field even after completing the course.

(b) There are at present two different trends at the higher level of commercial education in our country. One is a higher secondary certificate course in the commerce and general colleges and the other is a two-year diploma course in government commercial institutes under the Directorate of Technical Education.

Bengali, English, Shorthand, Typing, Economics, Management of Files Commercial Geography and Banking are taught as compulsory subjects in the higher secondary certificate course. One optional subject has to be chosen from among Civics, History, Mathematics, Statistics, Typing and Short-Management. Commercial Management and Commercial Arithmetic are taught level is very discouraging because of the shortage of qualified teachers and of appliances.

Bengali, English, Shorthand, Typing, Economics, Management of Files and Correspondence, Accounting Methods in Banking, Accounting, Commercial Correspondence, Operation of Office Machines, Commercial Arithmetic, Office Management, Commercial Management and Commercial Arithmetic are taught in the diploma course. The diploma course in commerce is largely vocational and practical.

There are at present 16 commercial institutes in the country of which 15 are attached to different polytechnic institutes and one has been separately set up in Dacca. There is a great shortage of suitable teachers and educational implements in the commercial institutes. Besides, the institutes attached to the polytechnics do not have the necessary facilities in regard to class-room, library, hostel and accommodation of teachers. Nor is there a separate principal. The principal of the polytechnic concerned supervises the commercial institute attached to it with the help of an instructor. This arrangement has not been found to be satisfactory.

(c) There is provision for the first degree B.Com. and for the M.Com. course at the post-graduate level for those passing out of the higher secondary course. The pupils passing the diploma course are also considered eligible for admission to the first degree B.Com. pass and B.Com. honours course. There is provision for the B.Com. course in a few government and non-government commerce colleges in the country and for the B.Com. honours and M.Com. courses at Dacca, Chittagong and Rajshahi Universities.

18.5. The arrangement for professional education an M.B.A. course for professional education and training is current in the Commercial Management Institute attached to the Dacca University. A training course is available in the Management Development Centre under the Bangladesh Government. There

are two separate organisations called the Bangladesh Institute of Chartered Accountancy and the Bangladesh Institute of Industrial Accountancy, which provide professional training in the field of commerce.

Recommendations

18.6 We make the following recommendation to remove the defects of commercial education at different levels and to make it cohesive and effective.

- (a) Commercial education should receive due importance in the curriculum at the school level. A good deal of money will be needed to make commercial education at this level vocational and realistic. At present there are no miniature banks, commercial museums, essential educational implements and opportunities for visits to commercial organisations which are of vital importance in this field of education at the school level and, therefore, the type of commercial teaching provided there is neither realistic nor effective.
- (b) The practical side of commercial education at the secondary and higher secondary levels should be strengthened and made more effective, so that the pupils are considered suitable to enter the working field right after they finish the course and can get suitably remunerative jobs. Properly trained and experienced teachers and essential educational implements like typewriters should be made available for the proper teaching of commercial subjects. There should be provision for on-the-spot training to acquire familiarity with the rules and principles of management relating to offices, courts, banks, and industrial and commercial concerns.
- (c) The fifteen commercial institutes attached to the polytechnics should be made separate organisations. The teachers and pupils belonging to the attached commercial institutes do not get the same facilities in regard to scholarships, accommodation and managements as those enjoyed by the teachers and pupils of the polytechnics. This has resulted in considerable frustration among them and has also greatly reduced the effectiveness of these institutes. Such discriminatory treatment must be ended forthwith. Provision for the promotion of teachers belonging to the commercial institutes is essential to attract qualified persons to teaching in these institutes. There is provision for a two-year diploma course in the commercial institutes for those passing out of class X. Vocational courses in classes IX, X and XI as proposed by us can be introduced along with the above course.
- (d) There is a great dearth of trained teachers in the field of commercial education. This is specially prominent in subjects like typing and stenography. A teacher-training course in typing and stenography can be immediately started in the Dacca Education Extension Centre and in the commercial institutes. A full-fledged teacher-training course in commercial education should be started in the general teacher-training colleges. Typewriting and shorthand should be compulsorily included in the course.
- (e) At present there is a two-year diploma course in only accounting and secretarial science in our commercial institutes. Separate diploma courses should also be started in insurance, banking and commercial methods and salesmanship, for there is a great dearth of trained pupils in these fields.

- (f) There should be provision for evening courses in every commercial institute to enable working pupils to get the necessary competence and to acquire improve commercial techniques.
- (g) The course at commercial institutes is of a terminal type and its main aim is to provide competent typists, stenographers, office assistants, accountants, selling and buying assistants to government and non-government offices and to commercial organisations. The present rules regarding employment should be changed to enable the pupils successfully passing out of these institutes to get the above positions on a priority basis. This will make the institutes more effective and popular.
- (h) To prepare the way for women to be employed in the above positions in offices, banks, insurance companies and different commercial organisations, adequate provision for commercial education should be made wherever possible in women's colleges.

18.7. At the degree level, there should be facilities for training in certain professional fields. Teaching in accounting managements, commercial economics, banking, insurance, transportation, statistics, the marketing and distribution of commodities, etc., should be so regulated as to enable the pupils to develop analytical ability and the power of judgment as well as professional competence and to be employed as supervisors, examiners of accounts, managers, etc., in government and non-government organisations.

Commercial education at the degree level should not be limited to the lectures of the teachers. This type of education must bear the impress of reality. For this purpose, well-stocked commercial museums, laboratories, for practical training and necessary fund for educational tours should be provided.

18.8. There should be facilities for a special type of education at the post-graduate level in general management, finance and banking; insurance, sale management, marketing of commodities, etc. The problems should be identified and its importance realised through collection of data and their analysis and the different ways of solving the problem should be weighed and the best one under the circumstances chosen and the ability to implement it must be nurtured and increased. It would be necessary at this level to create three categories of skill on the part of pupils-technical skill, the ability to comprehend social and humanistic problems and the ability to understand the complex working of an organisation. That is technical competence must be provided to the pupil in the profession chosen by him, and secondly we must be able to develop his skill to get the help, approval and co-operation of those he comes into contact with in the discharge of his official duties and to make them work whenever required, and finally we must be able to create a willingness among all concerned to place the interests of the company above individual or group interests. If their education is so regulated, the pupils in the field of commerce will be able to discharge their responsibilities with competence and devotion once they are employed as officers, managers and administrators in government and non-government organisation.

A well thought-out scheme of interneaship should be introduced at the post-graduate level. At this level, every pupil must have the opportunity to work in a business or industrial concern or a government or semi-government organisation for a period of atleast two months a year and be able to use his the oretical knowledge in the practical field. The help of local trade and industrial association and government offices may be sought in this matter.

18.9. Admission to commercial institutes should be regulated on the basis of the actual requirements of trained manpower in commerce for the country's economic and social development and new faculties should be opened and necessary financial allotment made in accordance with the number of pupils actually admitted.

18.10. As commercial education is both realistic and practical, the pupils in this field should be familiar with the problems actually faced by the trade and industrial concerns and government and semi-government organisations. They must, in addition, be taught how such organisations abroad face similar problems and find means of solving them. The pupils must be fully familiar with our production problem, with the problem relating to the sale of commodities with the export problem, with the problem arising out of finding necessary capital for the trade and industrial organisations, with the problem of how to commodities should be advertised, with the problem of transporting the commodities, and with the problem of business risk and how this can be eased throughly insurance. It is not possible to produce loyal and disinterested workers for any organisation or to strengthen its management without some acquaintance with the hopes and aspirations of the labourers, of the officers, of the supervisors, of the managers and of the administrators of such an organisation. The teachers must be constantly abreast of their subject if they intend to impart this kind of knowledge to their pupils. Commercial research and preparation of the syllabus and the text-books on the basis of its findings are necessary for this purpose. At present there is no commercial research bureau attached to any university in Bangladesh, although this is an urgent need.

18.11. In all developed countries of the world the teachers become aware of the problems faced by the local organisations through working as consultants and this knowledge helps them to make their teaching realistic and effective. The commercial teachers should, therefore, be encouraged to work as part-time consultants to local trade and industrial organisations. This will strengthen the method of teaching and bring about an intimate relationship between commercial institutes on the one hand and trade and industrial organisations on the other. Seminars and special lectures should be arranged in important subjects at the commercial institutes and competent and reputable managers and administrators should be invited to participate in them.

18.12. There should be provision for a summer commercial institute for the improvement of commercial education. The aim of the summer institute will be to arrange a refresher course for the teachers engaged at the second level of commercial education. An additional aim of this institute should be to arrange a short time training course for the working managers so that a close relationship can be established and an exchange of ideas made possible between the university and the trade organisations.

18.13. The universities in the developed countries are not content with merely providing education and awarding degrees in the field of commerce. They also exert themselves to provide suitable employment for their pupils in accordance with their mental frame, the background of their training and their personal values. For this purpose, there is an employment bureau attached to every faculty of commerce. Such is unfortunately not the case with our universities. Every university and every commercial institute in our country should try to establish an employment bureau with the help of the teachers and under the supervision of a trained officer and thus build a bridge between them

and the employing agencies. This will at once make it easier for the pupils to get jobs and render selection of employees by the organisations concerned scientific and free from bias.

18.14. At the higher level of commercial education, the standard of courses should not preferably vary. If the commercial management institute attached to the Dacca university confines its emphasis to professional training it will help the industrial organisations to become more efficient. If the faculty of commerce attached to the university concentrates its effort on teaching and research it will again help produce trained manpower in the field of management on a long-time basis. At the degree level, there should be only one course. According to us, it would be a waste of limited national resources in our present economic condition to start new courses one after another.

We have given due consideration to the proposal of introducing a B.B.A. course. But the recommendations we have made for the improvement and modification of the B.Com. course include the subjects of the proposed B.B.A. course. The diploma course at commercial institutes is a terminal course. The main aim of this course is to supply well-trained stenographers, typists, accountants, office assistants, etc., to government and non-government organisations. There is considerable paucity of such trained manpower in our country. If the commercial institutes concentrate their attention on producing trained manpower of this type they will be making a useful contribution to the country's economic and social development. The present opportunity for the admission of those having the diploma in commerce to B.Com. pass and B.Com. honours courses will facilitate higher education of really meritorious pupils.

18.15. In conclusion, we would like to say that commercial education should have a particular objective and philosophy, as education in any other field. This objective or philosophy should be the implementation of basic state principles and their reflection in the management and administration of trade and industrial organisations. Commercial education till now has been moulded by the concept of capitalism and designed to earn huge profits for those providing the capital and hence its management is reactionary and largely autocratic. Now all courses of commercial education must be adapted to our basic state principles to ensure that the management is no longer reactionary and is in fact made into a progressive and democratic force. The objective of all trade organisations should be to produce quality commodities at a reasonable cost in order to raise our standard of living and to ensure the most effective use of our limited national resources through distribution of these commodities at a fair price. While framing the syllabus and curriculum of commercial education this aim has to be carefully kept in view so that it is possible to produce such trained manpower as will be committed to the service of the nation. Commercial education of tomorrow should be so devised as to make the pupils mentally and intellectually ready for the necessary transition to socialism.

COMMERCIAL EDUCATION

SUMMARY

1. The importance of commercial education in a modern state is immense. The knowledge and ability to supervise and direct commercial and industrial concerns can be gained only through this type of education. The expansion and improvement of commercial education are essential for the proper training of office-assistants, supervisors, and managers and directors at the higher level (18.1.-18.2.)

2. Vocational commercial education at the secondary level should be expanded. For this purpose, an adequate fund for purchasing type-writers and other implements must be provided. (18.6.-a.)

3. There should be provision in offices, courts, banks, and industrial concerns for the practical training of pupils in this field of education. (18.6.-b.)

4. The commercial institutes attached to the polytechnics should be set up as separate organisations. A diploma course in insurance, banking, commercial methods and salesmanship should be started in the commercial institutes. An evening course must be provided for the working pupils. (18.6.-c.d.e.)

5. A teacher-training course has to be started to remove the dearth of competent teachers. There should be provision for a summer commercial institute for arranging a refresher course for the teachers. (18.6.-d.-18.12.)

6. The rules and regulations for employment should be modified to enable pupils trained in vocational commercial education to get jobs in government and non-government offices and commercial concerns. (18.6.-g.)

7. There should be provision for commercial education in women's colleges wherever possible. (18.6.-h.)

8. There should be provision for interneeship with the co-operation of commercial and industrial organisations to make commercial education at the degree and post-graduate levels more realistic. (18.8.)

9. If the commercial teachers at the higher level are allowed to work a part-time consultants of industrial and commercial organisations, their teaching will be made more realistic and at the same time it will help the pupils to be provided with jobs. There should be an employment bureau attached to the faculty of commerce to help their pupils get suitable jobs. (18.11.-18.13.)

10. The faculty of commerce at the university should lay special stress on teaching and research and the commercial management institute attached to the Dacca University on professional training. (18.14.)

11. The commercial education system should be so moulded as to fit in with a socialistic economy. (18.15.)

CHAPTER XIX

LEGAL EDUCATION

19.1. Legal education in Bangladesh should first be assessed in its true perspective and then it has to be determined what type of law graduates we require for our country. It can be stated in brief that we need law graduates of the highest competence and professional integrity those who can help in safeguarding and in strengthening our constitution. We need such law graduates who will be able to promote international relations and keep them intact. Our law graduates should not only be highly competent and intelligent persons but also dedicated to the principle of justice. We need liberal-minded, well-read and learned people in the field of law so that they can comprehend the contemporary economic, political and ideological forces at work. Our common people naturally expect the lawyers to help them get justice. Legal education plays a crucial role in maintaining the rule of law in the country. We, therefore, need such law graduates who will be able to make their own contribution to legal-knowledge and at the same time establish the highest standard of professional ethics.

19.2. Both the common people and the lawyers have been critical of the legal education system prevalent in Bangladesh. The standard of legal education has considerably deteriorated in this country over the past years. The main cause of this deterioration is the hurried establishment of law colleges in different parts of the country. Most of these law colleges are deficient in management and in appropriate surroundings and also have a shortage of competent teachers. The admission to the faculties of law attached to universities and to the law colleges is now virtually uncontrolled, although the law colleges are not able to attract qualified teachers. Most of these colleges have been set up without fulfilling the conditions laid down by the university. On account of external pressure or to gain popularity, the university authorities have shown a certain slackness in applying the conditions laid down for affiliation or approval. It is harmful for the pupils and the nation as a whole to grant affiliation to colleges which have a clear shortage of qualified teachers, of accommodation and of essential text-books and journals. If any law college works on the basis of meeting only the minimum requirements and of encouraging the memorising of a host of undigested data on the part of its pupils, it will fail to produce the type of law graduates we are looking for.

19.3. The chief weakness of the present law colleges is that they have no provision at all for higher education and research. Even the faculties of law attached to our universities are unable to provide necessary facilities for research. Our universities are producing lawyers to man the legal profession and the judiciary but have so far failed to take measures for enriching legal knowledge. There is no provision at present for the reform and improvement of legal methods and of the methods of administering justice.

Research is needed for effecting a cohesion between legal knowledge and its practical application and the ever-emerging new requirements of society. We have so far been able to produce only advocates and lawyers and not legal experts

19.4. Legal education has two aspects—one relating to teaching and research and one relating to practical use and application. Neither of these aspects is taken care of in the universities of the law colleges. After the establishment of the Bar Council it was hoped that they might assume the responsibility for the practical application of legal knowledge and leave the university free to concentrate on teaching and research. As there is no satisfactory arrangement for the development and co-ordination of the practical aspects of legal education, establishment of law colleges in larger numbers than required and admission of an excessive number of students have been made possible. Although legal education is in fact a post-graduate course, yet its standard has been deliberately lowered to enable pupils lacking the necessary calibre to be admitted to this course. Many of these pupils later resort to unfair means for passing the examination and thus lower the standard of legal education. The aim of legal education in our country should be to produce competent law teachers, lawyers, legal experts and judges in the required number. So admission to the law course must be regulated, as in medical and technical courses.

19.5. The system of legal education now prevalent in Dacca and Rajshahi universities and in the law colleges approved by these universities as well as by the Chittagong university differs in courses and in syllabus from university to university. There is provision for a two-year law-course after the first degree course in the law colleges in different parts of the country. On the other hand the legal education system obtaining at Rajshahi university consists of the B. Jur. (honours) course of three years' duration for those passing out of the higher secondary education system, of the M. Jur. course whose duration is one year for those having passed the B. Jur. (honours) examination and of the L.L.M. course whose duration is two years for those passing the M. Jur. examination. At the Dacca university the duration of the L.L.B. honours course is three years after the higher secondary course and the duration of the L.L.M. course is one year after the L.L.B. honours course. It is, therefore, seen that the Dacca university requires only four years for completing the L.L.M. degree course after the higher secondary course whereas the Rajshahi university requires six years for the L.L.M. degree course after the higher secondary course. The duration of B. Jur. (honours) course and the L.L.B. honours course is in each case three years, but there is considerable difference in curriculum and syllabus between the two years. The syllabus for the M. Jur. degree course at Rajshahi university is generally followed in the L.L.B. honours degree course at the Dacca university. It can be stated in brief that the Rajshahi university pupils are able to practice law four years after passing out of the higher secondary education system and the pupils of Dacca university can do so three years after passing out of the same system. On the other hand, the graduate pupils in the law colleges scattered all over the country become eligible for legal practice after the successful completion of a two-year law course.

19.6. We believe that certain measures should be taken to raise the level of legal education in our country in the light of the deficiencies enumerated above. The first degree in any subject of any approved university should be considered as the minimum requirement for admission to law colleges. If this minimum requirement is lowered the standard of teaching and the quality of the pupil's knowledge will deteriorate. The basic training of pupils in certain important branches of legal knowledge should be such as to enable them to be further trained in the technical aspects of jurisprudence. The teachers and principals of law colleges as well as the practising lawyers are both in favour of making the first degree the minimum requirement for admission to law colleges and we

ourselves strongly endorse this view. Admission to law colleges should be regulated on the basis of marks obtained in the first degree examination and of the results of the admission test.

19.7. The best way to raise the standard of legal education in our law colleges is to make a rational reconstruction of the present legal education system and to raise the duration of the law course at the college level from two to three years. In the better known universities of the United Kingdom and the United States the minimum duration of the law course has been reasonably determined to be three years. A three-year law course was current in Dacca university until 1957. But to make the course equivalent to the law courses in the other parts of the then Pakistan, Dacca university reduced its duration to two years. The 1919 Calcutta University Commission, the 1949 Commission for Indian Universities and the 1959 Education Commission of former Pakistan each had recommended that the duration of the law-course should be raised from two to three years. We do not think that this course can be mastered in less than three years. Those who read law in our country are not only required to read general law but also muslim law, hindu law, etc. As a result, the course becomes much too crowded with legal details and cannot, therefore, be satisfactorily completed as the real significance of these details is not properly understood. One must enter deeply into the country's prevalent legal system to get the necessary legal competence and as long as the law degree is regarded as a passport to the legal profession the main principles of adjective law cannot be ignored. Adjective law and substantive law must both be taught focussing the basic principles of each. Emphasis on these basic principles is not possible in a course—the duration of which is less than three years. For this reason we recommend that the duration of the L.L.B. course should be three years. One can enter the legal profession after completing this course. Of course, the Supreme Court or the Bar Council will determine the necessary qualification for entering the legal profession.

19.8. The L.L.B. course in our law colleges should be divided into two parts. The duration of the first part will be two years and that of the second one year. The university will conduct the examination for each of these groups. There should be an examination at the end of the first year of the first part. Only those passing this examination will be promoted to the second year. The first two years should be devoted to the history of law and to basic subjects and sources. The third year should consist mainly of training such as drafting of documents, cross-examination, conducting cases and submitting pleas and prayers. Besides, moot-courts, regular visits to the court, the preparation of the history of a case, of the preparation of a brief, lectures on professional ethics and on medical law, etc., should be arranged to make the pupils familiar with the practical aspects of law. The university may consider awarding an academic or a teaching degree at the end of the first part of the course for those reading law purely for an academic purpose. But those who want to enter the legal profession must complete the second part of the course and only those passing the examination at the end of the course should be given the diploma in advocateship. The chief advantage of the proposed system is that the number of pupils in the final year will be relatively few and this will enable the teachers to hold weekly moot-courts, to arrange visits to the courts and to prepare the history of cases and to actively supervise their pupils in these matters. A record should be kept in the law colleges of the actual participation of the pupils in these activities and ten per cent marks of the total obtained in these exercises

should be added to the marks obtained in the final examination. We have already stated that the required qualification for entering the legal profession should be determined by the Supreme Court or the Bar Council. But we are of the opinion that government should consider allowing the law students successfully completing the training part of the proposed course to practice law without imposing the existing restrictions on them.

19.9. We believe that the three years required now for doing the law-course at the university level after the higher secondary course is not adequate for training a lawyer, as the law course of two years duration in law colleges is similarly insufficient. The basic legal training of pupils in certain important branches of legal knowledge should be so strengthened as to make it possible for them to learn later the technical aspects of law. The reasons enumerated in para 19.7. are also applicable in this case and, in addition, those who do the L.L.B. honours course after the higher secondary course should be required to read subsidiary or other subjects with a total of 600 marks and to pass in each of them. The present three-year L.L.B. honours course after the higher secondary course is hardly sufficient for properly training a lawyer. We also strongly believe that the duration of the law course prevalent in our universities should in each case be the same and that there should be cohesion among them in matters of curriculum and syllabus. We, therefore, recommend that the present three-year honours law course in Dacca and Rajshahi universities for those passing out of the higher secondary education system should be converted to a four-year course. For this purpose, the duration of L.L.B. honours course at the Dacca university should be raised to four years from the present three and the three-year B.Jur(honours) course at the Rajshahi university redesignated as the L.L.B. honours course and its duration raised from three to four years. The proposed four-year L.L.B. honours course will include the one year of the present M.Jur course and so there will be no need for a separate M.Jur course. This will enable the two universities to achieve an equality in standard respecting their law courses and this will also have a wholesome effect on the law institutions at home and abroad. Similarly the duration of the L.L.M. course at Dacca university should be raised to two years from the present one year. This will make the duration of the L.L.M. course at both Dacca and Rajshahi universities the same (two years) after the L.L.B. honours course. Those obtaining the L.L.B. degree from the law colleges will also be eligible for admission to the proposed two-year L.L.M. degree course. As and when law education is introduced in the other universities of the country, the duration of the course and the curriculum and syllabus should be similarly fixed. An article period must be fixed for those who obtain the L.L.B. honours degree at the university before they are allowed to practice law. The duration of this period and the nature of articleship must of course be determined by the Supreme Court or the Bar Council. But the views expressed in the preceding paragraph regarding the teaching of those in the third year of the L.L.B. course in law colleges will also be applicable in the 4th year of the proposed law course at the universities.

19.10. We are of the opinion that the curriculum and syllabus of the law course taught in our law colleges should be similar to those obtaining in the law course offered at the university level. We repeat that it is necessary to be fully familiar with the existing legal system in the country to acquire legal competence and that a jective law cannot by any means be disregarded in the process. Law teaching should be so arranged as to lay a proper emphasis on the basic principles of adjective and substantive law. The history and objective

of current law, the interpretation of statutes and of the constitution, the origin of constitutionalism, administrative regulations, insurance-law, medical jurisprudence, etc., should form part of the syllabus.

19.11. A certain percentage of pupils not entering the legal profession should read a few chosen subjects of law. One can read constitutional law or contract law according to one's vocation or inclinations. Law can also be learned just for the sake of learning or research. These things may be taken into consideration while framing the syllabus for legal education. In certain countries, the academic learning of law is separated from the professional reading of law, England is a case in point. The professional side of legal education is controlled there by the Council of Legal Education and the academic side by the University. In this sub-continent and in the United States both these aspects are controlled by the university. It is indeed a difficult pursuit to simultaneously acquire proficiency in the technical aspects of law and be familiar with its theoretical aspects.

19.12. A modern civilised society is greatly influenced by the system of law prevalent there. So the activities of those responsible for interpreting law should clearly bear the impress of justice and of a high moral sense so as to develop an attitude of confidence and respect to law among the common people. For this reason, the arrangement of lectures regarding the role of morality in the legal profession should be considered an essential part of the syllabus.

19.13. There should be provision for master and post-graduate courses in law at our universities. We have said above that the duration of the 'L.L.M. (master)' course should be two years. Those passing the L.L.B. (honours) examination at the university level and L.L.B. examination at the college level should both be eligible for admission to the L.L.M. course. Those passing the first part (a two-year course) of the L.L.B. examination at the college level will also be eligible for admission to the above course. The master degree course of two years' duration mentioned above should be divided into two parts. The first part should be course-oriented and the second part course-oriented or thesis-oriented. Those who will do both the course-oriented parts and pass the examination will be awarded the L.L.M. degree and those who will do the thesis-oriented part after the first course-oriented part will be awarded the M. Phil. Degree. Those successfully completing a two or three-year research course under a qualified and reputable supervisor after obtaining the Master degree in law will be awarded the Doctor of law degree.

19.14. Provision must be made for the type of legal education required for the reform and improvement of legal and judicial methods. We must try to develop the kind of scholarship which enriches legal knowledge. Legal research is necessary for this and to effect a meaningful relationship between legal education and its practical application and the ever changing requirements of society. If there is no improvement in the field of legal teaching, we are not likely to get qualified teachers for our law colleges. Under the circumstances we consider it essential that the universities should provide facilities for legal research. The principal responsibility of the teachers in this matter will be to supervise the research of their pupils and to give them necessary guidance and directives. There should be provision for scholarships in certain fixed subjects of law to encourage the pupils to undertake research work and to be trained under the supervision of the departmental professor. All efforts must be made to conduct research in international law and in legal problems with

which the people and the nation are directly involved. It can be reasonably hoped that the centres of legal teaching and research in Bangladesh will in course of time be raised to the level of such centres in the developed countries if the above measures are adopted.

19.15. Quite a few law colleges of indifferent standard have been set up in the past two years. The universities have been liberal in according affiliation and approval to these colleges without ascertaining whether suitable standards are maintained by the latter. Only those law colleges which have the requisite facilities should be given approval. We say with the utmost emphasis that the requirements in respect of teachers, of building and accommodation and of tutorial and practical classes as applied to general colleges should be rigorously adhered to while considering the recognition or affiliation of law colleges. The universities should recognise only those law colleges which have the required number of qualified teachers and whose comprehensive educational programme is conducive to real learning.

19.16. The teachers at the law colleges must not all be full-time or part-time teachers but a mixture of both. Famous legal practitioners must also be associated with the college so that the pupils can get the advantage of their long experience in the legal profession. The association of such legal practitioners will be of particular help to the pupils in the matter of the rules relating to the conduct of cases. Of course, most of the teachers at the law colleges should be regular and full-time teachers. For, the satisfactory management of higher teaching and research in law colleges will not otherwise be possible.

19.17. The number of teachers in the existing law colleges is disproportionately few in relation to the huge enrolment. As a result, competence, discipline and orderliness in those colleges have suffered a set back. This position is educationally highly unsatisfactory. The admission of students has to be regulated and at the same time the number of teachers has to be increased. The salary of these teachers has to be increased if qualified and competent persons are to be attracted to teaching in the field of law. While appointing the principal and the professors in the law colleges, their published research work and their ability to supervise and direct research should be carefully assessed.

19.18. As the main aim of the present law colleges is to prepare law graduate quickly, the teaching there is not of the university standard. This should be quickly remedied. The requirements in respect of tutorial and practical classes, of teaching and research and of the supervision of pupils as applicable in the case of higher training and research in the field of arts should also be effectively enforced at the higher stage of legal education.

19.19. The financial condition of our law colleges is deplorable. It would be difficult to arrest the deterioration of standards in our law colleges if their financial condition is not appreciably improved. In fact, the main reason for the unsatisfactory quality of teaching in our law colleges lies behind their financial instability. It is for this reason that the law colleges are unable to appoint (in some cases even qualified teachers) the necessary number of teachers, to make due provision for building and accommodation, and to get the required number of books and journals and other educational implements. As a result the quality of teaching there suffers greatly. We must here point out that government does not provide any money for legal education, although it is more mindful of the

financial requirements in respect of the other types of professional education. In fact, there are government institutes for all other types of professional education, except legal education, the entire expenditure of which is borne by government. We require able lawyers as much as competent teachers, qualified engineers and good physicians. An adequate amount of money should, therefore, be allotted for legal education. It may be mentioned in this connection that the law colleges do not receive the government grant as received by other non-government colleges. We therefore recommend that government may examine the possibility of setting up law colleges in different parts of the country. In the meantime the better law colleges in our country should receive the same government grant as given to the other non-government colleges.

19.20. There is no clear-cut arrangement for the management and control of the law colleges. Every law college is attached to the regional university concerned as a constituent college. The college is visited before it is accorded recognition and before the recognition is extended. Each of these law colleges has a governing body in accordance with university regulations. But in matters of administration and of management and development, the colleges are controlled neither by the university nor by the government. At present only the governing body is responsible for these matters. But the manner in which the governing body is constituted and the way it functions leave much to be desired. The need for a truly responsible and active governing body is indeed very great in respect of these colleges.

16.21. The governing body for a law college should be constituted with a distinguished local lawyer or legal expert or a retired judge or a high officer of the judicial department or a high-ranking government officer as chairman and the principal of the college as member-secretary. The other members should be chosen from among the teachers, the local lawyers, local educationists and elected representatives of the pupils. The Education Ministry will select from among the local educationists and persons interested in education the representative/representatives on the governing body under this category. The chairman of the Governing Body should be chosen by the university concerned from among the persons indicated above. This governing body will be fully responsible for the administration, management and development of the college.

19.22. Besides, the following recommendations should be implemented soon:

- (a) The Bangladesh Bar Council should take effective measures without delay for assuming the responsibility for practical or applied legal education but this responsibility has to be meanwhile discharged by the universities. A new body called the Council of Legal Education should be set up, if necessary, to discharge this responsibility.
- (b) The admission of students to law colleges has to be regulated on the basis of the existing facilities in respect of management, of teachers, of building and accommodation, and of library and other educational implements. A special committee consisting of the university Inspector of Colleges, a representative from the Ministry of Law and of distinguished lawyers and legal experts should be set up and they should inspect the facilities for management in the law colleges under the jurisdiction of the university concerned and

they must not extend the recognition of colleges if the latter are not able to implement the rules and regulations regarding management within the current recognition period and recognition must be withheld from such colleges in future.

- (c) Provision for an adequate number of moot-courts and tutorial classes must be made from the next academic year in the existing two-year law (L.L.B.) course.
- (d) The honours and master course in the field of law now prevalent in Dacca and Rajshahi university should be made equivalent in relation to the duration of courses and to curriculum and syllabuses and in respect of standard. In this connection, effective measures as mentioned in para. 19.9 should be taken soon.
- (e) Provision for direct teaching of law should also be made in Chittagong and Jahangirnagar universities.
- (f) A special stress has to be laid on research in the field of post-graduate legal education so that legal education can be made research oriented. For this purpose, the Bangladesh Institute of Law International Relations should be made self-sufficient in library and other educational facilities and then made to work in close association with the universities.
- (g) Law should be taught as an optional subject at the first degree level. The pupils must be given the option to choose law as one of the degree pass courses or as a subsidiary subject in the honours course.
- (h) Those holding the present L.L.B. degree in the three-year honours course in law or a similar degree should do a one-year professional course and pass the examination held by the Bangladesh Bar Council before they can practice as advocates. The universities should arrange this training as long as the Bar Council is not in a position to assume the responsibility for the above one-year professional course.

LEGAL EDUCATION

SUMMARY

1. The lawyers as well as the public are critical of the present legal education system in Bangladesh. The standard of legal education has deteriorated for past few years setting up of law colleges in different parts of the country, is the cause for deteriorating legal education in the country. Most of these law colleges are deficient in management and in appropriate environment and also have a shortage of qualified teachers. The enrolment of law students in the universities and law colleges is disproportionately large. There is no provision for research in the law colleges. No research in the field of law is being done even in the universities. Our universities and law colleges are preparing lawyers only to man the legal profession and not to enrich legal knowledge. There is no provision for the reform and improvement of legal and judicial methods. The university and colleges are not able to cater satisfactorily to either the practical and applied aspects or to the theoretical and research aspects of legal education. (19.1.-19.4.)

2. Although legal education is a post-graduate course, pupils of relatively low calibre are admitted to it as admission is not selective as in other post-graduate courses. Most of these pupils resort to unfair means later for passing the examination and thus lower the standard of legal education. The legal education system at present prevalent in Dacca and Rajshahi Universities and in the law colleges approved by these two universities as well as by the Chittagong university is not uniform respecting duration of courses and curriculum and syllabus. (19.4.-19.5.)

3. Certain measures have to be taken in view of the above deficiencies to properly raise the standard of legal education. The duration of L.L.B. course for those holding the first degree at any approved university should not be less than three years. The L.L.B. course in the law colleges should be divided into two parts. The duration of the first part will be two years and of the second one year and the university will hold an examination at the end of each part. The first two years should be devoted to the history of law and to basic subjects and sources. The third year will consist mainly of practical training such as the preparation of documents, cross-examination, conduct of cases and submission of pleas and prayers. The universities may consider awarding an academic or a teaching degree to those who read law only for the sake of acquiring learning and successfully complete the first part of the course. But those intending to follow the legal profession must complete the second part and pass the examination at the end of it before they are awarded the diploma in advocateship. One passing the above course can straightaway practise law. Of course the requirements for practicing law must be determined by the Supreme Court or the Bar Council. (19.6.-19.8.)

4. The duration of similar law courses at all the universities should be the same and there should be cohesion between the curriculum and syllabus relating to law followed in the university and those obtaining in law colleges. The duration of the honours course in law now prevalent at Dacca and Rajshahi universities for those passing out of the higher secondary education system should be raised to four years from the present three. For this purpose, the duration of the honours course in law at Dacca university should be raised to four years from the present three. And the three-year B.Jur (honours) course at Rajshahi university should be redesignated as L.L.B. honours course and its duration raised to four years. The present one year of the M.Jur course should be incorporated in the L.L.B. honours course and the M.Jur course should be abolished. The duration of the L.L.M. degree at Dacca university should be raised to two years from the present one. This will make the duration of the L.L.M. course three years at both Dacca and Rajshahi universities after the two-year L.L.B. honours course. Those obtaining the L.L.B. degree from the law colleges should also be considered eligible for admission to the two-year L.L.M. course. The two-year master degree course should be divided into two parts. The first part will be course-oriented and the second part will be either course-oriented or thesis-oriented. Those who will do both the course-oriented parts should be given the L.L.M. degree after passing the examination and those who will do the first course-oriented part and then the thesis-oriented part and pass the examination should be given the M. Phil. degree. (19.9.-19.13.)

5. Legal research is necessary for the reform and improvement of the legal and judicial methods and to effect a cohesion between legal knowledge and its practical application and the ever-emerging new requirements of society. (19.14.)

6. Only those law colleges which have the requisite facilities and a teaching programme conducive to real learning should be given approval. The requirements regarding recognition in respect of facilities of tutorial and practical classes as applied in the case of general colleges should also be rigorously enforced in the law colleges.

7. The teachers in law colleges should not be all full-time or part-time teachers but a mixture of both. (19.16.)

8. The admission of students has to be regulated and at the same time the number of teachers increased. At the time of appointing teachers in the law colleges, their published research work and their ability to supervise and direct research must be assessed (19.17.)

9. Government may consider setting up suitable law college in different parts of the country. The more suitable among the existing law colleges should be given government grant as in the case of other non-government colleges. (19.19.)

10. An active and responsible Governing Body should be constituted for each of law colleges for its management, administration and development. (19.20-19.21.)

11. Besides, the following recommendations should be implemented without delay:

- (a) The responsibility for enforcing practical and applied legal education must be given immediately to the Bangladesh Bar Council but in the mean time this responsibility must be discharged by the universities.
- (b) A special committee consisting of the University Inspector of Colleges, a representative of the Ministry of law and distinguished lawyers or legal experts should be set up to inspect the law colleges under the Jurisdiction of the university concerned and recognition should be withheld from those colleges unable to implement the rules and regulations regarding management within the stipulated period of three years.
- (c) Law should be taught as an optional subject at the first degree level.
- (d) Those holding the present L.L.B. degree (a course of two years) or holding the honours degree in law (a course of three years) or a similar degree should do a one-year professional course before they are allowed to practise law. (19.22.)

CHAPTER XX

FINE ARTS EDUCATION

20.1. The fine arts education system is meant to achieve two main objectives in the country's overall educational programme. First, fine arts education helps a nation to become culturally more prominent and secondly it arouses man's latent awareness of beauty and helps to develop it fully. This development includes the development of physical, mental, social and moral qualities, in addition to the instinct for beauty.

20.2. The physical and mental development of a child begins to take place from his very birth through various natural and social activities and it always follows its own distinct course. But as man is a social being, society has a great responsibility towards this. Society has to ensure that man is able to expedite social advancement simultaneously with his own individual improvement and development. Social advancement is not possible without the development of the individual; likewise the development of an individual is not possible without a suitable social environment. Every human being has a basic responsibility, although not always of the same kind, in the field of social organisation and social progress and development. Man can individually and collectively advance the cause of social welfare and development through making necessary adjustments but without sacrificing his own distinctiveness. For this, there is need for the collective education of man under a well thought out scheme.

20.3. For man, the period of learning extends from day of birth to his last living day. A suitable educational institute and a favourable social environment are necessary to make man's life-long learning effective. On the one hand the society should set up educational institutes of various types to build up man as a responsible and effective citizen in conformity with national philosophy and ideology and aspirations as well as national traditions and on the other hand the educational institutes should try to make the social environment more developed and rewarding on the basis of their own knowledge and experience. The suitability of an educational institute depends not merely upon its building but more upon a scientific syllabus, upon competent teachers and upon essential educational implements. We must determine the proper place of fine arts in our national education system.

20.4. We know that man's instinct for beauty is a natural instinct. This is among man's basic instincts and so every civilised human being always feels a strong attachment for beauty. This natural instinct of man should be carefully nurtured and fully developed and for this a healthy, suitable and agreeable environment and an appropriate work programme are necessary. Although human development differs in quality from man to man, the main aim of an educational scheme should be to help develop the latent possibilities of every human being according to his capacity. Therefore, we should try to frame an educational programme of the same standard for pupils of the same merit and capacity and taste, and fine arts education should be given appropriate facilities in this regard. It is through games and experiments with fine arts that the infant and the adolescent pupils are largely able to express themselves. The importance of fine arts in this regard is very great indeed. In this connection

it must be mentioned that the importance of an appropriate work programme and a suitable environment is immense in the field of fine arts education and in developing the instinct for beauty.

20.5. A suitable environment in this context means an environment where the pupils will have all possible opportunities to see beauty, to come in contact with it and to experience it such as lovely natural surroundings, and architecturally satisfying building, a well-laid out garden, attractive items of furniture and neat appliances. The Complementary elements are an appropriate background music for physical exercises and games, a small museum attached to a school, an arts gallery, a music-library and a carefully preserved 'beauty-spot'.

20.6. Our duty should not end with creating suitable environment within the limits of the education institution. A well considered work-programme will also be necessary for the proper development of the natural instinct for beauty. The scope of this programme will be :

- (a) A scientific curriculum in accordance with the age, capacity and taste of the pupils,
- (b) Competent teachers trained in particular subjects,
- (c) Effective teaching methods and suitable educational implements,
- (d) Other measureable to establish fine arts firmly in the overall educational programme and in the larger society.

Curriculum :

20.7. Provision should be made for training in different subjects within the scope of fine arts. Leaving out poetry and sculpture, fine arts can be divided into the following main groups :

1. Music (vocal and instrumental).
2. Dancing.
3. Acting (including recitation).
4. Painting (including drawing).
5. Embroidery and related arts and crafts.
6. Sculpture

20.8. The following matters must be specially considered while framing the curriculum :

1. To Maintaining an artistic relationship with the outside world and the larger human society in matters of themes and techniques without foregoing national traditions.
2. To ensure that the different forms of our fine arts reflect not only urban culture but also the activities of the common people living in the rural areas.
3. To help develop an awareness of indigenous forms of fine arts, orderliness, a healthy taste and social and mental consciousness.
4. To provide means for earning livelihood together with developing the artistic sense.

5. To conduct education at the pre-primary level mainly through games and fine arts.
6. To fix the number of periods for fine arts in the weekly routine at the primary level.
7. The periods for fine arts in the weekly routine of classes IX and X and XI and XII should be as follows:

Classes IX and X:		Classes XI and XII:	
Vocational group:	The number of weekly periods :	Subjects to be read	The number of weekly periods:
(a) Local music	18		
(b) Instrumental music	18	Four from among the list of subjects in the fine arts group in classes XI and XII at the secondary level.	} 26
(c) Dancing	18		
(d) Acting & Recitation	18		
(e) Painting and Drawing.	18		

There should be provision for degree and post-graduate courses at special fine arts institutes like the college or academy of music, the institute for dramatic art and the institute for arts and crafts.

8. There should be provision for a faculty of fine arts in the universities.
9. There should be provision for a fine arts college in every administrative division of the country.
10. Fine arts should be taught in different teacher training institutes, specially Primary Training Institutes.

The above recommendations can be gradually implemented and the necessary government help, grants and patronage made available.

20.9. The main requirement for making the curriculum fully effective an adequate number of qualified teachers need be appointed and the following measures should be taken for this:

1. Introducing a teacher training course in fine arts in the teacher training institutes for teachers in fine arts at the secondary level and arranging a refresher course in fine arts at the Education Extension Centre.
2. Such teachers should be appointed for fine arts institutes who will not regard teaching as just a profession but will have an intense love for fine arts, a reliable knowledge of the subject, the practical ability to express and present it, a constant awareness regarding the personal problems of the pupils, a deep understanding and above all a liberal and broad attitude to the subject.
3. The economic standard and the social prestige of the teachers of fine arts should be appropriately raised to attract competent persons to teaching in fine arts.

Teaching methods and educational implements:

20.10. Teaching does not become effective, in spite of appropriate curriculum and the necessary number of qualified teachers, if correct teaching methods are not adopted: The connection of teaching methods and educational implements and appliances with the syllabus is very close. Therefore, educational implements should be adequately available in the fine arts institutes. As far as possible, foreign instruments and appliances and implements and devices should be avoided and cheap and local instruments used without sacrificing the standard so that these are readily available for pupils and educational institutions at all levels.

Other measures:

20.11. In addition to the measures mentioned above, the following measures must also be taken to popularise fine arts in every field of personal and social life:

1. Establishment of a national art gallery, a national museum, a national music-library and a national theater at government initiative and financial support and the setting up of an art gallery, a museum, a music-library and a theater, on a smaller scale, in every district town.
2. A peripatetic exhibition and music and drama groups should be set up with government finance.
3. To set up immediately a national fine arts academy and to start research there on the country's folk art and how it can be developed.
4. Publishing books and journals relating to the different branches of fine arts.
5. To take measures to enable persons trained in fine arts to earn their livelihood honourably in different fields.
6. Instituting national awards for excellence in different branches of fine arts.
7. To make provision for scholarships for poor but meritorious pupils in the field of fine arts and for distressed artistes.
8. Arrangement should be made to bring to Bangladesh representative specimens in the field of painting, sculpture and crafts from different parts of the world and to send abroad similar specimens from our country. ~~Cultural troupes consisting of musicians, dancers and actors should be sent abroad on good will missions and similar troupes from foreign countries invited to Bangladesh.~~
9. To hold an exhibition abroad of the representative specimens of our arts and crafts and to hold a similar exhibition in Bangladesh of representative specimens of foreign arts and crafts.
10. A few selected artistes and teachers and pupils in the field of fine arts should be send abroad every year for higher training.
11. Provision should be made for the import and distribution, through a central agency and at government initiative, of implements and appliances which are not at present readily available in Bangladesh such as film projectors, epidioscopes, tape recorders, record players, radios, transistors, musical instruments made abroad, paints and painting brushes, etc.
12. To arrange part-time and evening courses for pupils interested in fine arts education.

FINE ARTS EDUCATION

SUMMARY

1. The fine arts education system achieves mainly two aims in the overall educational programme of the country. First, it helps a nation to become more cultured and secondly it brings out man's latent instinct for beauty and develops it fully. Man can contribute individually and collectively to social improvement and advancement through making necessary adjustments and without sacrificing his own distinctiveness. We must, therefore, determine the appropriate place of fine arts in our overall education system. (20.1.-20.3.)

2. The instinct for beauty is a natural human instinct and the development of the instinct for beauty is among man's basic requirements. Every man has a strong attachment for beauty. It is necessary to build up an appropriate work programme and a healthy, attractive and suitable environment to reinforce this attachment. The need for a suitable environment in respect of fine arts education such as lovely natural surroundings, an architecturally remarkable building, a well laid out garden, a small museum attached to a school, an art gallery, a music library, a carefully preserved 'beauty-spot' must receive due importance. An appropriate work programme should include a scientific curriculum, competent teachers, suitable educational implements, etc. (20.4.-20.5.)

3. The curriculum should be mainly divided into the following groups and these taught through a well determined work programme;

1. Music (vocal and instrumental)
2. Dancing.
3. Acting (including recitation).
4. Painting (including drawing).
5. Arts and crafts (work or hand embroidery).
6. Sculpture.

While framing the curriculum, the traditions of the country, the way of life of the people living in the rural areas and the basic artistic relationship with the outside world should each be kept in view. Provision should also be made for means of livelihood simultaneously with imparting instruction in fine arts. (20.7.-20.8.)

Recommendations

4. (a) There should be provision for degree and post-graduate courses in selected fine arts institutes such as the college of music, the institute for dramatic art and the arts crafts institute.

(b) A faculty of fine arts should be opened in the universities.

(c) A fine arts college should be set up in every administrative division of the country.

(d) There should be provision for training in fine arts in all teacher-training institutes. A refresher course in fine arts should be arranged at the Education Extension Centre.

(e) A national fine arts museum, a national music-library and a national theatre should be set up and similar organisations, on a smaller scale, should be established in all district towns.

(f) Arrangement should be made for a peripatetic exhibition and for music and drama groups.

(g) A national fine arts academy should be set up immediately and research started there on the country's folk art and measures taken for its development.

(h) Arrangement should be made for bringing to Bangladesh representative specimens in the fields of painting, sculpture and crafts from different parts of the world and for sending abroad similar representative specimens from our country. Cultural troupes from Bangladesh consisting of musicians, dancers, and actors should be sent abroad and similar foreign troupes invited to Bangladesh.

(i) Provision should be made for part-time and evening courses outside the regular courses for pupils interested in fine arts education.

(j) The economic standard and the social status of the teachers of fine arts should be appreciably raised.

(k) Scholarships should be provided for poor but meritorious pupils and for distressed artists.

(l) Provision should be made for publishing suitable books and journals in different branches of fine arts.

(m) National awards should be instituted in different branches of fine arts.

CHAPTER XXI

EXAMINATION AND THE METHOD OF EVALUATION

The aim of examination :

21.1. Evaluating the standard or value of a pupil's educational progress is an inseparable part of every education system. It is possible to largely determine through a scientific examination system, how far the academic progress of a pupil and its results are in conformity with the previously determined aims of education at the appropriate level.

21.2. Examination has varied aims. The methods of the structure and the management of examination vary in accordance with the varying aims. The main aims of examination connected with formal education can be divided into the following categories :

- (a) To determine and to evaluate the extent of knowledge and the academic success achieved by a pupil at a particular level of education,
- (b) To determine the inclination, the willingness and the intellectual competence of a pupil for successful prosecution of higher studies,
- (c) To determine the standard of teaching and analyse the education system in accordance with that standard,
- (d) To provide incentive and encouragement for improving the standard of educational programmes and of teaching,
- (e) To determine the processes of pupil's mental development and to identify his weakness and his strength and to find out which particular system of education will be able to fully develop his latent faculties,
- (f) To find out for which profession or type of social work a pupil is mainly suited and to determine which persons should be selected for what jobs in order to promote individual as well as collective welfare.

21.3. The authority conducting examinations should decide beforehand the real purpose of the examinations for introducing a well-ordered examination system. The methods of examination, the structure of examination and the management and conduct of examination should be such as to make it a fully dependable test. Above all, the merits and demerits of a particular examination system should be analysed and the fitness of its application judged. The overall scheme of conducting and examination should be prepared after determining the amount of time and money to be spent, the restrictions that have to be imposed and the conditions of eligibility.

21.4. The framing of question papers and method of examination can vary in accordance with the varying circumstances and aims, *i.e.* :

- (a) Internal test and public examination,
- (b) Written or oral or practical examination,
- (c) The essay type of examination or the objective test,

- (d) Individual or collective examination,
- (e) Work-based or memory-based examination,
- (f) Evaluation of success or of natural inclination or of intelligence or of willingness or of personality,
- (g) An examination method consisting of some of the methods enumerated above. Again, every examination method can be adapted to the changing environment. The authority concerned must determine through properly directed research as to which particular method will make the examination more objective, dependable and adjustable.

21.5. As the examination prevalent in our country have failed to achieve their objectives, some are of the opinion that the whole examination system should be abolished. But perhaps these people do not consider the methods of conducting an examination separately from the examination itself. They hold one responsible for the faults of the other or for the common faults of both. If we intend to build the principle of social equity firmly on the foundation of a democratic or socialistic society, we must provide for a scientific examination system together with a suitable education system.

21.6. One chief demerit of our examination system is that the written essay type and memory based public examinations receive too much importance. Our education system faces a great crisis to day because of its heavy dependence on public examinations. Although there is provision for internal tests in our education system and these tests are conducted in respect of the pupils by their own teachers, the results of tests are not unfortunately given due weight. As a result, the objective of the examination is often in conflict with the objective of education and hence the education system is getting involved with various types of unethical activities. Again, as the same examination is used for different purposes, it makes it difficult for meritorious and talented and creative pupils to be identified. The number of pupils for the public examinations is constantly increasing and will go on increasing with the expansion of education. The existing system will then face a still more difficult problem. All efforts directed at national improvement will be negated if the present education system so heavily dependent upon public examinations is not appropriately modified.

~~21.7. The number of pupils failing in the examinations held in our schools and colleges is constantly increasing. This shows that the teaching methods have greatly deteriorated. This is a deplorable situation. If the teachers address themselves to their task with greater earnestness this sorry state of affairs can be largely remedied. The performance of each pupil in the periodical tests should be carefully noted by the teachers concerned and they must try to find out the pupils points of weakness and remove them with sympathy and understanding. If any pupil is found unable to follow the lesson, the teacher concerned must turn to him with affectionate care and try to make him interested in the lesson. Such efforts on the part of teachers will no doubt help to raise the standard in every field of learning. If this improvement is maintained, no pupils need to fail in the class tests in the future.~~

21.8. Resorting to unfair means in the examination has lately become very common. This problem has assumed serious proportions in certain fields of education and hence the whole examination system has been reduced to a farce.

The most grievous thing about this is that the noble aims of education are being completely frustrated. Our educational standards and our national prestige are today at stake in the international field. We must make all efforts to free ourselves from this extremely distressing situation.

Internal tests:

21.9. Internal tests are usually held in familiar surrounding: the pupils sitting in the class room and their teachers conducting the tests there. The progress of a pupil is evaluated through the periodical examinations. The teacher himself frames the question papers, conducts the examination and discharged the responsibility of an examiner. Such tests are prevalent in our country usually for determining which pupils will be promoted to the next higher class. These tests are naturally subject-based and provide no opportunity for measuring the reactions of a particular pupil to his environment. If other tests are also held in the class room to measure the development of the pupil's mental attributes and his personality and if the teachers are able to give proper counselling to the pupils for determining their future educational course, the value of these tests will greatly increase. In this role, the teacher will be able to help the pupil develop his personality. The environment resulting there from will gradually improve the standard of teaching and the quality of response and will transform the teacher into a real friend of his pupils and thus be of great benefit to the society and the nation.

12.10. As the familiar and natural surroundings of the pupil's own educational institution do not create a sense of apprehension or tension in his mind, internal tests held in such surroundings are largely dependable. Besides, the teacher is able to apply his direct experience in determining the knowledge and mental development of the pupil because of his close familiarity with the different aspects of his personality. The dependability and the objectivity of the examination are thereby greatly increased.

21.11. One must, however, be careful about certain things relating to the correct application of internal tests. The teacher must have dependable theoretical as well as practical knowledge of the modern and scientific methods of evaluation. And he must be trained in these methods. In matter of special tests, such as a test of intelligence, a test of personality, a test of natural inclination, etc., the teacher may seek the help of qualified consultants if he himself is not qualified to hold these test. Above all, the performance of the pupil in the internal tests has to be reflected in the certificate given by the own institution so that it can be used in selecting the pupil's future educational or professional course. The details of the pupils performance in the internal tests at the end of a particular course or at the end of an educational level should be carefully recorded in the certificate given to him by his own educational institution. That is, an evaluated assessment of the pupils performance in the internal tests relating to subjects included in the syllabus has to be incorporated in the certificate given to the pupil by his own educational institution.

Public examinations:

21.12. Examination has two main objectives already stated. First, it helps the pupil to adopt the correct educational programme in conformity with his personal and present condition and secondly it determines the relative merits of pupils. The principle of social equity is sought to be established through

this medium. Considering the great increase in the number of pupils in the field of formal education, the complexity of social life and rapid expansion of knowledge it is hardly possible to establish the principle of social equity in the field of education except through the medium of public examinations. So the importance of public examinations cannot be minimised. Even supposing that teachers are able to make a correct assessment about their own pupils we cannot rule out the possibility that the result of the assessment may not tally with those of a similar assessment in regard to the pupils of other educational institutions. Besides, the teachers are sometimes guilty of partiality towards their own pupils. The more number of teachers, the number of pupils and the number of educational institution the greater will be the difference in the standard of evaluation and the possibility of partiality either knowingly or unknowingly. Again, competitive examination are essential for assessing the standard and knowledge of the pupils undergoing the same course in different parts of the country and for determining the relative merits of the pupils. The responsibility for holding the public examinations is, therefore, given to the regional authorities or to a central authority. In our country this responsibility is discharged by the Educational Directorate, the Boards of Intermediate and Secondary Education and the Universities.

21.13. It can be said that a synthesis of internal tests and public examinations is indicated for the establishment of the principle of social equity and for the correct guidance regarding the development of a pupil's personality.

Synthesis of internal test and public examination:

21.14. On account of lack of confidence in the manner which internal tests are conducted, a certain examination system is prevalent at some levels of education in our country in which the teacher has no direct rule. The pupil is assessed for life through the medium of subject-based public examinations. The dependability and objectivity of public examinations are considerably lessened by the varying conditions in regard to examiners, authorities conducting examinations, time, surroundings and opportunity for adopting unfair means at the examination centre, and the more prominent are these factors the less effective are the public examinations. We strongly believe that if internal tests are given due weight and importance together with public examinations, eliminating the demerits of both, the dependability and objectivity of examination will greatly increase and thus radical reform in the education system be brought about.

21.15. It is undeniable that the actual merit of a pupil cannot be assessed either exclusively through internal tests or through public examinations alone. The use of both these methods will strengthen the education system and raise its standard. A combined use of these two methods is an immediate necessity. The responsibility for devising ways for removing the defects of the internal tests should be entrusted to an appropriate research institute. The task of the research institute will be to identify the methods of assessing the different aspects of a pupil's personality and to train teachers in the matter of framing the question papers and in principles of conducting an internal test. While trying to achieve a synthesis between an internal test and a public examination the other methods of examination must also be kept in view and partly incorporated, if necessary. It is extremely difficult to correctly assess a man's personality or his knowledge. It is almost impossible to make this assessment through any of the existing methods of examination. For this purpose, examinations of different kind have to be introduced according to the varying needs.

21.16. The examinations prevalent in our country to determine the standard of learning are all mainly written examinations. There is of some provision for practical examination in scientific and technical subjects. A *viva voce* examination of sorts is also taken at some particular levels according to need. We do not intend to minimise the importance of written examinations, although such examinations in our country are mainly a test of the power and sharpness of one's memory. Memory is certainly a factor in the favourable development of one's mind but the quality of one's mind cannot be determined exclusively by it. For this reason, the structure of the examination should vary according to needs. Earnest efforts should be made to introduce oral, practical and objective types of examination, in addition to the subject, based written examination.

21.17. We make the following recommendations regarding examination and the methods of evaluation in the light of the problems enumerated above and on the basis of their likely solutions.

Examination at the primary level:

21.18. From our discussion with teachers and educationists and guardian and representatives of the people in different parts of Bangladesh, we are convinced that no serious work programme is followed to day in our primary and junior high schools and in the lower classes of our secondary schools because there is no provision for a public examination either at the end of class V or at the end of class VIII. Year after year, the pupils in the primary and lower secondary classes are promoted from the lower to the higher class without any evaluation at all of the method of teaching or the standard of instruction or of the quality of the pupil's response. Besides, there is no healthy rivalry between these schools to raise the standard of education or to improve the method of teaching as there is no competitive examination either at the end of class V or at the end of class VIII. As a result, the standard of education at this level is gradually deteriorating and the pupils of low calibre at this stage are not able to get the full benefit of instruction at the higher level. This in its turn is lowering the standard of education at all levels. In the perspective of this situation, the teachers, the guardians and the educationists are all of the opinion that the public examination should be made compulsory at the end of class V as well as at the end of class VIII so that both teachers and pupils become more alert and pay greater attention to what they teach and what they learn respectively.

21.19. We have given careful thought to the above view of the teacher and the guardians and educationists. Taking all factors into account we recommend that at the beginning the evaluation of pupils from class I to class VIII should depend on their year-long record of studies, on their performance in the class-room and on their conduct and behaviour. At this level the teacher will be expected to hold class-room examinations frequently. There should be provision for at least three examinations in a year, in addition to the annual examination at the end of the year. Additional tests should also held from time to time to assess the pupils intelligence, his inclinations and the other qualities of his character. The different results of the evaluation must be maintained in the pupil's record. The main aim of these tests will be to create self-confidence in the pupil's mind and to encourage him to do occasional self analysis, and to dermine, the special merit of the meretorious pupil and special weakness of the backward pupil so that timely measures can be taken for the further development of the special merit and for the removal of the special weakness. Secondly, we consider it prudent for the scholarship examination.

to continue at the end of class V as well as at the end of class VIII. But measures should be taken for the participation in this examination of at least ten per cent of the pupils from each school. The framing of question papers for the annual examinations at the end of class V and at the end of class VIII should be district-based but the examinations themselves taken at the schools concerned and the teachers of those schools should examine the scripts. There should be an evaluation committee for these examinations. This committee should be constituted with the teachers of the schools concerned, the teachers of neighbouring schools and with local teachers. The task of this committee will be to arrange an oral examination, and to see whether the standard of examining the scripts is generally reasonable or not. A certificate should be awarded to successful candidates in the examination at the end of class VIII by the school concerned. This examination must be completed by December so that the successful candidates can get admitted to the next higher class without any difficulty.

Examination at the secondary level:

21.20. The present method of determining the standard and quality of a pupil's knowledge at the secondary level of our education system is confined to measuring his power of memory and this is done on the basis of written examinations held in the secondary schools at the end of the academic year. There is no effort on the part of the secondary schools to relate the promotion of the pupil to his actual work and performance throughout the academic year. On the other hand, the public examinations at the end of class X and class XII receive much greater attention from the teachers, the pupils and the educational institutions concerned because of their decisive nature. The defects of this system are very grave as the pupils depend exclusively on their memory for passing this examination. No effort is made to assess the pupil's intelligence and no importance is given to the actual mastering of approved or general subjects during the two-year course. This makes for no special eagerness to read on the part of the pupils until the examination is imminent. On the other hand, cramming is encouraged in the few weeks immediately preceding the examination as the examination seems a remote thing in the earlier days. This endangers discipline and orderliness at the schools and hampers the formation of the pupil's character.

21.21. Some are of the opinion that the public examination at the secondary level should be abolished and frequent internal tests conducted by the schools concerned should take its place. In such an eventuality the schools concerned must also be given the authority to award certificates. It is doubtless true that periodical internal tests are extremely effective in creating self-confidence and self-reliance among the pupils through gradually achieved excellence in subjects within their power of comprehension. This system will keep the pupils busy with their studies throughout the year and this in turn will become a permanent habit and thus help them to develop their characters.

21.22. But the above tests, however, effective they can be made, cannot take the place of public examinations. For, public examinations are absolutely necessary to determine the standard of the pupil's mental activities and to assess his familiarity with the subjects taught. Such examinations are but a yard-stick to measure the relative merits of the pupils belonging to different schools and these also create a sense of healthy rivalry among the pupils and the schools concerned. We are, therefore, in favour of retaining public examinations, but supplementing them with internal tests, at the secondary level.

21.23. We have also made a recommendation for the evaluation of the teaching throughout the year in our schools, that is, a due importance has also to be given to internal tests at the secondary level as at the primary level. At this level there should be at least four tests during the academic year in addition to home work, tutorials, occasional tests in the class-room, and practical and applied work. Some are of the opinion that the real aim of evaluation through internal tests will be destroyed by the teachers and the examiners concerned. For, they give excessive and undue importance to the activity of their pupils in the internal tests. But we believe that the teachers will not prove themselves unworthy of this responsibility. To rely on one's honesty is to encourage him to earn the confidence of others. As a safeguard against the fear expressed above, we have recommended that the results of the periodical or internal tests should be displayed on the Notice Board and the progress reports of the pupils maintained. We feel that this will act as a remedial measure. For no teacher will be able to face his pupils if he gives undeservedly high marks to a pupil whom others know to be deficient and backward. If the teachers of a particular school give undue weight to the performance of their pupils in the internal test and if their evaluation is constantly at variance with that of the public examinations, then all concerned will lose their faith in them. Even the public will get distrustful of these teachers. As a result the reputation of such schools will be at stake. So it will be in the interest of the teachers themselves and of the schools in which they teach to maintain fairness and objectivity in their evaluation of their pupils' performance in the internal tests conducted by them.

S.S.C. and H.S.C. Examinations:

21.24. We feel that the existing S.S.C. examination at the end of class X and the H.S.C. examination at the end of class XII should continue subject to appropriate modifications. There should be provision for oral tests in these examinations and ten per cent of marks in each of the subjects should be reserved for them. These oral tests should be conducted by the teachers of the candidates' own school in conjunction with the teachers of other schools as selected by the Education Board. The notification for the examinations should in each case be given one year in advance. The certificate given by the appropriate Education Board to the successful candidates at the S.S.C. or at the H.S.C. level should contain marks got by them in every subject relating to the public examination concerned. The certificate should also include the marks obtained by the candidate in the internal tests as conducted in the above manner. If a wide discrepancy is found between the marks obtained in the internal tests and those obtained in the public examination, the appropriate Education Board or Authority should duly ascertain its reason. The relevant Education Board or Authority should send the certificate form, along with papers relating to admission to the examination, to the educational institutions concerned. The latter will record the marks obtained by each pupil in the relevant column of the certificate form and send it back to the concerned Education Board or Authority along with the examination forms. The Education Board or Authority concerned must ensure beforehand that the certificate form, duly filled in, has been received back along with the examination forms similarly completed. The relevant Education Board or Authority will incorporate the marks obtained by the candidate in each of the subjects in the appropriate public examination and write 'passed' in the remarks column in respect of the successful candidates and 'failed' in relation to those unable to pass the examination. Any candidate failing to get 40 per cent of marks must be considered as having failed.

Examination at the higher level:

21.25. An excessive stress is laid on the public examination at the higher level of education. The work relating to the conduct of examinations has dangerously affected teaching and research at the universities. Besides, not much value is given to internal tests at the higher level of education except when honours and post-graduate degrees are awarded. The pupils, therefore, feel no urgency to attend the lectures of their teachers or the tutorials or to get guidance from their teachers, and as a result they do not develop the habit of constant endeavour and the regular application of their knowledge. Mastery of a subject, knowledge of its basic principles and the application of this knowledge in appropriate circumstances are all difficult to achieve but once achieved these are extremely pleasing. Proper attention is not paid to the realisation of this objective and instead the successful memorising of data connected with the relevant subjects is encouraged.

21.26. Some are of the opinion that the public examination should be completely abolished at the higher level of education and internal tests introduced instead. The reason advanced in favour of this view is that the teacher knows his pupils best. A contrary view is that the results of the internal tests are not dependable as the universities have no control over the evaluation of the tests in the colleges approved by them. Some express the fear that even the teaching universities will not be above partiality and showing favours in this matter.

21.27. The commission has given careful thought to all these views. There is one advantage of the public examination. This is a familiar and an accepted way. If carefully conducted, a public examination can eliminate the indolence and the incompetence of teachers and the possibility of their showing favours. If the examiners of the public examination are competent, this method can help the teachers to rectify themselves. On the other hand, it is an incontrovertible fact that the existing method does not create right attitude of constant study.

21.28. We are fully aware of the danger of the internal tests. Nevertheless, we believe that if these internal tests are regularly conducted and the answer papers are returned to the pupils this danger will be considerably lessened. This will act as a safeguard against partiality on the part of the teachers and will discourage all other consideration except those purely academic. We must place our reliance on our teachers. If we fail to do this, the necessary moral sense will not be created among them. We apprehend that if our universities and the colleges approved by them are unable to develop the habit of honesty among them, they will fail to give certain cause in support of their continued existence. We therefore, recommend that internal tests should be introduced at the higher level also to supplement the public examination.

Examination at the level of pass degree:

21.29. The internal tests must be given due importance at the above level as in the secondary level, that is, we consider it essential that the colleges themselves should evaluate the result of the teaching throughout the year in their own colleges. Four internal tests should be held in a year, in addition to regular tutorials, home work, periodical class-room examination, and practical and applied work. We have already recommended that the results of these tests should be displayed on the notice board. It is to be hoped that the colleges will send up those candidates for the university public examination who have successfully completed the pass degree course and shown a reasonable prospect

of success on the basis of their performance in the internal tests. There should also be a provision for an oral examination in the degree pass examination and ten cent of the marks in each subject should be set apart for it. This oral examination should be conducted by the candidates' own college teachers in conjunction with other college teachers selected by the university concerned. The notification should be given one year in advance. The diploma given by the university to the successful candidates should clearly show the marks got by the candidates in each of the subjects of the public examination. This diploma should also include the marks awarded to a pupil in each subject in the internal tests. The university should send the diploma-form along with the papers for admission to the examination to the colleges concerned. The university authority must make sure that they have received back the diploma form, duly filled with the results of the internal tests, from the colleges concerned along with the papers connected with admission to the examination. If there is a wide discrepancy between the marks obtained in the public examination and those obtained in the internal tests, the university concerned must make provision for timely investigation of its cause. In the remarks column of the diploma-form the word 'passed' should be written in respect of the successful candidates and 'failed' in regard to those unable to pass the examination. A pupil getting 60 per cent. marks or above in a subject should be given distinction in it. Pupils getting less than 40 per cent. marks should be considered as having failed. It transpires from our discussion with the teachers and the pupils all over the country that they too consider the above system necessary for meeting the challenge of the present situation.

Examination at the honours degree level and the master degree level:

21.30. The results of the honours and master degree examinations should be determined by the combined results of the public examination and the internal tests. The teachers should hold three formal internal tests and award marks, in addition to the tutorial classes and research and applied work. We propose that 25 per cent of the marks should be set apart for the internal tests in each paper of subjects relating to humanities, commerce and social science. And in each paper of science subjects 15 per cent of the total marks should be set apart for the internal evaluation and 25 per cent of marks in each subject should be reserved for practical work. The candidates for the honours and master degree examinations should take a viva voce examination and 10 per cent of the total marks should be set apart for it. The results of the viva voce examination should receive due importance in awarding the class. The public examination should be conducted on the basis of the remaining 65 per cent. marks in each paper of subjects relating to humanities, commerce and social science and of 50 per cent. marks in each paper of science subjects. The candidates for the honours and master degree examinations should pass in both the internal tests and in the public examination separately. The place and class or division of a pupil should be determined on the basis of the collective results of internal tests, the viva voce examination and the public examination. The diploma awarded to the successful candidates of the honours degree and master degree examinations, should show the results of the public examination, the marks obtained in the viva voce examination and separately the internal evaluation of the candidate. In the above examinations, a candidate getting 60 per cent marks or above should get a first class, between 50 and 59 per cent marks a second class, and between 40 and 49 per cent marks a mere 'pass'. Those getting below 40 per cent marks should be adjudged as having failed.

Improvement in examination methods:

21.31. There is here the problem relating to the evaluation of the correct examination methods. Memorising text books and notes and contents of lectures should not by itself enable a candidate to pass an examination. The examination method should be such as to encourage disinterested teaching and acquisition of learning. It should be determined through the medium of an examination if the candidate has acquired sufficient mastery in all his subjects and whether he is able to successfully apply his acquired knowledge. For this, a new outlook on the part of both teachers and pupils is imperatively necessary. One of the main functions of the institute of education and research and of the teacher-training colleges should be to investigate the possibility of adopting new ways of examination and to evolve a dependable examination method which is at the same time suitable for the pupils. For this matter, the institute of education and research and the teacher-training colleges should be particular about student counselling and aware of the special demands of a public examination while selecting pupils for admission. More over, a committee of specialists should be set up by each Education Board and each University to give advice regarding the organisation and management of examinations. We also believe that there is need for the setting up of an examinations-reform committee each by the Inter University Board and Inter Education Board.

Admission test at the higher level of education

21.32. The educational institutes concerned should all hold admission tests, as required for the purpose of selecting candidates for higher education. The preceding certificate or diploma and the results of admission test should both be given due importance while making the selection. The admission test should be formulated and managed on the basis of the candidate's natural inclinations, his willingness, his intelligence, his knowledge of relevant subjects, and certain particular aspect of his personality.

Test for jobs:

21.33. The employing organisation should consider the certificate or the diploma obtained and then hold a separate, written and competitive examination for the purpose of selecting candidates for jobs.

Conclusion:

~~21.34. How far the desired objective is fulfilled and the reliance put upon the teachers duly honoured by them must be ascertained in relation to the actual working of the proposed method. The whole method has to be kept under constant supervision to ensure that the experience shows that the balance of the responsibility given is properly maintained. The committee of specialists attached to the educational board or the university as proposed above, must discharge this responsibility.~~

21.35. Finally, a more realistic relationship has to be established between teaching and the examination held. The need for an examination springs from teaching and the former is but the final and natural requirement of teaching. A full discussion of the examinations held should take place to determine whether teaching in the approved subjects has been given due consideration, and to find out the ratio in which the power of understanding and the power of memory on the part of the pupils have been assessed and to ascertain the reasons behind their success or failure. We strongly feel that the Education Boards and the Universities should take energetic measures for raising the standard of their respective examinations.

EXAMINATION AND THE EVALUATION METHOD

SUMMARY

1. Evaluating the standard of a pupil's educational progress is an inseparable part of every education system. It is possible to largely determine, through a scientific examination system, how far the academic progress of a pupil and its results are in conformity with the previously determined aims of education at the appropriate level. (21.1.)

2. Examination has varied aims. The methods, the structure and the management of examination vary according to the varying aims. The authority conducting examination should decide beforehand the real purpose of the examination for introducing a worth while examination system. The methods of examination, the structure of examination and the management of examination should be such as to make it a fully dependable test. The overall scheme of conducting an examination should be prepared after determining the amount of time and money to be spent, the restrictions that have to be imposed and the conditions for eligibility. (21.2.-21.3.)

3. The examination methods and the framing of the question papers vary in accordance with the varying conditions and aims. Again, each examination method can if necessary be modified according to need or varying conditions. The authority concerned must determine through properly directed research as to which particular method will make the examination more objective, dependable and adjustable. (21.4.)

4. As the examinations prevalent in our country have failed to achieve their objective, some are of the opinion that the whole examination system should be abolished. But perhaps these people do not consider the methods of conducting an examination separately from the examination itself. They hold one responsible for the faults of the other or for the common faults of both. If we intend to build the principle of social equity firmly on the foundation of a democratic, socialistic society we must provide for a scientific examination method together with a suitable education system. (21.5.)

5. One chief demerit of our examination system is that the public examination is therein given too much importance. Although there is provision for internal tests in our examination system, the results of the tests are not given due weight. As a result, the objective of the examination is often in contrast with the objective of education, and hence the education system is getting involved with various types of unethical activities. The percentage of passes in the public examinations is getting increasingly lower. This but proves the deterioration of teaching-methods. The alarming situation created by the widespread prevalence of corrupt means in the field of examination must be forthwith tackled and all efforts made to make the examination system a dependable yard-stick for judging the merits of pupils. (21.6.-21.8.)

6. A special emphasis has to be laid on internal tests in evaluating a pupil's academic progress. Internal tests should be held frequently if we intend to remove the fear of public examination from the minds of the pupils and impel them to read throughout the year. One must, however, be careful about certain things relating to the correct application of the internal tests. The teacher must have dependable theoretical as well as practical knowledge of the modern and scientific methods of evaluation. And he must be trained in these methods. The performance of the pupil in the internal tests has to be recorded in the certificate given by his own institution so that it can be used in selecting the pupil's future educational or professional course. (21.9.-21.11.)

7. The importance of formal or public examination is very great. Even supposing the teachers are able to make the correct assessment about their own pupils, we cannot rule out the possibility that the results of the assessment may not tally with those of a similar assessment in regard to pupils of other educational institutions. The more the number of teachers, the number of pupils and the number of educational institutions the greater will be the difference in the standard of evaluation. Again, competitive examinations are essential for assessing the standard and knowledge of the pupils undergoing the same course in different parts of the country and for determining the relative merits of the pupils. The responsibility for holding the public examination should, therefore, be given to the regional authorities or to a central authority. (21.12.)

8. In the perspective of the above analysis, a combined method of public examination and internal tests should be introduced instead of the present public examination. (21.13.-21.15.)

9. The structure of an examination should vary according to need. Earnest efforts should be made to introduce oral, practical and objective types of examination, in addition to the subject-based written examination. (21.16.)

10. The evaluation of pupils from class I to class VIII should depend on their year-long record of study, on their performance in the class-room and on their conduct and behaviour. At this level, the teacher will be expected to hold class-room examinations frequently, there should be provision for at least three examinations in a year, in addition to the annual examination at the end of year. The different results of the pupil's evaluation must be maintained in his record.

The framing of question papers regarding the annual examinations at the end of class V and at the end of class VIII should be district-based. But the examinations themselves must be taken at the schools concerned.

The present scholarship examination at the end of class V as well as at the end of class VIII should continue. Provision should be made for the participation in this examination of at least 10 per cent of the pupils from every school. (21.19.)

11. The same stress has to be laid on internal tests at the secondary stage of education, as at the primary stage. At least four internal tests every year should be taken at this stage, in addition to home work, tutorials, periodical class-room examinations, and practical and applied work. The results of internal tests should be displayed on the notice board and the progress report of each pupil maintained.

We feel that the existing S.S.C. examination at the end of class X and the H.S.C. examination at the end of class XII should continue subject to appropriate modifications. Ten per cent of the marks in each subject should be set apart in this examination for the oral examination. The certificate should show the marks obtained by a candidate in both the public examination and in internal tests. 'Passed' or 'Failed' should be appropriately marked in the remarks column of the certificate. Those getting less than 40 per cent marks must be adjudged to have failed. (21.20.-21.24.)

12. Internal tests should be given the same weight at the first degree level as at the secondary level. Four internal tests should be held every year for this purpose, in addition to regular home work, tutorials, periodical class-room examinations and practical and applied work. The results of internal tests should be incorporated in the progress report. There should be provision for an oral examination in the pass degree examination and ten per cent of marks in each subject should be set apart for it. The diploma should show the marks obtained by a candidate in both the public examination and in the internal tests 'Passed' or 'Failed' should be marked in the remarks column of the certificate. A pupil getting 60 per cent marks in a subject should be given distinction in it. Those getting below 40 per cent marks must be adjudged to have failed. (21.25.-21.29.)

13. The results of the honours and master degree examination should be determined by the combined results of the public examination and the internal tests. The teachers should hold three formal internal tests and award marks. In addition to the tutorial classes and research and applied work. Twenty-five per cent of the marks should be set apart for the internal tests in each paper of subjects relating to humanities, commerce and social science. And in each paper of science subjects fifteen per cent of the total marks should be set apart for the internal evaluation and twenty-five per cent of marks in each subject reserved for practical work. The candidates for the honours and master degree examinations must take a *viva-voce* examination and ten per cent of the total marks should be set apart for it. The public examination should be conducted on the basis of the remaining 65 per cent marks in each paper of subjects relating to humanities, commerce and social science and of fifty per cent marks in each paper of science subjects. The candidates should pass in both the internal tests and the public examination separately. The place and class or division of a pupil should be determined on the basis of the collective results of internal tests, the *viva-voce* examination and the public examination. The diploma should show the results of the public examination, the marks obtained in the *viva-voce* examination and separately the internal evaluation of the candidate. A candidate getting 60 per cent marks or above would get a first class, between 50 and 59 per cent marks a second class, and between 40 and 49 per cent marks a mere "pass". Those getting below 40 per cent marks should be treated as having failed. (21.30.)

14. A committee of specialists should be set up by the inter education board and the inter university board each to give advice relating to the organisation and management of examinations. (21.31.)

15. The education institutes concerned should all hold admission tests as required for selecting candidates for higher education. The preceding certificate and diploma and results of admission tests should both be given due importance

while making the selection. The admission tests should be formulated and managed on the basis of the candidate's inclinations, his willingness, his intelligence, his knowledge of relevant subjects and certain particular aspects of his personality. (21.32.)

16. The employing organisations should consider the certificate or the diploma obtained and then hold a separate written and competitive examination for the purpose of selecting candidates for jobs. (21.33.)

CHAPTER XXII

THE RESPONSIBILITY AND STATUS OF TEACHERS

The responsibility of teachers :

22.1. The teacher is at the heart of every educational programme and the standard of education depends finally on the quality of efforts made by him. Teaching is directly a national activity. That is why we have forcefully indicated the crucial role of the teacher at all levels of education. We would like to say here unequivocally and with all the emphasis at our command that if the highest qualified persons irrespective of male or female are not selected at all levels of teaching and if society fails to recognise the important role played by teachers in our national life, no education reform based on our recommendations is ever likely to succeed.

22.2. The standard of education depends on the standard of teachers. The further our teachers are removed from the standard we expect of them, the longer will our education system take to reach its desired goal. Standard in this case means several other things apart from competence in teaching. Our teachers should display a high sense of vocation and be fully aware of their duty to the nation, be willing to take part in constructive activities, try as far as possible to lessen their dependence on foreign instruments and appliances and use indigenous educational implements which are readily available without lowering the standard of education, follow a high standard of professional ethics, and have self-respect. If we can properly realise the importance of our teachers, as we usually do, the teachers too must realise the importance of the above attributes.

22.3. The nation has naturally high expectations of its teachers. It has to be considered how far the expectations have been realised and if not measures should be taken to make it possible.

22.4. The primary responsibility of the teachers is to inspire their pupils to develop the habits of diligence, patience and perseverance and to inculcate in them a spirit of research and criticism. This can be done through personal examples on the part of the teachers. How the pupils spend their time would depend largely on how the teachers spend their's

The responsibility of teachers at the primary and secondary levels :

22.5. The teachers should discharge their responsibilities with ability and sincerity and spend a fixed time in teaching in their respective schools. The responsibility generally given to the teachers at these levels in other countries should also be given to our teachers at the same levels. Teaching, the preparation of lessons, the supervision of the pupils and extra curricular activities should be among their responsibilities. The weekly work load of every teacher in classes I to V of primary schools and classes VI to X of secondary schools should be respectively 40 and 45 hours. Eighteen hours should be set apart in respect of actual teaching, ten hours for preparation of lessons, seven for the supervision and counselling of pupils and five for extra curricular activities. In respect of secondary school teachers, 28 hours should be set apart for actual

teaching, 10 for the preparation of lessons, 8 for the supervision and counselling of pupils and five for extra curricular activities. The teachers should maintain records of the progress of pupils during their school life. The performance of the pupils in different periodical examinations, in class room work, in tutorials, in sports and games and their conduct and behaviour in different branches of school life should be assessed and their records kept.

22.6. The teachers should be familiar with modern educational implements and up-to-date teaching methods. The teachers should be careful to see that all arrangements relating to the class room, the laboratory, the workshop, the library, the garden and the playing field are made in time. They must also take the initiative in solving the educational problems facing their schools and must try hard for the gradual improvement of their teaching. The teachers must also be able to set examples before their pupils in the field of manual work—such as work requiring the use of hands, gardening, the maintenance of cleanliness in the school campus and repair work, etc. This is specially applicable in the use of indigenous educational implements relating to science and industrial arts.

22.7. The teachers should also be mindful of the problem of growing adolescent pupils in their schools and must try to help them in matters of adjustment. Supervision should have a dual role at this stage and at a later stage: educational and vocational. The teachers must try to understand the intellectual, emotional and social requirements of their pupils and try to earn their confidence through friendly contacts. At this stage of adolescence, the social relations of boys and girls change and expand from year to year. New emotions emerge, and the family, the environment and the school all exercise an ever-changing influence over the pupils. It can be said, for example, that the school expects the pupils to adjust themselves to the discipline and regulations of school life at the less rigid secondary level, but if the school's real aim is the unhampered development of a pupil's personality, the task of adjustment must be undertaken by both the pupil and his teachers. The teachers must carefully identify the attitudes of their pupils and take appropriate measures to meet their changing requirements. All this will help the pupil to achieve educational success and at the same time attain personal happiness and thus emerge as a stable personality able to contribute something valuable to society in conformity with his environment.

22.8. It is also the responsibility of teachers to determine the special inclinations of their pupils in keeping with their mental attitudes and their social relationship and to assign them such tasks which they can perform with competence and help them select the appropriate educational courses. They should also give advice regarding selection of vocations at a later stage on the basis of their close familiarity with the inclinations and the characteristics of their pupils. The proposed multilateral educational course will at once create an opportunity for the pupil to realise the aim of his life and enable the teacher to indicate to him which particular course he should choose. To make counselling in the matter of selecting vocations effective, one teacher in every secondary and vocational school should work exclusively for this purpose.

22.9. The teachers must be careful to see that the advice given by them is in conformity with their own conduct and behaviour. Any discrepancy in advice and conduct on the part of the teachers is likely to have an adverse effect on the moral values of their pupils.

The responsibility of teachers at the college and university levels

22.10. There is a general assumption that giving lectures is but the only work of the teachers at the college and university levels, and most of these teachers behave accordingly. This attitude has to be changed. In fact, giving lectures is only a small part of the teacher's overall responsibility. Hence, it is necessary to give due weight to the other activities so often neglected by the teachers.

22.11. A large part of the time of college and university teachers should be spent in correcting home and tutorial work of their pupils. But this is hardly practised in our schools and universities and the objective and methods of this type of work are not fully comprehended. In fact, the tutorial system is a useful means for a teacher to know his pupils, to discover their latent possibilities and to help bring them out, to encourage the spirit of enquiry through discussions, to assess the work done by them and to advise them separately as to how they should proceed with their studies. The tutorial system should be so devised as to enable the pupil to exchange ideas with his teachers and thus clarify his own ideas and to concentrate on his studies with a new outlook and renewed enthusiasm. The pupil should be encouraged to think for himself and to develop his own critical standards and apply them through the tutorial system. The general practice in tutorials is that the pupils read their own compositions by turns and these are collectively discussed and analysed and their value determined under the supervision of the tutor. An advantage of the tutorial system is that it helps the tutor to get to know his pupils personally and the spirit of inquiry—which is a vital part of higher education—is formulated and encouraged through it. So, while recognising the importance of formal lectures we at the same time emphasize that tutorials should be given due importance in all relevant educational schemes at the higher level and that there should be a uniform system of regular weekly tutorials in our colleges and universities.

22.12. It must be ensured that the work of the teachers is not reduced to an impersonal or conventional routine, that they fully employ their time and their ability in teaching and that their teaching is a pleasurable activity and a profitable line of investigation. For this purpose, there should be a clear work-schedule for different types of teachers. The amount of time a teacher is required to spend in an academic year in each of his different activities should be clearly indicated in the schedule. The responsibility for determining whether this work-schedule is actually followed and promotion and increase in pay are made in the perspective of this schedule must devolve on the college or university authority concerned.

22.13. It is our reluctant belief that most of our teachers, apart from a few dedicated ones, do not give the time required for extending their knowledge or to be familiar with the latest developments in their own subjects. We consider it essential that every teacher should spend at least three to four hours in his own library or in the college or university library for this purpose. The longer the teachers spend their time in their own college or university building, the greater will be the benefit for all concerned. This will enable the pupils to get in touch with their teachers for a longer period and the teachers to give undivided attention to their various important activities. Necessary facilities including a cafeteria, should be provided in this connection so that the teachers and the pupils are not required to go home frequently in the midst of their work and able to get food at cheap rates.

22.14. The paucity of research work in our educational institutions is quite pronounced. Our college and university teachers must do their utmost to rectify this. The problem of research at the college and university levels is somewhat different. Research at the college level is needed to make the teacher more alert and his teaching more effective. Of course the need of research is the greatest at the university level, for without it the real broadening of knowledge is not possible there.

22.15. The Commission entertain the highest respect for the independent ideals of teachers. The Commission are also of the opinion that educational freedom can be best maintained if the teacher discharges his responsibilities in accordance with his high ideals. These are mainly two. One is complementary to the other. In the matter of teaching, the teachers must be given the necessary inspiration. New ideas are often unpopular with the public as well as with the authorities. Educational freedom works as a safeguard against the superior attitude of the authorities and the whims of society. The teachers have the right to establish the truth in their own field in the light of their own knowledge and to search for new truths and new sources of knowledge.

22.16. But educational freedom does not certainly mean that the teachers should be able to do whatever they fancy. The teachers are free in the matter of discharging their responsibility, but this does not mean that they are free to neglect their work or the social and administrative obligations which they have. Such an attitude will render educational freedom completely meaningless.

22.17. We naturally expect a lot of things of our school, college, and university teachers. We expect a high professional standard and greater diligence on the part of our teachers. Therefore, the salaries, and the facilities given to them should be such as to make them reasonably satisfied. Besides, they should be given these facilities necessary for creative teaching. These facilities include necessary residential accommodation, proper medical care, pension or contributory provident fund. Teachers should be granted leave for higher study and research if their activities and their promise indicate that they will be able to utilise this leave for enhancing their professional competence. If such leave is granted from time to time and equitably, it will benefit both the teacher concerned and the educational institution to which he belongs.

Salary and Status of teachers :

22.18. Teaching is a creative activity and the standard of the educated manpower of the future largely depends upon the standard of teaching. So the more gifted and creative persons should be attracted to teaching. Unfortunately, as a result of long neglect the profession of teaching, specially at the school level, has lost all attractiveness. We need the highest qualified persons at all levels of teaching. The teachers play a crucial role in our national life. Therefore, our society should see to it that the teachers get their due status. Our development efforts will not be successful if we are not able to give the required social and economic status to our teachers.

22.19. We are aware of the many difficulties and wants through which our teachers work. The lack of accommodation in schools, the disproportionately high number of pupils, inadequate pay and low social status are all there. These wants have to be quickly removed. For the effective implementation of our recommendations for educational reform, an appropriate status and security for teachers are as necessary as the full co-operation of the teachers.

22.20. A successful teacher is a man of many qualities. He should have high professional competence in the subject he teaches. He should be specially trained in how teaching can be made effective and attractive. He should be able to understand the attitudes and the outlook of the pupils reading under his care and he should have a high concept of the value of teaching. But we on our part must ensure that the economic and social status of teachers are such as to create a favourable environment for their pursuit of learning and the appropriate recognition of their contributions to society.

22.21. A teacher's economy and social status should be determined according to his ability. But this is not the case now. This will become plain if we look at the present condition of our teachers, specially those of non-government educational institutions. Their pay is often below the subsistence level, and their achievement is not properly appreciated. Competent persons are not attracted to teaching because of the low and irregular pay, and if they are forced to choose another line because of their sad experience during the time they serve as teachers. A recent survey shows that more than 10 per cent of our teachers at the secondary level leaves teaching every year. In no other country is this phenomenon to be found. The teachers often work in surroundings which discourage even the most stout-hearted persons and they never get the assurance of a reasonable remuneration. Most of them are, therefore, forced to do private tuition on a wide scale. This creates a vicious circle, and one shirks work because of low salary and is sometimes forced to adopt dishonest means and thus lose the confidence of the public. In such circumstances, talented persons naturally find no particular attraction for teaching. It is needless to mention that it is idle to expect a high quality of work on the part of our teachers in such discouraging circumstances. As a result, the standard of education is lowered and the whole education system discredited before the public.

22.22. It is not possible to change the situation overnight. The universal recognition of the full social value of teachers requires long efforts on the part of the Education Department and the teachers themselves in co-operation with the educated section of the community. Government may take certain measures in this connection but the public cannot be forced through legislation to accord due respect to teachers. This is something which the teachers have to earn for themselves. To what extent a teacher is respected will depend on his ability to earn the confidence of his pupils and on the actual quality of his work and personality.

22.23. Government can do a lot in the matter of raising the economic and social status of the teachers. Salary of the teachers should be commensurate with a reasonable standard of living and adjusted to the changing price index. Teaching must be made economically as attractive as any profession at the level of specialists. This is a central issue. The pay of the teachers should be so fixed as not to force them to undertake work which might lessen the effectiveness of their teaching. For this purpose, the pay and status of the teachers at the secondary and college levels should be appreciably increased. The pay and status of thana, subdivision and district education officers should be similarly raised.

22.24. The present salary of the teachers in most of the non-government educational institutions is very low. It must be raised if we intend to maintain the national standard of teaching. The conditions of their service should be generally similar to those of the teachers in Government schools and colleges.

Besides, they must also be given the benefit of a contributory provident fund. The teachers and their employees should both contribute to this fund so that the teachers can be free from economic worry in times of sickness or retirement or unexpected mishaps.

22.25. Eighty thousand school teachers and ten thousand college teachers now working in the country's eight thousand non-government schools and colleges are deprived of the benefits given to government school and college teachers. In most cases there is no provision for leave on full pay during their service life or for residential accommodation at reasonable rents or for improving their professional competence through Government help. There is also no provision for retirement benefits. We realise that it is not possible for Government right now to nationalise all educational institutions and give the above facilities to all the teachers, as the whole thing is a time-consuming process. But we realise the urgent necessity for taking immediate effective measures for providing help to non-government school and college teachers and other employees of these institutions and their families in case of premature death, accidents, incurable diseases and other mishaps. We, therefore, propose that a national fund of taka 10 million be instituted on a priority basis. At the first stage Government should make a one-time grant of taka 5 million to this fund. The remaining 5 million taka should be contributed in one single instalment by the four Boards of Intermediate and Secondary Education and Bangladesh School Text Book Board. After the constitution of the National Fund on the above basis, the teachers and other employees in the non-government schools and colleges should each contribute at a fixed rate to this fund. The minimum annual contribution of each should be six taka. The Education Boards as well as the Text Book Board should make regular annual contributions to this fund. No Board should contribute less than taka 50 thousand annually. Besides, the Government should make an annual recurring grant of at least half a million taka to this fund. A Supervising Board should be constituted for the proper management of the National Fund. Financial assistance to non-government secondary school and college teachers at the time of retirement or as a one-time grant or for the treatment of serious diseases or as relief to the bereave family can be given from this fund.

22.26. There should be provision for annual awards for teachers and these awards should be given on a particular day every year by the President or the Prime Minister. The performance of the award-receiving teacher should be made known to the public through newspapers, the radio and the cinema.

22.27. Those appointed to responsible posts in educational institutions should be men of undoubted ability and personality. Their professional competence has to be determined and their promotion should depend on their capacity already demonstrated. Those selected for higher positions in the field of education should be men of the highest ability and must have previously demonstrated professional competence of a high order. As the responsibility for formulating our educational policy will develop on them and as they will take the lead in introducing and expanding all educational work-programmes, their opinion and advice should always be given due weight and importance. Their personality and character should be such as to command the respect and win the confidence of their colleagues.

22.28. We have not been able to attract the fittest persons to teaching—previously, direct recruitment was made to the higher posts in the field of education. The qualifications for these posts were laid down by the appropriate authority and appointments made following the same high standard as in

negard to the recruitment of candidates to the Civil Service. As these posts are now filled by promotion and their salaries have been reduced., there has been a lowering of quality in the management and administration of education as a whole. We are not opposed to the principle of promotion but we are of the opinion that the best youthful talents from the society should be recruited to these posts together with distinguished educationists of long experiences, high competence and demonstrated ability. To achieve this objective, the higher posts in the education department should be made equivalent to such posts in the field of administration in respect of salaries and professional and other facilities. At every level of educational services the posts should be generally comparable to similar posts in the administrative services and the salary at each level must be similar to that of the same administrative level. In the structure of services, officers in the Education Department should have the opportunity to attain the highest positions. For this purpose, the higher levels of educational services should be comparable to the higher levels of administrative services. If we can introduce such a structure of services, our talented young men will no longer chose their vocation for considerations of salary or status or facilities but in accordance with their own inclinations. Indeed, we must create such a system in the field of education that the teachers may feel that they have all opportunities for professional advancement before them and the right environment for making necessary adjustments in their attitude with changing times or circumstances.

22.29. The provision of appropriate educational implements, the basic facilities and a favourable environment must also be made in addition to providing economic inducement. Besides, all arrangements should be made for reasonable residential accommodation and library and laboratory facilities and to ensure the smooth functioning of research in the institutes of higher learning. A reasonable teacher-student ratio is a must. The professional openings for teachers must also be ensured. There should be provision for an additional allowance and for residential accommodation for female teachers working in the rural areas. The retirement age for teachers and officers of the education department should be fixed at 60 years (in special cases 65 years).

22.30. Some posts of national professors should be created for higher research. Provision should be made for state recognition of extraordinary achievement in teaching and research.

22.31. The community of teachers engaged in the noble task of building up a new society should be given all possible facilities to take part in social activities and their appropriate social status should be firmly established. For this, they must have freedom of thought, creative freedom and freedom of opinion. The thinking of teachers should be given due weight while determining educational policies and taking decisions to implement them.

22.32. The associations of teachers at different levels should pay a more active role in promoting the welfare of teachers. Their activities should not be confined merely to finding solutions to economic problems but also extend to professional and academic advancement of teachers.

22.33. Our recommendations to make teaching in our country attractive are as follows:

- (1) The salary of school and college teachers should be determined on the basis of ability and experience. The present differences in pay between the teachers of non-government schools and colleges and those of government

schools and colleges should be removed as far as possible and the salary of the former category of teachers should be made equivalent to that of the latter on the basis of ability and experience. The excess expenditure resulting there from must be largely met by Government.

- (2) Not only the scale of salary at the school level is low, but the prospect for promotion is also severely limited. So selection grade and special grade should be introduced at this level in addition to the regular pay scales. Many competent teachers will be required in the field of technical education to introduce the proposed vocational courses at the secondary level. Such persons cannot be attracted unless special grades are introduced.
- (3) The freedom of teachers was curbed in various ways during the colonial regime. It was not possible for any teachers in Government schools and colleges to contribute articles to journals or to publish books or to take part in any radio or television programme without the prior permission of the relevant authority. The colonial rulers made all possible efforts to render the community of intellectuals inactive and passive by imposing undesirable restrictions on their freedom of thought and on their freedom of opinion. It is essential that all teachers and officers of the education department should have complete freedom in the pursuit of knowledge and philosophical enquiry and in expressing opinion about all educational matters. For, no advancement of learning is possible for a nation where such freedom does not exist. So all laws and regulations relating to these restrictions should be forthwith withdrawn.
- (4) One of the characteristics of the principle of educational restriction followed during the pre-independence period was to gradually reduce the salary and the status of teachers and to limit the prospects for promotion. As a result, there are at present no posts of professors in Government colleges anywhere in the country. Moreover, the teachers in colleges and the majority of officers in the education department have been working on a purely temporary basis year after year and their posts not made permanent or substantive. The greatest indifference has been shown to them in matters of salary and professional facilities. These injustices must now be quickly removed. The teachers should ~~be made permanent after a successful probationary period as in respect~~ of other Government employees. Again, there should be no difference in pay between university and college teachers holding the same educational qualifications.
- (5) It is essential for trouble-free teaching that the teachers should have residential accommodation, among other facilities, as close to their educational institution as possible. In the matter of allotting government houses and flats in urban areas, priority should be given to teachers and the other officers of educational institutions. If it is not possible to arrange for residential accommodation, a reasonable portion of the basic salary should be given as house-allowance.
- (6) There should be provision for a special allowance for teachers in inaccessible areas, as in other countries. Besides, the salary of the teachers, at whatever level he may be employed, should be determined according to his ability.

- (7) A particular day in the year is observed as 'Education Day' in various countries of the world. This should also be introduced in our country.
- 22.34. We believe that the teachers will get back their lost reputation if the above recommendations are accepted and implemented and incessant efforts are made to make the public realise the importance and value of teachers. We consider this necessary for the teachers to take an effective part in all activities relating to social development.
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THE RESPONSIBILITY AND STATUS OF TEACHER

SUMMARY

1. The role of the teacher in the field of education is of immense importance. The teacher is at the heart of an educational programme and the standard of teaching depends upon the quality of the teacher's efforts. Therefore, if we are unable to select persons of the highest ability at different levels of teaching and if society does not give appropriate recognition to the teacher's crucial role in our national life, no educational reform can succeed. (22.1.—22.3.)

2. The primary responsibility of the teacher is to create enthusiasm in the pupil's mind and to help him develop habits of diligence, patience and perseverance and to inculcate in him the spirit of inquiry. The teachers should discharge their responsibilities with ability and success and spend a fixed portion of their time in teaching at the school or the college or the university. Teaching, preparation of lessons, supervision of pupils and extracurricular activities should be among the teacher's responsibilities. The weekly work-load of teachers should be 40 hours in classes I to V at the primary level and 45 hours in classes VI to X at the secondary level. Of this weekly work-load, 18 hours should be set apart for teaching, 10 for preparation of lessons, 7 for supervision and guidance of pupils and 5 for extra curricular activities in respect of teachers at the primary level. In respect of the weekly work-load of teachers at the secondary level, 21 hours should be set apart for teaching, 10 for preparation of lessons, 8 for supervision and guidance of pupils and six for extra curricular activities. The progress of a pupil during his school life should be maintained in a separate record (22.4.—22.5.).

3. The teachers should set examples before their pupils in matters of manual work, such as gardening, the use of one's hands, cleanliness at the school campus and repair work, etc. (22.6.).

4. The teachers must help their pupils to determine their future educational course and in solving their personal problems. (22.7.—22.8.)

5. The teachers should be particularly careful to see that their advice is in conformity with their actual conduct and behaviour. Any discrepancy between advice and conduct is likely to have an adverse effect on the pupil's moral values. (22.9)

6. A large portion of the time of the college and university teachers should be spent in correcting their pupil's tutorial and home work. They must also try to ensure that their teaching is not reduced to merely a conventional routine but is actually a pleasurable and profitable pursuit. There must be a clear work-schedule laid down for each teacher. The schedule must show clearly the amount of time a teacher is expected to spend every year in each of his different activities and the responsibility for determining whether this schedule is followed will develop upon the college or university authority concerned. (22.10—22.12.)

7. Every teacher should spend at least three to four hours a day in his personal library or in the library of his college or university. The longer the teacher is found available at his college or university, the better for all concerned. This will enable the pupils to get in touch with their teachers frequently and so teachers to give undivided attention to their various important activities. For this, a cafeteria should be provided. (22.13.)

8. The paucity of research in our colleges and universities is very pronounced. Our teachers must do whatever they can to remove it. (22.14)

9. The teachers should be given educational freedom. They should have the right to establish the truth in their own field in the light of their own knowledge. Likewise, they should have the right to explore new truths and sources of knowledge. Of course, educational freedom does not mean that the teachers should be free to do whatever they fancy. They cannot be allowed to violate their social and administrative obligations. (22.15—22.16.)

10. Leave should be granted to teachers for higher education and research (22.17).

11. The development efforts in the field of education cannot succeed if the teachers are not given their due social and economic status. The teachers work through many wants and handicaps. This will be apparent if we consider the ease of teachers of non-government schools and colleges. The salary actually drawn by these teachers does not keep them satisfied and even their due social status is not given them.

The salary and other facilities given to teachers must be in conformity with a reasonable and respectable standard of living and related to the changing price index. Besides, the status of teachers must be raised considerably. (22.18—22.23.)

12. The differences in pay between non-government school teachers and government school teachers must be removed as far as possible and the pay of the former fixed in accordance with their ability and experience. Such discrepancy in respect of teachers of government and non-government colleges should be similarly removed. (22.24.)

13. A national fund of taka ten million should be instituted immediately for providing help to non-government school and college teachers. A one-time grant at the time of the teacher's retirement, a reasonable grant in case of the teacher getting involved in an accident or falling grievously ill and financial assistance to the bereaved family in case of the teacher's death should be given from this. (22.25.)

14. Annual awards for teachers should be instituted. (22.26.)

15. The highest positions in the education department should be made as attractive as similar administrative positions in matters of financial benefit and professional facilities. At every level of educational services, there should be posts comparable with those at a similar administrative level and the pay at each level should be the same as that at the comparable administrative level. (22.28.)

16. Provision should be made for suitable residential accommodation for teachers. In rural areas, the female teachers should be given residential accommodation and an additional allowance. The retirement age for teachers and officers of the education department at all levels should be fixed at 60 years (in special cases 65 years). (22.29.)

17. A few posts of national professors should be created for higher research. (22.30.)

18. The views of teachers should receive due weight while determining the country's educational policy and taking decisions to implement it. (22.31.)

19. The teacher must be made permanent immediately after successful completion of his probationary period. Besides, there should be no difference in pay between government college teachers and university teachers holding the same qualifications. Some posts of professors should be created immediately for government colleges. (22.33.)

20. If it is not found possible to give residential accommodation to any teacher, he should be given a reasonable portion of his basic salary as house allowance. A special allowance for teachers in the inaccessible areas should also be provided in our country, as in other countries of the world. A particular day in the year should be designated as Education Day. (22.33.)

CHAPTER XXIII

THE REMOVAL OF ILLITERACY, ADULT EDUCATION AND
NONFORMAL EDUCATION

23.1. The percentage of illiteracy in Bangladesh is among the highest in the world. Economically too, we are one of the world's poorest countries. The density of population in Bangladesh is again the highest in the world: seventy and a half million people live in an area of 54 thousand square miles. The density of population is about fourteen hundred people per square mile. The main reason for our poverty and backwardness and our undeveloped state is that eighty per cent of our population is illiterate. According to the 1961 census the percentage of literacy in Bangladesh is 21.5, but this includes a large number of people who are just able to sign their names. The number of literate people in Bangladesh above the level of class VI is only 4.5. Not even ten per cent has the capacity to acquire knowledge through reading books. In our country the number of literate women is not even ten per cent. It is doubtful if the number of literate women above class VI will exceed even one per cent. The number of illiterate people between eleven and forty-five years old is about 35 million. The number of primary schools in Bangladesh is approximately thirty six thousand. Besides, four thousand more primary schools are run by local authorities. Only 55 per cent of children between five and ten years old go to school. The remaining 45 per cent does not go to school at all and it has not been possible to bring them under any educational scheme so far. Of the 55 per cent children admitted to class I the number is more than halved in class II and the number of children actually going up to class V does not exceed half of the total number studying in class II. The children returning to society with the rudiments of literacy after class V are gradually absorbed in the large illiterate manpower for lack of opportunity to keep their limited literacy intact. So, in spite of the increase in the number of pupils and educational institutions, the number of illiterate people is gradually increasing.

23.2 Twenty-five per cent of our huge illiterate manpower works on farms and fields and ten per cent in mills and factories—both main sources of production. Only one fifth of the total population of Bangladesh lives in cities and towns. It is the rural areas which actually constitute our country. But the villages are crowded with illiterate people. As they are immersed in the darkness of ignorance, they naturally suffer from poor health and poverty and are superstitious and reluctant to work. The environment in the industrial areas in Bangladesh is more pitiable and frightening. The educated and the rich live in cities and they dominate the administrative machinery. The facilities of modern life available to the people living in cities because of their control over the administration and economy of the country are not available to those living in villages. As soon as people in rural areas get the benefit of education they go to the cities in search of jobs. As large number of people of rural areas are moving to urban areas because of the economic crisis, it has put a great pressure upon our city-centred economy. All concerned have to day begun to realise that if all differences between the educated and the illiterate, between the rich and the poor and between cities and villages are not removed and the whole nation does not become united, our existence will be

at stake. Economic and social advancement is not possible if eighty per cent of our population continues to remain illiterate. We need an educated community for industrial expansion, for the modernization of agriculture, for the control of population and for the elimination of corruption.

23.3. About six million illiterates and unskilled labourers work in our mills and factories. But we need trained and skilled manpower for improving the quality of our production and for applying modern and scientific methods for hastening our industrial expansion. For this, we first need to make our workers literate. Again, we need literate farmers to make them realise the importance of modern and scientific methods in agricultural production and to build them up as soldiers of an agricultural revolution keen on creating a new life. The drive for greater production, modern irrigation methods, the protection of plants, production at the right time and proper ways of conserving the produce and of marketing it are dependent upon literate and skilled farmers.

23.4. Adult education in our country does not mean the same thing as it does in the more developed countries as the percentage of illiteracy there is almost nil. There is need in our country for applied knowledge able to cater to personal requirements. Additional training becomes imperative for all connected with productive work, with new technical and scientific inventions and discoveries. Education fills the needs of life at every stage and prepares one for the next stage. Life long pursuit of an ever-flowing educational course and gaining new experiences come within the scope of adult education. In our country this type of education should be introduced on a wide scale and should not be limited to any particular or fixed method but vary from the formal to the informal. Our main duty is to make our people literate and to provide facilities for profession-based, work-based and environment-based education.

23.5. Adult education should not be limited to making the illiterate literate and to teaching improved agricultural and industrial techniques. We must be able to communicate the true meanings of nationalism, socialism, democracy and secularism and make it clear why they are of such great importance in our political and social life. The happiness and prosperity of our people can be achieved only through a well-formulated scheme of adult education. The curriculum should be based on the needs and problems of the illiterate pupils and should encourage them to acquire the necessary skill for doing the household chores well and for preserving their health. Besides, the curriculum should provide elementary lessons in science, civics, economics, ethics and national culture with a view to arousing political consciousness and social awareness among this particular class of pupils.

23.6. Some efforts are being made in our country to remove illiteracy. Experimental work at government level is going on in eight selected thanas of Bangladesh for this purpose. Male and female organisers are available at the thana level for adult education. There is one Assistant Director of Public Instruction for adult education at Comilla under the Education Directorate and a small adult education institute for training and publications. The national co-operative union plays an important role in this matter. Organisations for adult education have been set up in twelve selected thanas of the country under the Pilot Project. An adult education centre at Rangunia, the rural development association at Roumari and the Centres at Guradashpur and Dhirai are all engaged in adult education work. Besides, many private associations in Bangladesh are making active efforts to remove illiteracy. These efforts are no doubt sincere

but their scope is unfortunately limited. It has not been possible to create social interest on a wide scale and to activate the efforts of all workers in the field of adult education for the purpose of launching a country-wide movement for the removal of illiteracy. The work of removing illiteracy is hampered by the lack of the necessary organisational and administrative structure, the want of suitably trained teachers, the dearth of necessary books and other educational implements and the non-introduction of scientific teaching methods.

23.7. We should use the experience of the countries which have been completely successful in removing illiteracy or have made considerable headway towards the realisation of this objective. No country in the world has been able to achieve progress without removing illiteracy. Soviet Russia has been able to make the entire population literate within a few years after the Revolution. China, Cuba and Ceylon have all made great strides in their fight against illiteracy. Although we cannot take Cuba as an exact parallel, we must nevertheless remember that she was able to remove illiteracy in just one year after the Revolution. We must ponder the deliberations of the representatives of various countries and the recommendations made by them at the international conferences organised by UNESCO in Montreal in 1960, in Iran in 1965 and in Japan in 1972. The help and co-operation of UNESCO will greatly facilitate our efforts to remove illiteracy.

23.8. We should seriously think of introducing legislation in regard to the following to make our fight against illiteracy successful in conformity with the above recommendations and the actual condition of our country:

- (a) a document showing participation for at least three months in the fight against illiteracy must be produced while seeking admission to a institute of higher learning or employment in a government, non-government or autonomous organisation.
- (b) The pupils must participate in the movement to eradicate illiteracy during vacations and for this purpose student-brigades should be formed.
- (c) Before awarding a certificate or a diploma or a degree to a successful candidate, he must be made to participate for at least three month in work relating to adult education or removal of illiteracy under the 'National volunteer Services'.
- (d) Every teacher, from the university down to the primary level, must obtain short-time training in adult education or how to remove illiteracy. During the vacations, the teachers should also be required to participate in the work mentioned at (b) above maintaining close link with their pupils as far as possible.
- (e) It will be the responsibility of the employers in all government and non-government organisations to make each of their illiterate workers literate within a year after their employment.
- (f) The newspapers, the radio, television and all film organisations must adopt a work-programme of direct participation in the fight against illiteracy.
- (g) All able-bodied and educated persons, in whatever field they may be employed, must in some way participate in the movement for the removal of illiteracy. A tax may be imposed on those unable or unwilling to take part in the above work.

23.9. A high powered adult education council should be set up to formulate the policy and to co-ordinate all activities relating to adult education and in this matter they should be given every possible help by government organisations like the Ministry of Labour and Social Welfare, the Ministry of Health and Family Planning, the Ministry of Agriculture, the Ministry of Co-operatives and Rural Development, the Ministry of Food, the Ministry of Local Government etc. The Prime Minister shall be the Chairman, the Education Minister the Vice Chairman, the Ministers concerned and the Deputy Chairman of the Planning Commission and some distinguished educationists members, of this council. The Education Minister shall act as the Secretary of the Council. This council shall have an executive committee. The Education Minister shall be the Chairman, the Education Secretary and the Secretaries of the concerned ministries members, a Joint Secretary of the Education Ministry Secretary, of this committee.

23.10. There should be a sufficient number of officers and employees in the Education Ministry to properly implement the work programme of the National Council and the policy laid down by it. There should be an officer for adult education at every district headquarters with the necessary number of assistants and other employees. An advisory committee may be set up for the co-ordination of the work of the district adult education officers. Persons interested in education and members of the district council should be members of this committee. There should be an adult education officer at the subdivisional level and one male and one female adult education organiser at the thana level. Male and female adult education organisers should also be appointed at the union level under the supervision of the thana adult education officer. These organisers must visit by turns the adult education centres located in their union and give them necessary guidance and submit weekly and monthly progress reports to the thana adult education officer. An adult literacy association has to be formed at every level with enthusiastic members from among the public and with representatives from the thana and union councils. The responsibility of this association will be to make the public aware of the cures of illiteracy and the need of literacy for economic development, family planning, the smooth functioning of agriculture and co-operatives and for leading a meaningful life. Besides, they should also help in the management of local adult education centres.

The full time employees at the subdivision and thana levels should be responsible for all local arrangements and supervise all activities relating to selection of teachers, training facilities, granting of allowances maintenance of work-records, management of the centres and other connected matters.

23.11. We consider it necessary that at least one adult education centre should be set up in every village. Adult education centres can be started in our primary and secondary schools and in our colleges and in the surrounding areas of these institutions. The heads of these centres should be the heads of the institutions concerned. A full-time trained teacher and a part-time trained teacher should be attached to each of these centres. There should be two courses every year at each centre each of six months' duration and the minimum number of pupils attending each course should be 30. The time schedule should be convenient to the pupils and generally operative during the evening without dislocating the normal activities of the present organisation. An afternoon shift can be arranged in the primary schools for illiterate adolescents between 10 to 15 years old. Where it is found inconvenient to open centres for women because of distance and other reasons, such centres should be started

in the club rooms or the sitting rooms of private houses in the interior. Local women teachers should be appointed as far as possible for women pupils. If there is dearth of properly qualified women instructors, women who have read up to class V or male and female students reading in class IX or class X can be employed for the purpose after they have undergone a short training course for women. One must be fully aware about the distinctiveness of the educational programme for women. In this connection we may refer to the question of employing women teachers in primary schools.

23.12. A national adult education institute of a high standard should be set up in the country. Its main aims shall be (a) training for administrators at different levels, (b) training for inspectors and supervisors, (c) the supply of trained teachers to all parts of the country for training of those untrained, (d) preparation of books and follow-up material and their publication and distribution, preparation and distribution of maps, charts, drawing and publicity material, (e) removal of illiteracy and research on adult education, the invention of improved teaching methods through experiment and observation and publication of research-oriented journals and journals for the newly educated, (f) critical assessment of the whole work programme and other related matters through annual or bi-annual conferences. The adult education institute should be managed by a full-time director. This institute should be divided into four divisions: (a) research division, (b) training division, (c) publication division, (d) distribution division. An assistant director should be in charge of each division.

23.13. The contribution of libraries is of great importance in building up a successful adult education system. The habit of reading is an essential condition for keeping alive the knowledge earned at the adult education centres and it is necessary to set up libraries in rural areas, where the distribution of books is a difficult matter, for making this habit regular. We must take into account the needs of the country's 80 per cent illiterate people while setting up libraries. The libraries set up in the villages should have the necessary reading material for the newly educated in large quantities so that it becomes easily available and can be distributed without difficulty. The newly educated will be encouraged to extend their horizon of knowledge through reading books in these libraries and will thus make themselves fit for acquiring higher knowledge in future.

23.14. The primary education system is intimately connected with the movement for removal of illiteracy. If we want to make this movement successful, primary education must be immediately made compulsory at least up to class V. Measures have to be taken to ensure that each child belonging to the five-ten age group gets an opportunity to go to school and does actually go there. For this purpose, the number of primary schools has to be increased according to need or a double shift introduced in the existing primary schools. If we can free the school-atmosphere from the fight of examination and from excessively rigorous discipline and introduce there something of the relaxed home-atmosphere and if we are able to make the guardians truly attached to education the drop-out problem at the primary level can be largely tackled and the source of the gradual increase in the number of illiterates closed.

23.15. Non-formal education is a type of education which is detached from an organised educational programme and separate from a diploma-giving formal education system based on age and on the class-room. This kind of education can be regarded as an alternative, or complementary, to formal education.

Non-formal education has gained considerable importance in the developed countries of the world as one way of removing the defects and deficiencies and backwardness of the formal education system. The inadequacy of opportunity and resources in the field of formal education, the remote connection between formal education and life and the life-long need for acquiring learning have all contributed to the importance of non-formal education.

23.16. Naturally formal education is bound up with examinations, syllabuses, educational institutions and the age of the pupils. On the other hand the distinctiveness of non-formal education is the adaptability of its work programme-relaxation of the conditions for admission, and adjustment with local conditions and with changing requirements, constant experiment with new methods the employment of teachers at a low salary, fixation of the curriculum and the objective and of time and place according to the convenience of the pupils.

23.17. In our country non-formal education should be introduced on a wide scale together with formal education. The work programme we have mentioned in connection with adult education can also be regarded as an inseparable part of non-formal education. Schemes relating to agricultural expansion, the training of teachers, the introduction of the domestic science course for women, vocational training for the young and the old, family planning, nutrition and public health should be tried through non-formal education and as part of adult education.

23.18. The adult education scheme should not be compared with other educational schemes, as it gives the necessary impetus to the whole nation and to all institutions engaged in constructive work to take an effective part in it. If the movement for the removal of illiteracy is confined to governmental efforts, it is not ever likely to succeed. All political groups and associations, all trade unions, all women organisations, all newspapers, the radio and television must equally assume the responsibility for eradicating illiteracy. To create the necessary impetus and to sustain it is a difficult task. This task should be among the responsibilities of the organisations mentioned above. On the other hand, government, each administrative division, all planners and teachers and social workers should plunge into the movement with a clear objective. It is possible to make the 35 million illiterates in our country between the 11-45 age group effectively literate within the next five years. We do not regard this as an unrealistic aim. No obstacle can endure before the collective endeavour and the fixed determination of about eight hundred thousand young pupils, two hundred thousand teachers and the twenty-six hundred thousand other educated people of the country.

THE REMOVAL OF ILLITERACY, ADULT EDUCATION AND NON-FORMAL EDUCATION.

SUMMARY

1. The percentage of illiteracy is about the highest in Bangladesh. Economically too, Bangladesh is among the poorest countries of the world. The percentage of literacy in Bangladesh, inhabited by 75 million people, is only 21.5. The number of illiterates in the 11 and 45 age-group is about 35 million. The number of the 55-per cent. children actually admitted to class I is more than halved in class II and the number of those who move up to class V is again half of the total number reading in class II. The children who return to society before class V with only the rudiments of literacy are gradually absorbed, for lack of practice, in the vast crowd of illiterate manpower. So, the number of illiterates is day by day increasing in our society. (23.1.)

2. Twenty-five per cent. of this vast illiterate manpower is scattered over our fields and farms and 10 per cent. works in mills and factories. In Bangladesh it is the villages which actually constitute the country. But unfortunately the villages are crowded with illiterates. Those in the rural areas who get the benefit of education move to the cities. Not only that, large numbers of village people are moving to towns and cities in search of jobs because of the present economic crisis. All concerned have now realised that economic or social advancement is not possible if eighty per cent. of the country's population remains illiterate. (23.2.)

3. A literate community of workers and farmers is a must for the application of scientific methods and of new inventions in the field of industry and for bringing about an agricultural revolution through modern, mechanised farming.

4. Adult education does not mean the same thing in our country to day as it does in the more developed countries. Our first duty is to make the whole population literate and at the same time to introduce a profession-based, work-based and environment-based education system. (23.3—23.4.)

5. Adult education is not confined to making the illiterate literate. They must be simultaneously made to understand the real meanings of nationalism, socialism, democracy and secularism and why they are so important in our social and political life. The curriculum for the illiterates must be related to their problems and designed to awaken their political consciousness. (23.5.)

6. Some efforts are being made in our country to remove illiteracy but it has not been possible so far to launch a country-wide movement to remove illiteracy through generating public enthusiasm and motivating the people for this purpose.

7. We must use the experience of countries like Soviet Russia, China, Cuba, etc. in the matter of quickly removing illiteracy. We must also give due consideration to the recommendations made by the experts in this field at the international conferences organised by UNESCO. The help and co-operation of UNESCO will facilitate our efforts to remove illiteracy. (23.6.—23.7.)

8. Recommendations:

- (1) An all-out effort must be made throughout the country to make the three and a half million illiterates in the 11-45 age group effectively literate.

- (2) We must consider introducing legislation regarding the following to make our country's fight against illiteracy successful:
- (a) A document showing participation in the fight against illiteracy for at least three months must be produced by the candidate before he can be considered for admission to an institute of higher learning for employment in any organisation.
 - (b) The pupils must take part in the movement to remove illiteracy during vacations.
 - (c) A candidate should be required to participate for three months without break in adult education work before he is awarded a certificate or a diploma or a degree.
 - (d) All teachers must obtain short-time training in adult education.
 - (e) The employers concerned must be responsible for making each of the illiterate workers in government and semi-government organisations and in mills and factories literate within one year after their employment.
 - (f) The newspapers, the radio, television and the film organisations must all adopt a programme of direct participation in adult education work.
 - (g) Each able-bodied and educated person must take part in the fight against illiteracy, otherwise a tax should be imposed on him.
- (3) To keep alive the knowledge of the newly literate, provision must be made for the easy distribution of suitable books and journals throughout the country, specially in rural areas.
 - (4) A high-powered adult education council should be formed to determine the policy and to co-ordinate all efforts in this field. The Prime Minister shall be the Chairman, the Education Minister, Vice-Chairman, the Ministers concerned and the Deputy Chairman of the Planning Commission and some distinguished educationists the members, of this council. The Education Secretary shall be the Secretary of the Council.
 - (5) A national Adult Education Institute should be set up for the preparation and publication of books and for training and research.
 - (6) There should be an adult education officer and advisory committee at the district level. At the sub-divisional level there should be an adult education officer: at the thana level, a male adult education organiser and a female adult education organiser: at the union level, a male assistant adult education organiser and a female assistant adult education organiser.
 - (7) At least one adult education centre should be set up in a local educational institute at every village and one full-time and one part-time trained teacher attached to each centre. Two courses every year—each lasting six months—should be introduced at each centre.
 - (8) Non-formal education should be introduced throughout the country on a wide scale as complementary to formal education. (23.8.—23.18.)
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CHAPTER XXIV.

WOMEN'S EDUCATION.

24-1. Suitable facilities for women's education are essential for the full development of the attributes of all people in society, for the improvement of the environment and quality of home and for ensuring the participation of women in the country's economic and social advancement. The character of the child is formed and developed in relation to an environment dominated by the mother. And yet women's education in our country has not achieved the same importance as men's education. The majority of women lead a life of superstition and ignorance for want of education. This situation has to be remedied immediately.

24-2. The world of women is very extensive in to day's society. But in our country the number of girls in primary schools is only 33 per cent of the number of boys, 20 per cent in the junior high schools and 10 per cent in the secondary schools. We make the following recommendations for the expansion of women's education, so that the foundation of socialism in our country is strengthened and all sections of our population are able to lead a happy and prosperous life through participating in the country's developmental activities.

24-3. The expansion in women's education should be in conformity with our national ideology and with the culture of Bangladesh and its traditions. We must ensure that women get that type of education which will be of help to them in their domestic life and in learning vocational skills. For this purpose, the question of setting up separate educational institutions for women should be considered.

24-4. As the distance between one school and another in the rural areas is considerable and as the rural areas in Bangladesh are criss-crossed by rivers and drains and the roads there are often inaccessible, it is not possible for women in many cases to go to school. Considering the above factors we recommend that a primary school for girls should be set up if necessary at a distance of less than one mile and a new school started as needed.

24-5. There should be some special subjects for girls in the syllabus from classes VI to VIII. These subjects should be such as to help them earn their own living and lead a more rewarding domestic life. A large number of girls in our country do not get the opportunity for further education after class VIII. Therefore, it is essential that the following subjects should be included in the syllabus; child-care, the nursing of the sick, preservation of health, cleanliness, nutrition, preparation of food, preservation of food, embroidery, dress-making, the making of toys and dolls, cane, bamboo and jute work, mat-weaving, poultry farming, etc.

24-6. The responsibility for teaching at the primary level is usually given to women in all developed countries of the world. For the teachers at this level require the patience, the earnestness and the affection appropriate to the mother. Women teachers should therefore be appointed in all primary schools up to class V. Immediate necessary measures should be adopted for this purpose

24.7. The women teachers at the primary level face a practical disadvantage in undergoing P.T.I. training as the P.T.Is. do not offer any separate accommodation for them. The number of trained women teachers at the primary level is negligible. It is therefore necessary to extend the primary training institutes so that they can offer accommodation to the women teachers ready and willing to undergo the P.T.I. course.

24.8. Women teachers must be sent to the rural areas if primary education is to realise its objective. It is, therefore, essential that our primary schools should provide accommodation for women teachers.

24.9. The required number of women teachers should be appointed in all co-educational secondary schools to give women pupils an impetus for further education after class VIII. This will help solve the special problems which the adolescent girl-pupils face.

24.10. The responsibility for making the public realise the importance of expanding women's education must be taken by the education department and the institutes concerned with social welfare. Some measures have to be taken to ensure that the conservative attitude of the guardians does not reduce the pace of expansion in the field of women's education. For example, the illiteracy and the superstitious attitude of the guardians should be removed through adult education and required numbers of women teachers appointed in all types of secondary schools.

24.11. Women candidates should be given preferential treatment in vocations specially suitable for them and which will at once enable them to lead an independent economic life and raise national income—such as, teaching at the primary level, nursing and para medical work, the work of office and bank assistants, typing and stenography, the work of telephone operators and receptionists, etc.

24.12. No distinction should be made between men and women in vocational and technical courses. The school authority should be specially mindful of the health of their women-pupils as they are the future mothers. For this purpose, gymnasium, playing field and swimming facilities should be provided for the girl students in every school at all levels. Properly trained women teachers should be appointed to supervise the physical exercises of the girl students.

24.13. Teacher-training should be a special optional subject for women at the secondary level. Besides, the home economics course must also be available for them. For, every girl will be eventually required to run a home and she needs preparation for this. Likewise, home-accounts should also be included in the syllabus for girl students. First Aid and home-nursing may simultaneously be included in the syllabus.

24.14. There is a great dearth of inspectors and inspectresses at present at the secondary level, as at the primary level. As a result, many defects are noticeable in the field of school management. We further recommend that the number of Inspectors and Inspectresses at both primary and secondary levels should be appropriately raised.

24.15. Men and women should get equal opportunity for appointments to both teaching and administrative posts on the basis of ability and experience. In this matter, ability should be the deciding factor.

WOMEN'S EDUCATION**SUMMARY**

1. In our country women's education has not achieved the same importance as men's education. The number of girls in our schools is very limited in relation to the number of boys. The majority of women lead a life of ignorance and superstition for want of education. Expansion of women's education is essential for correcting this imbalance. (24.1—24.2)
 2. It should be borne in mind while setting up schools in rural areas that women are not discouraged from utilising their facilities for reasons of distance and other such considerations. (24.4.)
 3. Women's education should be such as to be of help to them in their domestic life. The following subjects must, therefore, be included in the syllabus from classes VI to VIII: child-care, the nursing of the sick, preservation of health, food, nutrition, preservation of food, embroidery, toy and doll making, poultry farming, etc. Teacher-training, home economics, etc., should be included among the optional subjects for women at the secondary level. (24.3, 24.5.—24.13.)
 4. A larger number of women teachers should be appointed at the primary level up to class V. For this purpose, the primary training institutes should offer greater facilities for training of women teachers. (24.6-24.7.)
 5. A larger number of girls will be attracted to further education after class VIII if the number of women teachers is raised in the co-educational schools at the secondary level. (24.9)
 6. Women candidates should receive priority in vocations specially suitable for them, such as teaching at the primary level, nursing and para medical work, typing and stenography, the work of telephone operators, etc. (24.11)
 7. Men and women should have the same opportunity to be appointed both teaching and administrative posts. (24.12-24.15.)
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CHAPTER XXV

SPECIAL EDUCATION FOR THE PHYSICALLY AND THE MENTALLY HANDICAPPED AND FOR THE PARTICULARLY MERITORIOUS.

25.1. The number of the blind, the deaf and the dumb, the physically and the mentally handicapped among the children of educational age in Bangladesh is not negligible. But no reliable data are available regarding their exact number. In our country, such people belonging to poor families usually resort to begging. This has to be at once stopped for considerations of national interest. There are only a few educational institutions in Bangladesh for the blind and for the deaf and the dumb. There is some provision in these institutions for vocational education in accordance with the pupil's ability and inclinations. There is, however, no provision for special training in regard to the other handicapped pupils.

25.2. It is thus apparent that the country's existing facilities for training for the physically and the mentally handicapped are totally inadequate to the actual needs. Our recommendations in this perspective are as follows:

- (a) A survey should be started to determine the exact number of blind, deaf, dumb and physically and mentally handicapped children within 1975. Schools providing special training for the handicapped children should meanwhile be improved.
- (b) In Bangladesh at present there are a few educational institutes which provide training to the blind and the deaf and the dumb together, but separate institutions should be set up in the perspective of the physical and mental condition of the pupils. Separate and full-fledged educational institutes of a high standard should be set up for the above categories of pupils one in each division first and then in every district according to need within 1980. The teaching methods for the blind and the deaf and the dumb are separate from those for ordinary pupils. Besides, the teaching methods for the blind are different from those for the deaf and the dumb. The blind do not see but their power of hearing and their power of smell are very strong. The deaf and the dumb can see every thing, but as they cannot hear they are unable to express their thoughts in words. So there should be separate institutes for these two categories of handicapped children and these institutes should be self-contained. Suitable facilities for teacher training must be provided for both these separate institutes. Arrangements for separate and suitable text books and other education implements for the special training of the blind and the deaf and the dumb should be made within 1979.
- (c) There should be separate accommodation for boys and girls of these special institutes. The general curriculum should be followed but special methods of teaching adopted for the handicapped children. The main aim of their training should be to make them self-supporting and self-reliant. At the beginning the pace of their training is bound to be a bit slow because of their peculiar handicap. But

their self-confidence can be developed through vocational and applied education on the basis of their mental inclinations. Thus they will, after completion of their training, be able to earn their own living and to establish themselves securely in society.

- (d) General education up to class VIII will be compulsory for the handicapped children as for the non-handicapped children, but provision should be made for technical education and for musical training in accordance with their inclinations. Simultaneously with musical training beginning from the primary level, these handicapped children should be taught cane and bamboo work, leather work, plastic and clay doll-making, wire making etc., Facilities should be provided for them to manage on a co-operative basis the making of small parts of machines, the actual operation of a machine, poultry farming and animal husbandry etc. Besides, they should be taught physical exercises, sports and games, recitation and drama. The teacher able to see must master special methods if he intends to teach his blind pupils successfully. For this, provision for special teacher-training should be made. In fact, provision for teacher-training and for the preparation of text books in braille should be made for the effective training of the blind pupils before full-fledged institutes are set up for them.
- (e) The deaf and the dumb do not need special text books but their text books should be profusely illustrated. Besides their way of learning pronunciation at the primary level will be different from others. They should try to imitate the pronunciation-methods of their teachers by closely observing their lip-movement and repeating it before the mirror. Moreover they should try to acquire knowledge through finding a likeness between the pronunciation and the thing indicated by touching their vocal cords. The education of the deaf and the dumb is time-consuming. Hearing and speaking are both unknown to them and hence they first see the objects and then draw them with pencil, ink, and colour. They move towards gradual improvement at different levels once they know how to draw and have mastered clay-work. Many expensive and highly developed accessories will be necessary to aid their hearing. For this purpose group hearing aids, multiple-microphones and record players should be used at different levels. In addition, musical instruments of different kinds will also be required for them to comprehend the variety and variation of words.
- (f) There should be provision for vocational education together with the general education for the deaf and the dumb up to class VIII. The main aim of their education is to enable them to earn a living and find a suitable place in society. Separate vocational training should therefore be given to the deaf and the dumb according to their mental inclinations, as in the case of the blind.

Those unable to proceed further education after class VIII should be prepared at this stage for their rehabilitation. At this stage; they should be given training in technical and machine work, printing tailoring; typing and different branches of cottage industry. Wherever animal husbandry and agriculture can be practised on a co-operative basis, the deaf and the dumb with the necessary training should be employed. A laboratory and a workshop should be set up in each of their schools for this purpose.

- (g) There should be provision for a special kind of teacher-training for the effective teaching of the deaf and the dumb, as in the case of the blind. A teacher-training centre should therefore be set up with each of these special institutes. As long as arrangements cannot be made for this special kind of teacher-training, the teachers may be sent abroad for this purpose. Otherwise, foreign consultants should be brought to the country to make suitable arrangements for the training mentioned above.
- (h) In our country a few mentally handicapped and emotionally backward children read in the general schools. The teachers concerned must be tolerant and sympathetic to these pupils to ensure their overall development. At the same time, they must be careful to see that the education of the healthy children is not hampered in company of the mentally handicapped. Teachers for the mentally handicapped must be patient and have proper psychological attributes and a sensitive mind. The best thing would be to set up separate schools for the mentally handicapped and as far as possible vocational education should be provided at these schools so that the pupils can realise their basic needs and be self-reliant.
- (i) There is need for separate schools for the lame, the disabled and the paralytic. There should be provision for the medical treatment of the physically handicapped at these schools but at the same time there should be full facilities for the particular kind of training needed by them. For this purpose, trained teachers must be employed.

25.3. There is considerable difference of opinion about the necessity of residential model schools and cadet colleges in the country. The demand for a people oriented education system goes back to many years. It is not possible to realise this objective, if class distinctions are not abolished in the field of education. We have been told that the cadet colleges and residential model schools in our country should be abolished as they help create class distinctions in the field of education. We favour their continuance as technical institutes, agricultural polytechnics or as quality institutes for science or general education.

25.4. Special secondary schools should be set up in addition to the general ones for the special training of the extra-ordinarily meritorious pupils after class V and class VIII. Such arrangements exist even in Soviet Russia, not to speak of the developed non-socialistic countries of the world. Of course such arrangements must be people oriented and the truly meritorious pupils should be chosen through a selection test from all levels of society irrespective of their economic status. This selection can be made through the competitive examinations after class V and class VIII. The educational expenses of the poor pupils thus selected should be borne by government. The more affluent guardians should bear the expenses of their wards fully or partly according to their financial ability. Government should render financial assistance according to need in such cases.

25.5. Our comment and our recommendation about the laboratory schools in our country are as follows. These schools are usually attached to the teacher training colleges. Only meritorious pupils are admitted to these schools. But the true aim of teacher-training is not fulfilled through this. It is highly unlikely that our teachers will find only meritorious pupils in their schools on completion of their training. The laboratory schools could have justified their existence as institutions encouraging educational research if their doors were kept open

for pupils belonging to different intellectual levels. But this is not feasible because of our limited financial resources. In the existing situation, we recommend that a few non-government schools should also be used to encourage the kind of research indicated above.

SPECIAL EDUCATION FOR THE PHYSICALLY AND THE MENTALLY HANDICAPPED AND FOR THE PARTICULARLY MERITORIOUS.**SUMMARY**

1. There are many physically and mentally handicapped children in Bangladesh within the educational age. Proper facilities for their training do not exist at present. Most of these children earn their living through begging. (25-1).

2. The correct number of these handicapped children should be determined through a survey to be started within 1975. (25-2-a).

3. Separate residential schools should be set up for the blind and the deaf and the dumb. There should be at the beginning a separate school for each of these two categories in every division and then according to need in every district within 1980. Separate text books and special implements and trained teachers should be provided for them. Music, embroidery, sports and games should get special importance in their curriculum. Provision for vocational training should be made according to their mental inclinations so that they can earn their own living. (25-2-b-g.)

4. There is also need for special institutes for the mentally handicapped and the emotionally backward and for the physically disabled. Specially trained teachers will be required for these types of schools. (25-2-h-i.)

5. It is necessary to abolish educational institutes which encourage class distinctions in the field of education. The residential model schools and cadet colleges can be retained as technical institutes or quality institutes for general or science education. (25-3)

6. Special secondary schools should be set up for the extra-ordinarily meritorious pupils after class V and class VIII. The educational expenses of the poor pupils at these schools should be borne by government. (25-4.)

CHAPTER XXVI

HEALTH EDUCATION, PHYSICAL AND MILITARY TRAINING

26.1. Health, according to the World Health Organisation, means the physical, mental and social well-being of the individual. Health is not merely the absence of illness. A well-conceived Health Education and Physical Training scheme should be introduced along with general education for the development of a balanced personality physically fit and mentally sound. It is, therefore, desirable that 'Health Education' and 'Physical Training', should be regarded as one of the necessary elements of general education.

26.2. 'Health Education and Physical Training' should be given to the pupils at their own institutions to build them up as completely healthy, well balanced, socially-conscious and self-reliant citizens of the country. This will enable the pupils to cope with the problems of the future with healthy bodies and sound minds and thus to participate in increased production, and to create a strong defensive system for the country.

26.3. The pupils receiving the benefit of 'Health Education and Physical Training' will be able to get familiar with the country's geographical situation (climate, soil, weather, minerals resources, light and air) and trained in proper nutrition and data regarding health and to develop themselves as healthy personalities by making proper use of this knowledge in their daily life. Besides, they will be able to know which plants and trees and which animals and creatures in the biological environment can be beneficial or otherwise to human health.

26.4. On the whole, the pupil so trained will be able to take necessary measures for the promotion of his own health and that of others through his knowledge of how diseases can be prevented and treated and how public health safe-guarded. It is, therefore, apparent that the value of 'Health Education and Physical Training' for the pupil is very great.

26.5. The main aims of 'Health Education and Physical Training' are as follows :

1. To create a healthy and strong personality.
2. Divert the pupil's mind from anti-social activities by fully developing his body and his mind through sports and games and physical training.
3. To develop the pupil's mental alertness, his tolerance, his sense of fair play and his leadership qualities.
4. To remove selfishness from the pupil's mind and to discourage disorderly conduct on his part by habituating him fully to the rule of law.
5. To give him necessary training to secure his physical safety.

26.6. It is necessary to introduce a thoughtfully conceived 'Health Education and Physical Training' curriculum for implementing the above aims at the following levels of education :

(a) Pre-primary and primary levels :

26.7. It is necessary to give special stress on the different methods of 'Health Education and Physical Training' and on primary preventive treatment of diseases through sports and games. Indeed, sports and games should be one of the mediums for the 'Health Education and Physical Training' of the pupils at this stage. It is therefore, necessary to include physical exercises, sports and games, cubbing, etc. in the curriculum at this level.

26.8. Sports and games and physical exercises should be selected from the following for boys and girls separately and as they are suitable to the different age-groups :

1. *Physical exercises* : Running, jumping, rolling, skipping, climbing, spring jump, maintaining balance, boxing, etc.
2. *Games* : Different collective games.
3. *Dancing* : Jhumur, bratachari and saotaly dances.
4. *Swimming* : Different kinds of individual or competitive swimming.

26.9. The following facilities should be available in every school at this stage for 'Health Education and Physical Training' :

1. A suitable playing field, a gymnasium, a swimming pool, a playing ring, a wooden block, etc.
2. Flutes, musical sticks and other accessories for learning dancing.
3. A personal health card for every pupil.
4. A physician and necessary medical accessories.
5. 'Health Education and Physical Training' should be made compulsory at the primary level from class I to class VIII.

(b) Secondary stage :

26.10. Due stress should be laid on 'Health Education and Physical Training' at the secondary level also. All possible opportunities should be given to the pupil for sports and games and efforts made to develop his physical, intellectual and emotional faculties. At this level, too, 'Health Education and Physical Training' should be made compulsory and necessary facilities in this regard, together with a physical education teacher, provided.

26.11. Usually there is a great physical and mental change among the adolescents at the secondary level and a radical transformation of their activities and attitudes. At this age, the pupils tend to be very sentimental and emotional. A thoughtfully-conceived curriculum for 'Health Education and Physical Training' is necessary to guide them in the right direction.

26.12. The children at the secondary level are able to do more difficult physical exercises and play more exhausting games than those at the primary level. A few examples are given below of how the above curriculum can be formulated :

1. *Physical exercise* : Spring board, ring, lowbar, highbar, handstand, cart-wheel, catspring, throughvault, etc.
2. *Running and jumping* : High-jump, long-jump, javelin throw, discuss-throw, shot-put, relay race, hardles race etc.
3. *Sports and games* : Football, volley ball, basket ball, cricket, hockey, tenniquote, badminton, lawn tennis, swimming, etc.
4. Stick dance, Jhumor dance etc.
5. A week long camping should be arranged for each successful pupil at an appropriate time before awarding him his S. S. C. certificate.

26.13. It is necessary to appoint trained physical education teachers, both male and female, for 'Health Education and Physical Training.' They must be well-trained and know how to direct the pupils for calisthenics, P. T., march-past, turning and marching etc. It must be remembered in this connection that the above training should be in accordance with the different syllabuses at different levels.

26.14. 1. There must be evaluation of how much a pupil is learning about 'Health Education and Physical Training' throughout the year. This evaluation must be given due weight while promoting a pupil or sending him up for the S.S.C. examination.

2. One trained health and physical education teacher should be appointed for every three hundred pupils.

3. A playing field, a swimming tank, gymnastics, athletics, bratachari, scouting, girls guiding and indigenous games should be provided at every school.

4. Every school should supply tiffin at a cheap rate under the supervision of the 'Health and Physical Education' teacher.

5. Provision should be made for a 'Health card' for every pupil at this stage and for health services, 'emergency care', and at least a quarterly physical examination of the pupils.

6. Residential accommodation should be provided for 'Health and Physical Education' teachers both male and female, adjacent to the school and their salary, status and training facilities should be comparable with those of other teachers.

(C) College and University level :

26.15. Proper facilities for 'Health Education and Physical Training' and for suitable sports and games should also be provided for pupils at the college and university level. It is largely possible to cure the pupils at this stage of their restlessness and their agitated attitude and their predilection to crime owing

to frustration through a well co-ordinated scheme of physical training through sports and games. For this purpose, athletics and gymnastics of different kinds should be provided for the pupils at this stage (wrestling, judo, jujutsu, swimming, boxing, etc.)

26.16. The following measures should be taken for the pupils at this stage:

1. Provision should be made for a playing field, a swimming pool or tank, physical exercises and sports and games.
2. One trained physical education teacher should be appointed for every five hundred pupils.
3. B.C.C. and U.O.T.C. training should be provided for the pupils at this stage.

26.17. The following measures should also be adopted to introduce 'Health Education and Physical Training's at all levels :

1. A physical education college should be set up in each division in Bangladesh. A scheme for the establishment of a central college of physical education for women should be included in the first five year plan.
2. Suitable text books should be prepared by experts according to the syllabus.
3. A short physical education training-course should be introduced in teacher-training colleges and in P. T. Is. to meet the urgent need for physical education teachers.
4. The M. A. in physical education course should be preferably started at the Government College of Physical Education.
5. The post of physical education teachers at different colleges should be raised to the status of lecturers.
6. The district physical education officer should be promoted to the B.E.S.
7. The status of teachers with the B.P.Ed. degree should be the same as those of teachers with the B.Ed. degree and they both should enjoy the same facilities.

Military Training.

26.18. The Bengalees were deliberately excluded from military training during the British and the Pakistani regime. As a result, the general body of Bengalees was apprehensive about military training and had a scornful attitude towards it. We need to create a favourable attitude towards the country's defence to remove the attitude mentioned above.

26.19. Besides, military training has also a moral aspect. One develops an attitude of respect to orderliness, one's willingness to make sacrifices for larger national interest is increased, one can learn to accept without hesitation the rule

of law, and one's self-reliance is enhanced through military training. Briefly the qualities whose absence is most noticeable in our society to day are created and developed through military training.

26.20. Although physical training does not quite come under military training the former is a preparatory ground for the latter. Moreover, the compulsory participation of the successful candidate in a week-long physical education camp before he is given the S.S.C. certificate, as proposed by us, will facilitate his military training.

26.21. Our defence forces should separately or collectively set up academies for the training of their own employees. These academies should formulate their own syllabus at the degree level. The affiliating university concerned should hold the examination and award degrees after the completion of the course fixed by these academies. For this purpose a naval academy, a land-force academy and an air-force academy should be set up under the different universities.

26.22. Besides, military training should continue as an optional subject at the higher secondary level. U. O. T. C. should likewise continue at the university level. It is desirable to keep the department of military science going in all universities.

HEALTH EDUCATION, PHYSICAL AND MILITARY TRAINING

SUMMARY

1. 'Health Education and Physical Training' should be incorporated as one of the necessary elements of general education, (26.1.)

2. The main aim of 'Health Education and Physical Training' is to build up a strong and healthy personality, to make the pupil mentally alert, to develop his tolerance, his sense of fair-play and his leadership qualities, to remove selfishness and disorderliness and to make the rule of law readily acceptable. (26.2.-26.5.)

3. At every level of education, there should be suitable provision for each pupil, according to age, of facilities in respect of physical exercises and sports and games. To realise this objective, there should be provision for a suitable playing field, appliances and accessories, and trained teachers, both male and female, at every educational institute. (26.6.-26.16.)

4. A college of physical education should be set up in each administrative division of the country for improved teaching in 'Health Education and Physical Training'. There should be provision in the first five year plan for a central college of physical education for women. A short training course in physical education should be introduced in the teacher-training colleges and the P.T.Is. to meet the urgent need for physical education teachers. A post-graduate course should preferably be started at the Government College of Physical Education. The status and facilities of physical education teachers should be appropriately raised. (26.17.)

5. The importance of military training in an independent country is undeniable. The pupil's sense of discipline and his willingness to make sacrifices for the larger interest of the nation are developed through military training. The subjects of physical training will help the pupil in the matter of his future military training. (26.19.-26.20.)

6. Our defence forces should separately or collectively set up training academies and the affiliating university concerned award the degree to the pupil successfully completing the academy's course. Military training should continue as an optional subject at the higher secondary level. (26.21.-26.22.)

CHAPTER XXVII

HOLIDAYS IN EDUCATIONAL INSTITUTIONS

27.1. At present our educational institutions do not follow a uniform system of holidays. The number of holidays in a year is not the same in primary schools, secondary schools, madrasahs, colleges, professional and technical institutes and universities. Apart from regular holidays, many unscheduled holidays are given by our educational institutions and sometimes working days are converted into virtual holidays without making any formal announcement. It may be mentioned, for example, that many days pass without any real work at the beginning of the academic year to give the pupils time to buy their text books and other accessories. In many cases working time is wasted by giving certain classes holidays by turns for the purpose of holding examination for the other classes. In addition to this long prevalent habitual system, many working days are wasted because of natural calamities, preparatory work for public examinations and for many other reasons. The total number of working days in a year is not the same even in all educational institutions at the same level. Even the weekly holiday is not observed on the same day in all institutions. Many working days are spent without any meaningful work and for this reason the syllabus remains incomplete at the end of the academic year. As a result, the very rapid teaching undertaken by the teachers relating to the unfinished portion of the syllabus before the annual examination is something which the pupils are unable to comprehend. Moreover, every working day is not utilised for completely relevant work.

27.2. Many persons connected with education are coming to feel that the standard of our education at every level is gradually deteriorating. This feeling is not without any basis, but no single factor can be held responsible for this deterioration. But it is undoubtedly true that a principal reason for the lowering of educational standards is the incomplete attention given by the teachers to the syllabus on account of an excessive number of holidays.

27.3. Our opinion in this perspective is that there should be co-ordination in determining the principles for holidays should be observed in the educational different levels and that the same rules for holidays should be observed in the educational institutions at the same level.

27.4. We believe that holidays totalling 120 days a year, including weekly holidays, should be ample for all educational institutions from the primary up to the university level.

27.5. We make the following proposals as a guideline for holidays for primary schools, secondary schools, colleges and other educational institutes of comparable levels within the limitation mentioned above :

- (a) The academic year should be generally divided into two equal parts. The half-yearly examination should be held and its results announced in the first part. The annual examination should be held and its results announced in the second part.

- (b) The question of holding the public examination simultaneously with the annual examination towards the end of the second part of the academic year should be actively considered. If the public examination is held within the academic year, the wide gap of time that at present exists between the end of the public examination and the beginning of the academic year will be removed. If this system is followed working time will be saved and the pupils will be attracted to regular study.
- (c) Measures should be taken to ensure that there is no undue delay in starting regular work at the beginning of the academic year and test books are made available to the pupils in time.
- (d) Weekly holidays, religious holidays, government holidays and local holidays should be all included within the limit of 120 days mentioned above.
- (e) Purposelessly long Summer vacation or Ramzan vacation is, in our opinion, unnecessary.
- (f) The weekly holiday in all educational institutions should be observe on the same day. For family, social and administrative reasons the weekly holidays in government and non-government educational institutions should be observed on the same day as in government offices.
- (g) Apart from the weekly holiday, it is not necessary that all other holidays should be followed at the same time. These holidays can be followed in particular educational institutes in accordance with local needs and keeping in view the interest of both teachers and students. It can be said, for example, that the educational institutions in the region where flood during the monsoon is a recurring event should have a monsoon vacation instead of summer vaction or winter holidays.
- (h) There is a view prevalent among some that the educational institutions should be closed at the time of planting of seeds and during harvesting. We believe that if the pupils are able to help the guardians in their family profession or vocation, they will not only be able to lighten the work-load of their guardians and to render them indirect financial help but also benefit themselves considerably. The benefit will be in the form of direct acquaintance with the realistic course of life and of satisfaction derived from participation in productive work. We, therefore, feel that if the schools arrange for holidays at the time of planting of seeds and during harvesting, the pupils will be able to help their guardians.
- (i) The total number of working days in a year in all educational institutions should be 245. How this working time is actually spent in regular work in addition to holding the examination and participation in social and productive work, is something for which all educational institutes must, if required submit, reports to the appropriate authorities.
- (j) No educational institutes should be closed for more than the specified 120 days. If a holiday has to be declared for unforeseen reasons this has to be adjusted from the total so that the number of total holidays does not in any case exceed 120 days.

27-6. The academic year at present starts at different times in schools, colleges and universities. As a result, considerable time is wasted when a pupil goes up to the college level from the school level. But this can be rectified if the academic year begins at the same time in both schools and colleges. We, therefore, recommend that the academic year should begin at the same time in schools, colleges and universities.

HOLIDAYS IN EDUCATIONAL INSTITUTIONS**SUMMARY**

1. At present the same rules for holidays are not observed in our educational institutions. The total number of holidays in a year in different educational institutes and in the universities is not the same. Apart from the scheduled holidays, unscheduled holidays are given for different reasons or working days converted into holidays without a formal announcement. The number of total holidays in all educational institutions at the same level is not, again, the same. The main reason for the lowering of educational standards is the fact that the syllabus remains incomplete because of the excessive number of holidays. (27-1-27-2.)

(a) In this perspective we believe that the total number of holidays in a year, including weekly holidays, in all educational institutions from the primary to the university level should not exceed 120 days. The total number of working days in all educational institutions should be 245.

(b) The weekly holiday should be followed on the same day in all educational institutions, other holidays may be given at different times in accordance with local needs.

(c) The academic year should be generally divided into two equal parts. The question of holding the public examination with the annual examination towards the end of the second part of the academic year should be actively considered.

(d) If the educational institutions are closed at the time of planting of seeds and during harvesting, the pupils will be able to help their guardians. The pupils will also be able to have a direct acquaintance with the realistic course of life and to profitably participate in productive work. The academic year should begin at the same time in schools, colleges and universities. (27-3-27-6)

CHAPTER XXVIII

CURRICULUM AND TEXT BOOKS

28.1. In our country the Education Directorate determines the curriculum and syllabus from class I to class VIII, the Boards of Intermediate and Secondary Education determine the curriculum and syllabus from class IX to class XII and those in the field of higher education are determined by the different universities and the educational institutions concerned. The text books from class I to class VIII are prepared and distributed by Bangladesh School Text Book Board.

28.2. Our country seems to be outside the scope of the great transformation that is taking place in the field of education in the developed and progressive countries of the world through extensive experiments in the matter of curriculum and syllabus and dramatic enrichment in human knowledge. The curriculum and syllabuses prepared several decades ago are, with slight modification, still prevalent in our schools and colleges. This sort of conservative, traditional, conventional and low-quality material cannot be of any help in devising an education system of a quality appropriate to a progressive country.

28.3. At present the total number of pupils in our schools is over eight million. This number will be increased, as a result of the fast expansion of education, to ten million in the next few years. If we intend to build up this very large number of pupils as good and responsible citizens, we must give special attention to improving the quality of the curriculum and syllabuses, and of text books and other educational implements.

Curriculum and syllabuses at the primary level.

28.4. We have indicated in the chapter on primary education that the stage from class I to class VIII shall constitute the primary level and that education at this level must be made universal. If primary education is not made free and compulsory its universality cannot be maintained. We have, therefore, recommended that the free education now prevalent from class I to class V should be made compulsory within 1980 and free and compulsory education up to class VIII must be introduced within 1983.

28.5. A well-ordered and dynamic primary education system is the necessary foundation for all later education. It is not possible to strengthen higher education if this foundation remains weak. A suitable curriculum has to be devised in this perspective after a careful analysis of the objectives of primary education. While determining the curriculum it must be borne in mind that its main aim should be the full development of the physical, mental and moral attributes of the pupil and of his personality. The basic knowledge and skills which the pupil will need to acquire in future must be kept in view as well as the particular nature of his abilities and his natural inclinations so that he later experiences no difficulty in pursuing higher education. The curriculum should be so devised as to awaken a sense of patriotism and social responsibility in the pupil's mind and to motivate him to spontaneously participate in the country's development programme. Perseverance, diligence, tolerance, courtesy, devotion to truth and curiosity must be developed through the curriculum and

also the foundation laid for a liberal outlook. The pupil must also be made aware of the importance of a healthy body in a healthy mind and how physical exercises and sports and game can help him achieve this objective. Above all, the four fundamental state principles must be firmly implanted in the pupil's mind.

28.6. The age of pupils between class I and class VI should generally be between five years and thirteen years. The educational course at this stage must naturally be suited to the mental capacities of the pupils belonging to the above age group and be such as to help them in adjusting themselves to the natural condition of daily life. A radical reconstruction of the curriculum at the primary level consistent with the actual environment of daily life, the requirements of society and the physical and mental capacities of the pupils together with their inclinations—is therefore called for. The subjects to be read in class I and II shall be Bengali and Arithmetic. Physical exercises and sports and game, vocal and instrumental music and painting should also be included in the curriculum. The subject to be read from class III to class V shall be Bengali, Arithmetic, History, Geography and General Science. Physical exercise and sports and games, vocal and instrumental music and painting should also be included as in the case of the lower classes. From class VI to class VIII the subjects to be read shall be Bengali, and a second language (such as English or Arabic) Arithmetic, History, Geography, General Science and Religious or Moral Instruction. Physical exercises and sports and games, vocal and instrumental music and painting should be similarly included. The educational methods between class I and class V II should be work-oriented and practical training should receive greater importance therein than the mere acquisition of theoretical knowledge. The pupils should be required to do manual work such as gardening, toy making, clay modelling, weaving, binding, cane and bamboo work, dyeing, sewing, etc.,—in their own school. The pupils from class III to class V II should also participate in agricultural extension work. One of the basic weaknesses of our education system is the minimum importance attached to manual-work. Indeed, this weakness is but a reflection of the weakness of our society. For this reason, we have recommended that manual-work should be made compulsory for all pupils at the primary stage. There should be provision for participation of the pupils in agricultural extension work, with this course, so that they can acquire basic knowledge about farming.

28.7. The primary school have a crucial role to play in awakening a consciousness of the four fundamental state principles (nationalism, socialism, democracy and secularism) among their pupils. The basic formation of the pupil's character is made at the primary stage—a stage which shall be terminal for the majority of the pupil. Therefore, the awakening of the above consciousness should be the most important objective at this terminal level of education. In fact, therefore, by all means be ensured that our four fundamental state principles are reflected in the curriculum.

28.8. In our opinion there is no need to learn another language in addition to Bengali up to class V. The additional load of learning a new language hampers the realisation of the objective of primary education. Generally speaking, if the children up to ten years old are required to learn a language in addition to their mother tongue it becomes a sort of burden for them and acts as an impediment to their mental development. Moreover, if efforts are made to teach a second language the whole educational time table will be so upset that the effort to implement our recommendations will end up in failure. In our opinion a second language should be learnt from class VI onwards to

liberalise the pupil's outlook and to help him acquire modern knowledge. All pupils at this stage must learn a second language compulsorily up to class VIII. Theoretically, the second language can be English or Arabic or Sanskrit or Pali or French or Russian or German or Japanese or Chinese. But for historical reasons and for considerations of actuality, English shall perhaps take over as the second language in our country. A third language at this stage can also be taught according to need.

28.9. The present teaching method in our primary schools is excessively rigid and contains no provision for meeting local needs or interests. Similarly, the arrangement for actual application of the more prominent attributes connected with the profession and the way of life of the local people is absent in this teaching method. What we mean to say is that our teachers are heavily dependent upon text books prepared by a central body and are not active in collecting illustrative materials from local resources and the way of life of the local people. The economy of Bangladesh is agriculture-based as the country is pre-eminently agricultural. Besides, the efforts to industrialise the country shall contain uninterruption to make the country economically self-reliant. Therefore, the curriculum and syllabuses at the primary level should be so formulated as to have a close bearing on our agriculture-based economy and on our efforts to industrialise the country and should be related to local conditions and the way of life of the local people.

Curriculum and syllabuses at the secondary level :

28.10. The stage after primary education and preceding the degree level is known as the secondary level in our education system. Secondary education is the second level in our educational structure. From the point of view of age, secondary education is education of the teenagers and of the adolescents. The work programme at the secondary level should be related to the basic knowledge and learning acquired at the primary level and must at the same time be seen as a distinct effort to co-ordinate knowledge and experience. One of its main aims should be to liberalise and broaden the pupil's outlook on life and to create a co-operative attitude in matters of the country's progress and of national and social advancement. The environment in which the pupils lead their way of life, local economic activities and subjects providing means for future employment must be clearly reflected in syllabuses at this stage.

28.11. The curriculum at the secondary level should be so formulated and developed as to make teachers at this level aware of the real needs of our country and society and of the inclinations and interests of the adolescent pupils. There is some controversy about the level up to which all the pupils must read the same subjects. The scope of knowledge is broadening as a result of scientific discoveries to meet the needs of man's daily life. Many, therefore, are of the view that a 12 year education system is a must for acquiring the minimum required knowledge. Therefore, general education for all pupils should extend to 12 years (that is up to the 17th year of the pupil's age) and the same subjects should be taught and the same methods followed. Besides, they advance the argument that if the course of education is changed and efforts made to create specialists at this stage, the whole thing will not be durable either from the educational or the psychological point of view. Those who hold a contrary opinion say that special interests are created at the stage of adolescence and therefore there should be adequate provision for their proper development. Moreover, the financial resources of the parents and of the government are

such that it is not feasible to educate a pupil up to his 17th year as part of a 12 year education system. Therefore, those terminating their education at this stage must be trained to earn a living.

28.12. There has been some unanimity of opinion among the educationists that the opportunity to change the course of education must be given at the end of eight or ten years of education and not twelve years. We accept this view and recommend that the curriculum at the secondary level be based on two basic concepts. First, adequate knowledge must be provided to every pupil so that he can cope with the requirements of a fast-changing society and be reasonably happy. There should be some subjects compulsory for every pupil. Secondly, optional subjects and facilities for training should be so arranged as to enable the pupil to prepare through them for his particular means of livelihood.

28.13. For this purpose, we propose two measures. If these measures are implemented many of the existing defects of our secondary schools will be remedied. We believe that the effect of accepting these two measures will be far-reaching. The first measure is: a reasonable number of our secondary schools should be converted into multilateral schools. These multilateral schools will of course provide facilities for the study of basic general subjects but, more importantly, they must offer a group of optional subjects, specially relating to vocational and industrial matters of practical application, so that the pupils after successfully completing the class VIII course are able to choose certain subjects according to their inclinations and their particular ambition and with greater relevance to social and national needs. The duration of this course shall be from two years (class IX and class X) to three years (classes IX, X and XI). One particular aim of this course should be to produce competent and dutiful workers. To realise this objective and to train the majority of pupils completing the courses from class IX to class XI for vocational careers we have made recommendations for the introduction of vocational education at all appropriate levels. The pupils following the vocational course shall be required to read compulsorily three or four fixed subjects in classes IX and X, such as Bengali, English, Mathematics and General Science. Besides, they will select five or six vocational papers in accordance with their inclinations and abilities. The list of the courses for vocational education will be found in the chapter on secondary education. These vocational courses which will be completed in two academic years (class IX and X) must be followed by a public examination at the end of class X for the purpose of evaluation and the body conducting this examination shall give certificates to the successful candidates. The vocational courses which will be completed in three years should be followed by a one year training programme in vocational subjects of the pupil's own choice. A public examination should be held at the end of class XI and the body conducting this examination shall give certificates to the successful candidates.

28.14. At present the number of pupils in classes IX and X of general secondary schools is disproportionately high. For, the pupils at this stage are not considered suitable for any employment and arrangement for a suitable alternative system of education does not exist. If our recommendation is accepted, the pupils completing the class VIII course will have effective practical skills. It is natural for such pupils to be attracted to an alternative course of education where they will get the opportunity to have on-the-spot training in mills and factories. We have recommended the introduction of the vocational course in secondary schools to enable the pupils following this course to directly

enter into vocational careers or participate in a suitable training course. Special care should be taken while selecting pupils with pronounced inclinations and eagerness for vocational courses. At present, we have some vocational training centres, but they are hardly effective for lack of a suitable teaching programme. We, therefore, emphasise again the need for the introduction of a vocational course in our secondary schools.

28.15. Our second proposal is that all secondary schools (all secondary schools where vocational courses will be introduced as described in the previous chapter must also provide for the general course as a preparatory measures for education at the higher level. These secondary schools will ordinarily teach up to class X. But, in certain cases, they can have classes XI and XII attached to them. All pupils at this level shall read compulsorily five or six subjects in classes IX and X, such as, English, Mathematics, General Science, Physics, Chemistry, History and Geography. Besides, every pupil must select two or three subjects from among the fixed optional subjects. Moreover, he will be required to read one vocational paper. The list of the fixed optional subjects is given in the chapter on secondary education. At the end of class X there should be a public examination and the body conducting this examination shall give certificates to the successful candidates. After completing the class X course and before entering class XI, every pupil must decide to follow one particular general course according to his future educational plans. The pupils at this level must read Bengali and English compulsorily and they can select four subjects from among the fixed optional subjects. The list of these subjects is also given in the chapter on secondary education. There should be public examinations at the end of class XI and of class XII and the body conducting these examinations shall give certificates to the successful candidates. A detailed discussion on examination and evaluation methods can be found in the relevant chapter.

28.16. The subjects taught at the secondary stage of education are all given equal importance and an equal number of periods is allotted for them. As a result, the pupils find this arrangement a burden although the number of subjects taught may not be large. In the developed countries all subjects are not given equal importance and subjects of varying importance are introduced and completed according to a phased programme. The introduction of certain subjects does not mean that these should be taught throughout the secondary stage and given the same importance as the other more important subjects. The main objective of secondary education is to provide the basic knowledge which an educated citizen requires.

28.17. If the more important subjects are given more attention and these are introduced and completed according to a phased programme and the number of periods adjusted accordingly and if at a certain levels some subjects are taught together, this will enable a pupil we believe, to acquire basic knowledge in the required number of subjects—which a citizen of a modern society needs.

The responsibility of those framing the curriculum:

28.18. Those framing the curriculum must ensure that the subject specialists do not impose an unnecessary burden on pupils at any stage and that the tendency to make the curriculum stiff is avoided. The syllabus at different levels should be so formulated as to ensure a connecting link between the preceding stage and the stage following. Every subject must be given their due importance and a comprehensive and suitably-structured curriculum should be framed for the entire education system and its separate parts.

28.19. The education system relating to science, mathematics and applied industrial arts should be strengthened in line with the general tendency throughout the world. Science and Mathematics should be given due weight in the curriculum at the secondary level as the knowledge of these two subjects is vital for acquiring the scientific and technological skills necessary for a country's continued progress. Of course a balance must be maintained between the teaching of science and mathematics and that of humanities. Nevertheless, these two subjects must always be given special weight. Mathematics should be divided into two groups in classes IX and X general mathematics which should be compulsory for all pupils and advanced mathematics to be read by those keen on acquiring special knowledge in science, likewise, science should be divided into two groups in classes IX and X General Science, compulsory for all pupils and advanced Science for pupils following the science course at the higher level.

28.20. Practical arts and crafts should be taught in relation to our environment and in the context of developing skills in manual-work. For the majority of our pupils this should mean awakening of knowledge about agriculture. By practical crafts we mean competence in manual-work and in operating machines. Typing, stenography, accounting, home economics and general nursing are all included in this. For the proper teaching of these subjects a special class-room should be provided in our secondary schools and priority given to the training of suitably qualified teachers. Provision should be made for teaching wood work, cane and bamboo work, leather work, metal work, electrical work, machine work, etc., through operation of small hand-driven machines wherever necessary. Similarly, facilities should be provided in girls schools for dancing and acting, vocal and instrumental music, needle work and embroidery weaving, soap-making and other types of manual work suitable for girl students. Besides, the following vocational courses may also be included in our secondary schools, teacher-training, library assistantship, book-binding, draughtsmanship, drawing, graphic arts, plastic arts, motor-car repair, radio-repair, watch-repair, house-building, commercial methods and salesmanship, catering and hotel management, pisciculture, clay modelling, printing, poultry farming and animal husbandry, etc.

28.21. These courses must be related as far as possible to the vocational and professional courses following on them. These courses must be so inter-related as to enable a pupil completing one of these courses to get higher education up to the university level independently according to need. For this purpose, we have recommended the inclusion of basic general subjects in the course of our secondary schools. For the realisation of the above aim, a careful selection of the subjects to be read and their co-ordination are necessary.

28.22. Each group at the stage of class XI and class XII should be so constituted that all groups are able to reach their goals without much difficulty. For example, those pupils who want to go in for engineering education should do a course in drawing in addition to physics, mathematics, and chemistry. There should be provision at this stage for vocational and technical courses including agriculture, commerce and home economics. This will provide preliminary training to the pupils and free the professional institutes from the botheration of providing elementary knowledge in vocational and technical subjects.

28.23. Our pupils must of course be able to attain a reasonably high standard of proficiency in Bengali. Their proficiency in Bengali will help them considerably in their future educational courses and in achieving success in the

profession they choose. The present method of teaching Bengali has to be considerably improved. The time spent in this at present is not adequate. Our pupils cannot acquire greater proficiency in Bengali if more time is not given to its teaching and improved teaching methods employed. Although Bengali will be the medium of instruction at all levels, a good knowledge of English is a must for successfully following many courses at the university level. Those who intend to prosecute higher studies in science and technology must have a reasonable familiarity with English. English has to be learnt as a living language and not so much for its literature. The role of languages in individual and social development is of considerable importance and therefore adequate time should be given to language courses in this perspective and in accordance with individual and social needs. The greatest importance should of course be given to the Bengali language but the English language should by no means be neglected. European languages and the modern languages of Asia and the Middle East may also be taught according to need.

Curriculum and Syllabus Committee:

28.24. It is not possible to frame a curriculum valid for all times. The curriculum has to be adjusted with growing individual and social demands and in relation to the broadening of knowledge. This is specially applicable in our country for the next ten years. Our existing curriculum must be improved to translate the recommendations made in this report into reality. We, therefore, recommend that a curriculum and syllabus committee should be set up immediately with the express purpose of modifying and improving the existing curriculum in the light of our recommendations.

Curriculum regarding science education and general higher education:

28.25. Our views on the curriculum relating to general higher education, science education, commerce education, medical education, agricultural education, technical and technological education, teacher-training, vocational and technical education, will be found in the relevant chapters.

Bureau of Curriculum Development and the Department of Curriculum at our Universities and Education Boards:

28.26. Our Education Boards and Universities should each have a department of curriculum to conduct regular investigation and research in regard to all educational matters. This department should have freedom to consult specialists in different fields of education. The proposed departments of curriculum must all be manned by experienced and able educationists so that the work of framing the curriculum and syllabuses can be accomplished successfully and without hindrance.

28.27. It is necessary to set up a Bureau of Curriculum Development to improve the curriculum and syllabuses at different levels. The aim of this Bureau shall be to carry on experiments as to how the curriculum and syllabuses at different levels can be improved and to advise educational institutes and educational authorities in this regard, and not directly to frame the curriculum or syllabuses. We have also recommended the setting up of a Central Curriculum and Syllabus Committee to frame the curriculum and syllabuses at different levels in accordance with the requirements of a newly independent country and in conformity with the basic principles and structure as described in this report. After this, the yearly modification of the curriculum and syllabuses shall be the responsibility of the educational authorities or institutes concerned.

Textbooks :

28.28. Text books are used as the chief implement for education throughout the world. Text books have a special importance in a country in which the ratio of trained teachers and pupils is unsatisfactory and where supplementary or reference books are not easily available. Both these conditions are present in our country. We must, therefore, carefully devise a system of making the required number of text books available to our pupils at a reasonable price.

28.29. There are certain things intimately connected with the nature and aim of preparing text books. The contents of the syllabus are so incorporated in successful text books as to make them easily intelligible to the pupils. The teaching in educational institutes should not be confined to text books but they are nevertheless a constant source of acquiring greater knowledge.

Writing text books :

28.30. The skills and talent required for writing text books of a high quality cannot usually be found in one single person. The general practice, therefore, is that a body of experts is entrusted with the job of preparing a text book. An experienced and competent teacher at the level for which the text book is prepared should be among the experts. He will give his views, depending on his knowledge and in relation to the problems arising out of actual teaching, on how the different elements can be effectively collected and synthesised. The second expert—a specialist in the subject concerned should determine the importance and appropriateness of the elements collected. The actual job of writing the text book should be given to the expert wielding a facile pen. Moreover, there should be an artist among the experts able to illustrate the contents and to draw pictures and maps in a way as to at once attract the attention of the pupils. The whole body of experts must co-ordinate their activities and produce a text book capable of arousing the interest and enthusiasm of the pupils.

28.31. It is an easy matter to effectively project the contents of a text book before pupils of different ages and different capacities and for this purpose the body of experts should be familiar with the thinking of text book authors and with the methods of writing text books in advanced countries. For the full realisation of their aim, the body of experts should collect specimens of text books published at home and abroad, an abstract of research in the field of text-book composition, the opinions and views of teachers on educational matters published in periodicals, the results of research in relation to various methods of acquiring knowledge and a brief but correct summary of the topics taught in the educational institutions.

28.32. The main thing to be done in this connection is; the experts interested in writing text books should be assembled together and they should be given all possible facilities for writing a dependable text book suitable for teaching and that text books should be selected strictly on the basis of merit and the selected text books edited in such a manner as to feed suitable material to the pupils for acquiring progressive and co-ordinated knowledge.

Writing of text books and their publication :

28.33. The next thing to be considered is how the authorities concerned can ensure the supply of quality text books with attractive designs at a cheap rate throughout the year. This problem has been a source of anxiety to our educational authorities for a long time.

28.34. The Bangladesh School Text Book Board follows two separate methods in the matter of writing of text books for classes I to X. The first method is that the Board entrusts the job of writing most of the text books to the experts. Of course, in most cases, a board of editors is appointed for this purpose working under the supervision of the Text Book Board. Moreover, the Board takes the opinion of other experts about the quality of the text book prepared. And the work of writing the text book is completed on the basis of the criticism and suggestions offered by the experts. The second method relates to the invitations issued by the Text Book Board, in some cases, to writers and publishers to submit their books for consideration. These books are also sent to experts for their views and criticism. And the books are selected on the basis of their opinions and views. In this connection it must be mentioned that only one text book is selected for each of the subjects included in the syllabus.

28.35. The system of selecting only one text book for a particular subject uniformly for all schools is educationally unsound. It is also true that in our country many of the text books are of an inferior quality. There is also a great shortage of help and reference books for teachers and pupils. As a result, memorising of contents in a mechanical way is encouraged instead of understanding and creativity.

28.36. The manuscript of a text book should be made ready at least two years before the academic year for which it is meant. The text book prepared for a particular class must be distributed to the teachers and pupils of that class to ascertain their views and reaction. The views of the educationists and the writers of the country must also be invited in this connection. If thereafter the book is published in its final form incorporating the necessary corrections and additions, it is likely to be generally free from defects.

28.37. There should be provision for more than one text book in each subject apart from the purely literary text books. The Bangladesh School Text Book Board can get a text book prepared in each subject according to the method indicated above and then publish it. In addition, they should invite authors and publishers to submit manuscripts of books for the purpose of selecting more than one text book in each subject from among them. These books should be reviewed by the experts concerned and a few text books selected for each subject in all classes on the basis of their recommendation. The books thus selected should be published by their authors or publishers as books approved by the Text Book Board. The list of these approved books must be sent to schools simultaneously with the list of books published by the Board. The general principle in this matter should be that the authors and the publishers can openly compete in the matter of preparing and publishing text books and that complete freedom obtains regarding which books are actually selected.

28.38. The Board should have both the publication and proprietary rights for the books prepared and published by them. The Board should offer a fair remuneration for attracting competent persons to write and edit text books. The Board should give the responsibility of printing and publishing text books to dependable publishers after laying down conditions for printing and fixing the price. As the main consideration regarding text books is their quality and price, the job of printing and publishing text books should be given to only those publishers or publishing agencies which have suitable printing presses, able compositors and a reliable distribution system. The Board itself can take the responsibility of printing, publishing and distributing text books according to

Technical terminology, its preparation :

28.48. One chief obstacle in the way of preparing text books in Bengali for higher education in the lack of technical terminology in the language. We have no equivalents in our language for many scientific and technical terms. We are of the opinion that the effort to translate scientific and technical terms or signs and symbols will be wasted and will actually retard our intellectual progress and the expansion of our knowledge. If the translation is undertaken many new words have to be invented for which there will be hardly any utility in the scientific world. So we think the best course would be the adoption of technical and scientific terms and signs and symbols as used in English. The language used in science is universal and not the exclusive property of any nation. Behind to day's spectacular scientific progress lies the combined effort of different nations. We will not be able to take any active part in international co-operation if we do not adopt the common language of science. The adoption of scientific terms universally used will, on the other hands, help us to achieve a synthesis in all our research work. Gradually these terms will be absorbed in our language and no one will be aware of them as a foreign element. Many such foreign words have become assimilated in Bengali.

28.49. We believe there is need for a special effort in formulating our technical terminology. A committee under the supervision of the Bengali Academy should be set up with scientists, linguists writers, historians, technicians, social and political thinkers and other experts to give advice and guidance regarding the different aspects of preparing a suitable technical terminology. We attach great importance to the setting up of this committee and believe they will be able to render considerable help in the matter indicated above and preparing scientific books in Bengali.

The matter is of extreme urgency. Only scientists and experts can accomplish this task successfully with the help of their experience and knowledge. The Bengali Academy had accepted the responsibility for formulating and publishing a technical terminology suitable for us. It is needless to mention that they will require a large number of experts and a good deal of money for discharging this responsibility to the satisfaction of all concerned.

CURRICULUM AND TEXT BOOKS

SUMMARY

Curriculum and Syllabus:

1. In our country the Education Directorate determines the curriculum and syllabus from class I to class VIII, the Boards of Intermediate and Secondary Education determine the curriculum and syllabus from class IX to class XII and those in the field of higher education are determined by the different universities and the educational institutions concerned. The text books from class I to class VIII are prepared and distributed by Bangladesh School Text Book Board, (28.1.)

2. Our country seems to be outside the scope of the great transformation that is taking place in the field of education in the developed and progressive countries of the world through extensive experiments in the matter of curriculum and syllabus and dramatic enrichment in human knowledge. The curriculum and syllabuses prepared several decades ago are, with slight modification, still prevalent in our schools and colleges. This sort of conservative, traditional, conventional and low-quality material cannot be of any help in devising an education system of a quality appropriate to a progressive country. (28.2.)

3. At present the total number of pupils in our schools is over eight million. This number will be increased, as a result of the fast expansion of education, to ten million in the next few years. If we intend to build up this very large number of pupils as good and responsible citizens we must give special attention to improving the quality of the curriculum and syllabuses, and of text books and other educational implements. (28.3.)

4. A suitable curriculum has to be devised for primary education after a careful analysis of its objectives. The curriculum for primary education has to be reconstructed in accordance with the actual environment of daily life, the requirements of society and the physical and mental capacities of the pupils. The four fundamental state principles (nationalism, socialism, democracy and secularism) must be reflected in the curriculum. The teaching methods should be work-oriented and manual work must be made compulsory. (28.5.—28.7.)

5. The pupils should learn only one language (Bengali) up to class V. From class VI to class XII, however, they will be required to learn a second language. For historical reasons and for considerations of actuality, English will achieve pre-eminence as a second language. Those who will not read English as a second language will read it as an additional subject at this stage. (28.8.)

6. Our rural environment and agricultural base and our effort at industrialisation should be borne in mind while determining the curriculum and provision made for the use of environmental material to make teaching at this level interesting to the pupil. (28.9.)

7. The work-programme at the secondary stage should be related to the basic knowledge and learning acquired at the primary level and must at the same time be seen as a distinct effort to co-ordinate knowledge and experience. One of its main aims should be to liberalise and broaden the pupil's outlook on life and to create a co-operative attitude in matters of the country's progress and of national and social development. The environment in which

necessity to ensure the quality of paper, printing and illustration and to maintain low price. In regard to the approved books, too, the Board must lay down conditions for printing, paper, price and distribution in such a manner that high quality text books are available to the pupils at a reasonable price throughout the year.

28.39. The Text Book Board must publish, in addition to the text books, reference books and research studies regarding curriculum, study-schemes and the problems arising out of preparing text books. The publication of guide books, of books designed to help the teachers and of supplementary books should also be among the Board's responsibilities.

28.40. We consider it necessary for the Board to set up a library of text books to help persons engaged in writing and publishing them. This library should contain and appropriate number of sample text books from different countries. Translated text books, journals and periodicals containing articles connected with text books and dictionaries relating to matters included in the curriculum should also be available in this library.

The composition of the School Text Book Board :

28.41. The Bangladesh School Text Book Board must be a representative body. But it must not be unwieldy to the point of being inefficient. It must continue to be an autonomous body. In such matters as preparation of text books and select on of authors the Board must function through an Executive Committee comprising representatives from the appropriate educational bodies or authorities. The Board should set up different committees consisting of experts and representatives from educational institutions to help and advise them in the matter of preparing and publishing text books for different levels.

28.42. We believe that the aim of supplying quality text books to the pupils at a reasonable price will be realised if the above method is followed. Our proposals will encourage the writers of text books and their publishers to devote themselves to their respective work with greater zeal. The scheme laid down by us will, we believe, help the teachers, the pupils and the public equally.

28.43. In this connection it must be mentioned that the work of reconstructing the curriculum and syllabuses and the teaching and examination methods should go on in full swing, in addition to teacher-training, to remove the pupil's total dependence on text books. As teaching methods improve, the dependence on text books will proportionately decrease. Although the text books will continue to occupy their previous position in educational institutions we are hopeful that the library and other facilities offered by them will be duly used by the pupils.

28.44. Our educational standards are suffering an irreparable damage because of wide and indiscriminate use of digests and note books which are often of a poor quality. The printing, publishing and distribution of such books should be made a penal offence. In addition, the organisations found to be implicated in the above work must be forthwith disqualified from the printing and distribution of text books by government, the appropriate educational authorities and the Text Book Board. It must be pointed out here that the text books themselves should contain meanings of the more difficult words, appropriate explanations and model answers to discourage the tendency to turn to note books on the part of the pupils. In this matter, the responsibility of class teachers is very great indeed.

28.45. Our educational institutions should each set up a library of text books. Text books can be loaned to pupils for a fixed period or for the entire academic year from this library. The binding of the text books loaned to the pupils must be strong and each text book lent must have a hard paper-cover so that it can be used by the pupil for three to four years, if necessary. Money for this purpose can be collected as text-book fee from the pupil with his monthly tuition-fee. The text book fee can be determined on the basis of the average value of the text books loaned or a deposit may be taken for the whole value of the book and the deposit subtracted in accordance with the actual damage to the text book, if any, while it is returned. In either case, the pupil must make good the loss of, or damage to, the book, if any. If the text books loaned are used with care, their prices can be shared by their users in proportion to the number of pupils who had already used them and those reasonably expected to use them in future. This will at once provide text books to a pupil as needed by him and lighten the financial burden on his guardian.

Text Books for Higher Education

28.46. We do not recommend the setting up of a separate publishing agency for the preparation and printing of prescribed text books and books recommended for reading at the college or university level. The Bengali Academy has been entrusted with the responsibility of printing and publishing text books for the above level and they have already begun this work. The job of preparing and publishing text books in Bengali for higher education is indeed a complex one and expensive at the same time. A considerable amount of money is needed for an urgent undertaking like this. Text books are prescribed in only a few cases at the degree and post-graduate levels. At these levels generally, a number of books is recommended for reading in a particular paper. As the number of pupils at these stages is far less than that at the school level, there is not much scope there for corruption regarding text books but we are nevertheless inclined to point out the necessity to exercise the utmost care in the selection of these books and of making them available to the pupils at a low price.

28.47. We have recommended the use of Bengali as the medium of instruction at all levels for the full realisation of our educational goal. A well-planned overall effort must be made to prepare the required number of text books in Bengali in the field of higher education and to translate foreign text books into Bengali as required. In this matter, the Bengali Academy, the universities and the select colleges must play a forward role. Their work-programme must specially include the writing of text books in Bengali in the field of humanities and of social science, the preparation of scientific and technical books and dictionaries in Bengali and arranging publication of these books. Government must make appropriate grants of money to the Bengali Academy and to the universities and select colleges for the successful realisation of the above objective. The teachers concerned must also be granted leave and other necessary facilities to enable them to devote themselves whole heartedly to the job of preparing text books in Bengali for higher education. The persons able independently to do the above job and to translate foreign text books into Bengali should be provided the required facilities for undertaking it individually or collectively. For this purpose, government grants should be made, if needed. In the field of literature, original writing and adaptations should be given greater value than mere translation. This will encourage independent thinking and the free play of imagination. So far as translations are concerned, proper attention must be paid to the use of modern mechanism and contrivances.

the pupils live, their way of life, local economic activities and subjects. providing means for future employment must be clearly reflected in the syllabuses at this stage. The curriculum at the secondary level should be so formulated and developed as to make teachers at this level aware of the real needs of our country and our society and of the inclinations and interests of the adolescent pupils. (28.10.—28.11.)

8. The pupil must be given an opportunity to change his educational course at the end of class VIII. For this purpose, the educational course beginning at class IX must be divided into two main groups: vocational and general. A few subjects must be read compulsorily in each group. The pupils following the vocational course will compulsorily read three or four fixed subjects in classes IX and X—such as, Bengali, English, Mathematics and General Science. In addition, he must choose a particular vocational course and read five or six papers relating to that course. The pupils following the general course will compulsorily read five or six subjects. For example, the pupils belonging to the arts group shall read Bengali, English, Mathematics, General Science, History and Geography; those belonging to the commerce group shall read Bengali, English, Mathematics, General Science and Geography; those belonging to the science group shall read Bengali, English, Mathematics, Physics and Chemistry. In addition, each pupil must select two or three subjects from among the fixed optional subjects. Moreover, these pupils must also do one vocational paper. After completing the class ten course and before entering class XI the pupil must choose one particular general course according to his future educational plans. The pupils at this stage must compulsorily read Bengali and English and choose four subjects from among the fixed optional subjects. (28.12—28.17).

9. Those formulating the detailed curriculum must see to it that the subject specialists do not impose an unnecessary burden on the pupils and the tendency to make the curriculum stiff for the more developed stage is curbed. (28.18.)

10. Science and Mathematics should be given due weight in the curriculum at the secondary stage. Of course a balance must be maintained between the teaching of science and mathematics and that of humanities and social science and other subjects included in the curriculum. (28.19.)

11. For the proper teaching of arts and crafts, a special class-room should be provided in our secondary schools and priority given to the training of suitably qualified teachers. (28.20.)

12. The vocational courses must be so inter-related as to enable pupil completing one of these courses to get higher education up to the university level independently according to need. (28.21.)

13. Each group at the stage of class XI and class XII should be so constituted that all groups are able to reach their goals without much difficulty. For example, those pupils who want to go in for engineering education should do a course in drawing in addition to physics, mathematics and chemistry. There should be provision at this stage for vocational and technical courses, including agriculture, commerce, and home economics. This will provide the preliminary vocational training to the Pupils. (28.22.)

14. The teaching standard in Bengali, the mother-tongue, should be higher. As a language, English, too, should receive greater attention. There should be provision for teaching of modern languages as optional subjects according to need. (28.23.)

15. (a) The setting up of a Central Curriculum and Syllabus Committee for framing the curriculum and syllabuses at different levels according to the principles and structure laid down in this report and keeping in view the requirements of a newly independent country is an urgent necessity.

(b) There should be a permanent department of curriculum in each of our Education Boards and Universities for conducting investigation and research regarding all educational matters.

(c) A 'National Curriculum Development Bureau' should be set up for the improvement of curriculum and syllabuses at different levels. The aim of this Bureau shall be to carry on experiments as to how the curriculum and syllabuses at different levels can be improved and to advise educational institutions and educational authorities in this regard, and not directly to frame the curriculum or syllabuses. (28.24.—28.27.)

Text Books :

16. Text books are used as the chief implement for education throughout the world. Text books have a special importance in a country in which the ratio of trained teachers and pupils is unsatisfactory and where supplementary or reference books are not easily available. Both these conditions are present in our country. We must, therefore, carefully devise a system of making the required number of text books available to our pupils at a reasonable price. (28.28.)

17. A combined effort on the part of teachers, specialists, writers and artists is necessary for the production of successful text books. They must all be familiar with the principles and technical skills lying behind the production of text books in foreign countries. They must be given all necessary facilities for this purpose. (28.30.—28.32.)

18. The present principle of selecting only one text book in a particular subject, apart from literary text books, is educationally unsound. The manuscript of a text book should be prepared two years before the academic year for which it is meant so that it can be circulated to specialists and its defects removed in time. The Text Book Board can prepare only one text book per subject but they should, in addition, ask writers and publishers to submit books for consideration and select a few from among them as books approved by the Board. The arrangement for the publication of text books should be such that these are made available to the pupils at a low price. (28.34.—28.38.)

19. The Text Book Board should publish reference books and research studies, in addition to text books, relating to the curriculum, schemes of studies and the problems arising out of the actual writing of text books. The publication of guide books and help books for teachers and of additional educational materials in reference to the text books actually used in schools should also be counted among the responsibilities of the Board. (28.39.)

20. The educational authorities concerned should set up a library of text books for use by persons interested, or actually engaged, in writing and publishing text books. (28.40.)

21. The Bangladesh School Text Book Board should be a representative body. The Board should continue to operate as an autonomous unit. The Board should function in such matters as the writing of text books and the selection of authors through duly constituted executive committees comprising representatives from the relevant educational authorities. The Board should set up different committees consisting of subject-specialists and representatives from the concerned educational organisations for rendering help and advice in the matter of writing and publishing text books for various levels. (28.41.)

22. The printing, publication and sale of 'Key' and 'Note' books should be made a penal offence and those found guilty of this offence should be debarred from publishing or distributing text books. (28.44.)

23. A library of text books should be set up in schools. An appropriate number of text books should be collected for this library for long-term loan of text books. A text book fee should be charged for this purpose from the pupils actually using this facility. (28.45.)

24. The educational authorities and the college and university authorities should exercise the utmost caution in the matter of selecting books at the degree and post-graduate levels and take necessary measures for the supply of these books to the pupils at a low price. (28.46.)

25. A well-considered all out efforts must be made in all sincerity to written text books in Bengali for the higher level and to translate suitable foreign text books into Bengali. The Bengali Academy, the Universities and the select colleges should all play a forward role in this matter. Persons or bodies engaged in original writing or translation work in this field should be given all necessary encouragement and monetary help. (28.47.)

26. While translating suitable foreign books, scientific and technical terms and symbols and signs must be incorporated in Bengali exactly as they are, as the effort to translate them will result in confusion and be opposed to our true educational interests. (28.48.)

27. A special initiative is required for formulating a suitable technical terminology. To strengthen the effort to realise the above aim, a committee comprising scientists, technicians, linguists, litterateurs, historians, political and social thinkers and other specialists should be immediately set up under the supervision of the Bengali Academy. An appropriate allotment of money is required for the purpose. (28.49.)

CHAPTER XXIX

Educational Buildings and Educational Implements

29.1. Arrangement must be made for construction of more school buildings in the next ten years as the number of pupils of school-going age is likely to increase appreciably with our growing population in the next ten years. Similarly, more school buildings and hostels will be required at the secondary level. New school buildings have also to be constructed in the fields of technical and vocational education. It must be mentioned in this connection that the campus at our universities is now either under construction or under development.

29.2. Many of our schools buildings are not adequate to the actual needs. Some have the additional disadvantage of defective construction. Some are so old that their maintenance is a difficult job. In a few cases, an unnecessarily large amount of money has been spent on the construction of the school building. Our recommendation in this perspective is that special care should be taken that the most productive use is made of the money actually spent on constructing a school building. Full use, again, should be made of all kinds of modern technical facilities to provide greater accommodation for pupils in the school building. The new school buildings required to be constructed must be utilitarian and local materials should be used as far as possible in their construction. It must be ensured that the new school buildings are constructed at the lowest possible cost and that full economy is observed in their maintenance.

29.3. There is need for the relevant authorities to collect data as to how the class room and laboratory facilities in our schools are actually used. A scheme regarding the proper use of time and accommodation and the extension of facilities if needed can be formulated on the basis of the data collected. A time-table for every class and for the laboratory can also be made on the above basis. It is possible to provide accommodation for a larger number of pupils with slight modification of the time table and introduction of some new classes at the institutions where the collection of data takes place. For this purpose, a teacher or an employee at each educational institution should be exclusively put in charge of finding out how best its class room and laboratory facilities can be used and of making suitable adjustments in the time-table on the basis of his findings. At the university level, a committee of deans and departmental heads should formulate the time-table and determine the use of class rooms, of lecture halls and of tutorial rooms in accordance with it. They must ensure that artificial difficulties are not created in the common use of facilities available. For example, there is no valid academic reason why the class room facilities of the departments of Bengali and English should not be allowed to be used by other departments if needed by them.

29.4. The design and construction of school buildings are both of crucial importance. The responsibility of constructing school buildings is usually given to general contractors and the result is often not satisfactory. The following provisions should be made while constructing school buildings: the size and length of a class-room should be determined in accordance with the pupil's normal power of vision and of hearing and the windows should be so placed

as to let in the maximum amount of sun light the structural design of the class-room and the items of furniture should both be made keeping in view the safety of the pupils and their hearing convenience; the colour scheme should be in harmony with natural light so that it creates no adverse effect on the pupil's vision. Those who construct school buildings in our country must take particular note of the structural and related deficiencies so commonly seen in the past. We must use indigenous materials and conduct research about the construction of school buildings and the making of furniture, if we intend to make school buildings at a low cost. If the durable materials available in our country are widely used we can achieve the necessary expansion of the scheme relating to the construction of school buildings. The teachers have a responsibility regarding the construction of suitable school buildings. They can help the architect in this matter. A course for this purpose should be introduced in the teacher-training colleges.

29.5. The government departments which are entrusted with the responsibility of constructing houses should appoint architects and engineers experienced in constructing school buildings and give them complete charge of implementing the scheme relating to the constructing of school buildings, if this scheme is to work satisfactorily and the defects in the construction of school buildings are to be removed. It is also necessary to determine a fixed standard in the matter of constructing school buildings in keeping with the furniture and other facilities required for them. There is urgent necessity for research in our technical institutes, in the house building research cell and in college laboratories and in similar organisations about the problems relating to construction of school buildings and their maintenance and about improving the quality of local materials used in house-construction.

29.6. Our educational implements, like school buildings, are often found inadequate to the actual needs. In some cases, again, an unnecessarily large amount of money has been spent and in other cases expensive appliances have been purchased without any planning. Many instruments and apparatuses are now lying unused in different school and college laboratories. This is so because either it is not found possible to use them or they need to be repaired and there is a dearth of suitable technicians. Effective measures must be taken for the immediate use and proper maintenance and for necessary repair of the instrument lying unused.

29.7. The recommendations we have made about the expansion of education are largely applicable to scientific, medical, technical and vocational education. Scientific instruments are required in each of these fields. The demand for these instruments will increase in the fields of scientific and vocational education as soon as our recommendations regarding them are implemented. If we continually buy these instruments from abroad, there would be a great pressure on our limited foreign exchange. So the best way would be to manufacture these instruments locally. If this is done the total expenditure relating to our overall scheme will be reduced, there will be no unnecessary pressure on our foreign exchange and our recommendations will be more quickly implemented.

29.8. We believe that the university grants commission or inter-university board will feel the need of setting up a committee to investigate how these instruments are being used and to ensure that these are properly utilised in future and to meet the requirements of the universities in this regard. Government should set up a similar committee for schools and colleges. If it is

found necessary to buy new instruments and appliances for schools and colleges and to apply for foreign exchange for this purpose, the concerned heads of the education department should take necessary measures on the basis of the report of the above committee. The universities should have a few technicians trained in the maintenance and repair of scientific instruments and appliances. The universities must provide employment to the technicians so trained. There is also need for a 'centre for repairing scientific instruments' under the education department to meet the requirements of secondary schools and colleges in this respect.

29.9. The possibility of using films and slides instead of expensive instruments for demonstrating scientific and technical methods should also be considered. Where suitable appliances for teaching through demonstration are not available and where the use of such appliances for work of a minor nature proves to be expensive, the above method can be tried. If a suitable scheme is formulated and able management provided, the same films and slides can be used in different educational institutions in one year and still preserved for use in the next. Those institutions which have film projectors and slides instruments can use them and meet the requirements of many teachers and many departments throughout the year.

29.10. It is not possible to provide teaching of a high standard in schools and colleges without good black boards, maps and charts. Government patronage and encouragement are necessary for the large scale production of these educational implements. We have now only two institutes for the above purpose: Audio-Visual Education Centre and Equipment Development Bureau. But as their resources are very limited they cannot meet even the minimum requirement of educational implements. We, therefore, recommend that these two institutions should be immediately coalesced and located in such a place where it is possible to produce different educational implements under the supervision of experts.

29.11. Long-term and short term schemes should be made for meeting the need of different educational implements for scientific, technical and vocational education. Provision should be made as soon as possible for the local production of common instruments under the short-term scheme. This objectives can be realised through private enterprise but government should be ready to help private organisations in the matter of collecting production instruments and necessary fixtures.

29.12. Government must provide training facilities for the technicians required for the making or repair of these instruments. If such skilled technicians are produced according to need, they should be able to make complicated instruments within the next ten years.

29.13. There should be mutual co-operation between the curriculum and syllabus committees and the organisations making these instruments so that the instruments produced are suited to the particular curriculum or the making of instruments according to the curriculum is made possible.

29.14. Government must take immediate measures for the local production, and where necessary the import, of new instruments required for agricultural, technical and medical education. The existing arrangement for locally producing pumps, spares, small diesel engines and electrical motors should be expanded. Arrangement should be made for the local production of lathe machine, drilling

machines, grinding machines, shapping machines, milling machines, welding machines, etc. Microscopes, stethescopes, thermometers, syringes, and surgical instruments should all be locally produced. The instruments mentioned above and other related implements are urgently necessary for effective agricultural, medical and science education.

EDUCATIONAL BUILDINGS AND EDUCATIONAL IMPLEMENTS

SUMMARY

1. More school buildings and hostels have to be constructed in proportion to the increase in the number of pupils. Special care has to be taken that the most effective use is made of the money spent on the construction of these buildings. Full use must be made of all kinds of modern technical facilities to provide greater accommodation for pupils in each new school building. The new school buildings should be of a utilitarian nature. Local materials must be used as far as possible in the work of construction and steps taken to observe full economy in the maintenance of the school buildings. (29.1.—29.2.)

2. The best possible use must be made of the class-room, laboratory and other facilities available in every educational institution. There is also need for collection of data by the appropriate authorities about the actual use made of these facilities. A scheme relating to the judicious use of time and accommodation and for the required expansion of other facilities should be made on the basis of the data collected. (29.3.)

3. Research should be conducted about devising ways of constructing houses cheaply. The teachers themselves must have some knowledge of the technical skill involved in the construction of school buildings. They can help the architect in this matter, and there should be a separate course for this purpose in the teacher-training colleges. (29.4.)

4. The government departments which are entrusted with the responsibility of constructing houses should appoint architects and engineers experienced in constructing school buildings and give them complete charge of implementing the scheme relating to the construction of school buildings, if this scheme is to work satisfactorily and the defects in the construction of school buildings are to be removed. (29.5.)

5. Educational implements in our educational institutions are quite inadequate to the actual needs. In many cases expensive instruments are bought without any planning. Many instruments are lying neglected in the laboratories of different educational institutes. Effective steps must be taken for the immediate use of these instruments for their maintenance and for their repair. The instruments most widely in demand should be manufactured locally. (29.6.—29.7.)

6. We believe that the university grants commission or inter-university board will feel the need for setting up a committee to investigate how these instruments are being used and to ensure that these are properly utilised in future and to meet the requirements of the universities in this regard. Government should set up a similar committee for schools and colleges. (29.8.)

7. For the large-scale production of good black boards, maps and charts government patronage and encouragements are necessary. The Audio-Visual Education Centre and the Equipment Development Bureau should be coalesced and extended and improved. (29.10.)

8. Short-term and long-term schemes should be made to meet the need of various kinds of instruments. Government must make provision for the training of skilled technicians required for the making and repair of such instruments. (29.11.—29.12.)

CHAPTER XXX

LIBRARIES

Libraries in Educational Institutes;

30.1. The library is like the heart of an educational institution. In reports submitted by previous Education Commissions, this truth was acknowledged and many weighty recommendations were made for the development of libraries at different levels of education. But as they did not determine any fixed standard, their recommendations were of no practical value. In our educational development schemes our libraries have been generally neglected and given only a tiny proportion of the total amount of money allocated for the former. In many cases no provision was made for the construction or expansion of the library building and where there was such provision it was altogether meagre with the result that libraries all over Bangladesh acutely face the accommodation problem. Besides, the money allotted for books and journals, the number of library assistants and their degree of ability and the items of furniture are all so insufficient that libraries do not virtually exist in our schools and colleges. In the few cases where libraries can be found in our schools and colleges, they function extremely inadequately. In other words, the heart of most of our educational institutes has become inactive. We are firmly of the opinion that the libraries in our educational institutions must be thoroughly reconstructed, and no patch-work will be effective here, if we want to make our education system a dynamic force.

30.2. We believe that conventional recommendations for the development of libraries will serve no purpose at all. Prompted by this belief, we have defined the standard and the scope for the development of our libraries so that the administrative authorities and the development workers concerned can proceed in their work with a clear concept and achieve a sort of balance between different school and college libraries.

30.3. The standard we have laid down cannot be lowered without injury to the whole scheme and is not unrealistic in the perspective of our present economic condition. But it will not be possible to raise all the school and college libraries to this level during one single five-year plan.

30.4. The standard fixed by us is lower than that obtaining in the more developed countries. This standard has to be gradually raised, considering the importance of libraries in the whole system of education. The standard has to be reassessed at least once in five years.

Primary School Libraries;

30.5. The responsibility for creating an attraction for books, for developing an attitude of respect regarding them, and for implanting seeds of the habit of reading in the minds of the pupils at the primary stage is at first that of the guardians and later of the school concerned. But this responsibility is not being properly discharged. The majority of our guardians is illiterate and there are no libraries in our primary schools; hence the responsibility mentioned above is not discharged either by the guardians or by the schools concerned. Even in the developed countries it has not been found possible

to provide a library for each primary school but arrangements are there for the supply of books to both teachers and pupils according to need. In our country no attempt has been made to include the supply of books to teachers and pupils in primary schools in any development scheme. As a result, the outlook of teachers does not get broadened, the teaching is wholly dependent on text books and the entire system of education gets extremely monotonous and uninteresting from the point of view of reading.

30.6. It is beyond our means at present to set up a library in each primary school. It does not seem likely that the above aim can be realised in the near future considering the present condition of the primary school buildings and their implements.

In this perspective our recommendations are as follows :

30.7. Arrangement should be made as far as possible for supply of books to primary school through our libraries. For this purpose, a library has to be set up at every thana headquarters. The supply of text books to primary schools shall be one of the responsibilities of these libraries.

30.8. One or more than one primary school at every union should be used as a camp for the distribution of books. Books from the thana library shall be sent to this camp and the teachers of the primary schools under the jurisdiction of the thana should collect books from this camp according to demand and return them there after use. The primary schools relatively close to the thana library can get the books directly from it.

30.9. A book-distribution committee consisting of at least five members with the thana education officer as president should supervise the above arrangement. The distribution of books can be made directly to schools from the thana library.

30.10. The national government must bear the expenses of setting up a library at each thana headquarters. The recurring expenditure must also be met by government. About fifty per cent of the expenditure involved in the purchase of books and their distribution to the primary schools must be defrayed jointly by the district educational authority and the local union council or the municipal body.

30.11. Our national objective should be the setting up of a library at each primary school. The responsibility for realising this objective shall rest with the district educational authority and a fixed portion of the income of this authority should be spent at the first stage for the primary school libraries. The allotment can be gradually raised at later stages. The district educational authority should have a 'library advisory committee' attached to it. The responsibility of this committee shall be to determine the standard of the primary school libraries under the authority and to advise the authority regarding their management and improvement. Besides, the district educational authority shall follow the advice and guidance of the national directorate of libraries in this matter.

30.12. The library at every thana headquarters must continue to supplement the needs of the libraries set up in primary schools. The libraries at the three levels of thana, subdivision and district should continue to discharge their responsibility of supplying books first to the primary schools at the thana

level and later to secondary schools, as the primary school and secondary school libraries find it impossible to collect newly published books quickly or to get a quantity of books proportionate to the need. On the other hand it becomes easier to make the teachers and pupils familiar with a larger number of books at a low cost if books can be had on loan from the regional public libraries. To union council, the municipal body and the district educational authority must each play an active role in the matter of establishing libraries on a firm basis at the three levels mentioned above. Government shall determine the scope of this role and give directives that it is adhered to according to the advice given by the directorate of libraries.

30.13. There should be provision for an open shelf of books for pupils at the primary level from class I to class V. The teachers of these classes should supply books to the pupils as needed by the latter.

30.14. More attractive books and periodicals for the children should be published at government initiative and distributed at a cheap rate. The publication cost of such books is considerable and the investment of capital has been meagre in this regard. For this reason children's books are hard to come by also very expensive. Government initiative in this matter is, therefore, clearly indicated. The setting up of a national organisation for the publication of children's books should be given serious consideration. The above aim can also be realised if the illustrators, printers and publishers are given due encouragement. Government should find means to see that the capital invested in the publication of children's books does not lie idle for a long time that is, they should buy a fixed number of copies of each such book and distribute them to libraries and primary schools.

Secondary School Libraries :

30.15. The libraries in secondary schools are for various reasons not functioning well. The library in such schools is often relegated to a corner where all the books cannot be accommodated, where there is no arrangement for ventilation and where a separate reading room does not exist. The library in most of the secondary schools is scattered hither and thither and most of the books are to be found in the headmaster's room or in the teacher's room, or in the almshouses under lock and key at different places of the school building. New books are quickly damaged as they are indiscriminately thrown among old, worm-eaten books in the secondary school libraries. The heavily damaged books cannot be separated for lack of accommodation or for lack of almshouses or of both. There are legal and procedural difficulties regarding writing off the damaged books and the whole thing also involves some labour. Occasionally insecticides are used in an unscientific manner. This causes more damage to the books and the insects also develop immunity for the wrong use of insecticides. The question of arranging library books properly or attractively does not, therefore, arise in such adverse circumstances. The sickly look of the scattered library provides no inspiration to teachers or pupils.

30.16. The responsibility for managing the library in the secondary schools is usually given to one teacher. He is of course freed from the work-load of two or three periods per week but most of this time is actually employed in taking classes of the absent teachers. There is no separate library period for the pupils.

30.17. A whole-time librarian completing a short-time library training course and having passed the H.S.C. examination was appointed in each of the 22 'Pilot' schools. Lots of books, including books from abroad, were given to these schools through the Education Extension Centre and their librarians were also taught the modern methods of arranging books. In the other secondary schools, however, the library suffers from lack of accommodation, an insufficient number of books, a negligible allotment, lack of periodicals and specially reference books and above all the non-availability of a whole-time librarian. The condition of secondary school libraries is on the whole very discouraging.

30.18. Those secondary schools which were brought under development received some grants for one-time purchase of books. The library did not receive a just proportion of the total amount allotted for the construction or development of the school building. The annual recurring grants for books have not at all kept pace with the increase in the number of pupils and teachers, with the increase in the number of optional subjects and with the increase in the price of books.

30.19. A handful of non-government secondary school teachers was trained in the certificate course of the library association. A few government secondary school teachers also underwent a short library training course at the Education Extension Centre, but their training has not been utilised.

30.20. We believe that no patch-work will be effective in the development of secondary school libraries. They have to be built up as entirely new libraries.

30.21. The pupils must be given freedom to browse among attractively arranged books in pleasing surroundings so that they can independently choose books according to their tastes and reading capacities. We are firmly convinced that the secondary school libraries have a special importance. We have already mentioned that the majority of the guardians is illiterate and that there are no libraries in primary schools and we see no possibility of such libraries in the near future. So for a long time the secondary school libraries must discharge the primary responsibility of making books attractive to the pupils and of developing among them an attitude of reverence to books and the reading habit. The inevitable result of the failure of the library system in secondary schools will be to endanger the proper functioning of libraries at the college and university levels. In fact, this is generally the case today. At present most of our pupils are indifferent to using library facilities and even many teachers and professors are not particularly enthusiastic about further reading. The lifeless state of most of the secondary school libraries is largely responsible for this harmful condition.

The secondary school libraries must therefore be given top priority.

30.22. The secondary school libraries must be thoroughly reconstructed and their deficiencies and wants removed. We therefore feel the need for determining their minimum quantitative standard and make the following recommendations :

- (a) *Size of libraries* : The size of secondary school libraries should be at least one thousand square feet. Preferably and according to need, a separate library building should be constructed. The following must be borne in mind while preparing the blue print :

The inevitable need for expansion in future.

The need for keeping most of the books in open shelves. The library floor must be damp and insects-proof. It must be protected against dust-storms, heavy downpours, excessive heat. The size and number and location of the various items of furniture should be determined before the construction of the library building starts.

- (b) *Library-furniture* : Modern, scientific and utilitarian items of furniture should be used.
- (c) More than one blue print for the library building should be prepared by the educational authority concerned and samples distributed beforehand to the relevant school authority. The size, shape and location of the items of furniture should be shown in the blue print.
- (d) *Allotment* : The annual allotment for books and journals should be on the basis of at least five taka for each pupil and teacher, and this will be nothing more than the rate of buying a moderately-priced book per head. This amount will include the expenditure relating to repair and binding of books and miscellaneous charges.
- (e) The library shall remain open from one hour before the start of school to one hour after the school closes. The weekly routine of schools must include at least two periods to be spent in the library.
- (f) There should be one full-time librarian who must have at least passed the higher secondary certificate examination and been trained in library science and one full-time catalogue-assistant who must have passed the secondary school certificate examination and been trained in library science.

An-employee who will do all cleaning, repairing and binding work and also act as a peon.

- (g) The quantitative standard has to be reassessed at least once in five years and the standard raised if found possible.

College libraries:

30.23. There is not much real difference between college libraries and secondary school libraries in our country. Here, too, the accommodation problem is very acute. It is seen in many old and large colleges that the book-shelves are stuck in the wall and rise high to the ceiling. The books kept in the upper half of the shelves are unobtainable without a ladder. Even then, all the books cannot be properly stocked. In some of the larger colleges a few books have been transferred to the room of the departmental head concerned. This has somewhat eased the crowding of books but there is no separate departmental reading-room. A member of the department concerned looks after the books transferred to the department and distributes them according to his convenience. The number of seats available in the library reading-room is quite insufficient. The books in every day demand are mixed up with books which are seldom used, as there is no arrangement for separating the former from the latter. There is a great paucity of reference books. Sometimes, old editions of an encyclopaedia and a set of attractively bound reference books, the latter perhaps donated by a foreign organisation, are seen in the library. Very few copies are available of the books—both foreign and published at home in constant demand and those available are usually kept for the exclusive use of teachers.

30.24. In some of the relatively new colleges it is seen that the books take up every inch of space in the library room. The librarian does his work of issuing books to students, sitting at a window-like small opening, before which they assemble. The pupils submit their requisitions of books beforehand and crowd round the opening at the fixed hour.

30.25. Recently a few government colleges have been given gazetted librarians and better qualified cataloguers. The post of librarian has not been made gazetted in other government colleges and there is also no provision there for the post of a trained cataloguer. This imbalance has been prevailing for some years now. The imbalance also exists in relation to the allotment for books.

30.26. A few intermediate colleges have been recently upgraded to degree colleges. In some degree colleges, honours courses have also been introduced. Even post-graduates courses have been opened in a few colleges, but the library has not been expanded.

30.27. We believe there is need for determining the minimum quantitative standard for the college library. The colleges can be divided into three broad groups according to enrolment :

- (a) Large colleges—at which the enrolment is over one thousand.
- (b) Medium-sized colleges—enrolment at which varies between five hundred and one thousand.
- (c) Small colleges—whose enrolment is less than five hundred.

30.28. Our recommendations for the minimum standard of development regarding college libraries are as follows ;

(a) *The size of the library :*

Large colleges—At least four thousand square feet.

Medium sized colleges—At least three thousand square feet.

Small colleges—At least two thousand square feet.

It is imperative to build a separate building for the college library.

(b) *Allotment :* the annual allotment for the purchase of books and periodicals should be on the basis of taka ten per head (of both teachers and pupils). The cost of book repairing and book binding and other related things must be met from this allotment. If a new department is opened, an appropriate allotment for books and journals must be made.

(c) The college library must remain open from 8-00 a.m. to 9-00 p.m. The college library must follow the open shelf-system.

(d) The minimum requirements for a college library should be as follows :

Designation.	Minimum qualifications.	Large colleges.	Medium sized colleges.	Small colleges.	Remarks.
1	2	3	4	5	6
1. Librarian ..	Must be a graduate and hold a post-graduate diploma in Library Science.	1	1	1	(i) The librarians at the larger colleges should hold a Master Degree and post-graduate diploma in Lib.Sc.
2. Assistant Librarian.	Ditto ..	1	1	1	....
3. Cataloguer ..	Ditto ..	2	1	1	(ii) Must be H.S.C. passed and hold a certificate in library training.
4. Library Assistant	Must be S.S.C. passed and hold a certificate in library training.	2	1	1	....
5. Book-supplier ..	Must be S. S. C. passed and hold a certificate in library training.	3	2	1	....
6. Peon ..	Must have passed class VIII.	3	2	1	....

Those large colleges which have honours and post-graduate courses should be given an additional assistant librarian and two additional book suppliers.

University Libraries :

30.29. The existing library arrangement at our universities is also not in our opinion, very satisfactory. Here, the accommodation problem is acute. The Chittagong University and Jahangir Nagar University have not either been able so far to build a separate library building. Consequently, there is no methodical arrangement in those universities for the proper stocking and display of books and journals. The number of books meant to be loaned to pupils at these universities is again insufficient. The system of lending books on hire has not been introduced in the universities mentioned above. The library workers are hard put to it to evenly distribute those books among the pupils which are beyond their purchasing capacity. A strong reference service required for research has not been built up either. The supply of micro-photographs for research and that of films and related materials for the same type of work is far from satisfactory.

30.30. Immediate measures should be taken for the development of university libraries. The effectiveness and the weaknesses of the university libraries should be independently assessed. There is need for setting up a library

committee comprising well-known librarians to give advice to the universities and to formulate a development scheme on the basis of the above assessments. We draw the attention of the university grants commission to this.

30.31. We believe that immediate and short-term measures should also be taken for the improvement of university libraries and we make the following recommendations in this connection :

- (a) The allotment of books and periodicals should be increased without delay. When determining the allotment the following factors must be taken into consideration: the number of subjects read, the number of teachers and pupils, the number of existing books, the proportion of books and periodicals in large demand and those seldom used, the increase in the price of books and periodicals and the size of the library.
- (b) The work of constructing the library building or developing it should be undertaken immediately.
- (c) A suitable number of reference librarians and reference assistants should be appointed and financial and other facilities given to the library for inter-library exchange of books to strengthen the system of research.
- (d) The university libraries should be given licenses more freely for importing necessary foreign books, periodicals, films and related materials. The requirements of research institutes and university libraries should be given special consideration in the country's import policy and customs and control of foreign exchange regulations. The opinions of the university librarians and of librarians of research institutes together with the views of library associations should be taken in the matter of removing legal and procedural defects regarding import, customs and control of foreign exchange regulations. In this matter, we should also seek the help and co-operation of UNESCO.

People's Library :

30.32. There was a lukewarm attempt in this country in the fifties to set up libraries in different parts of the country. The foundation of the Central library in Dacca was laid in 1954. At that time, one-time grants were made to fifteen non-government libraries at district headquarters. Later, two more government libraries were set up: one in Chittagong and one in Khulna. A post was created in the Education Directorate for the exclusive management of libraries. It was hoped that the allotment for non-government libraries would be gradually increased and many new libraries set up in the country. That hope has not been realised. The allotment was raised up to taka two hundred and sixty-one thousand only and this included grants to more than one hundred libraries. The post of the officer in-charge of libraries has remained vacant since 1969.

30.33. The allotment for books for the three government libraries in Dacca Chittagong and Khulna is taka 45 thousand only. The purchase of necessary books has been impeded in these libraries because of the inadequate allotment. The building of the Central Public Library was handed over to Dacca University 1961. The construction work of the new building for the library is still incomplete. The Central Public Library is somehow carrying on in a

part of its old building. The Dacca University Library is also short of accommodation. The accommodation problem of the Chittagong Public Library is much more acute. No new building has been constructed for this library. The need has arisen for the expansion of the building housing the Khulna Government Library.

30.34. The total allotment for the non-government libraries is at present two hundred and seventy-one thousand taka. The allotment for libraries is generally made on the basis of their performance at different levels. On the average a library can expect to get taka two hundred only per month from the above allotment. If the pay of the part-time librarian and that of one peon is deducted from this amount, hardly any money is left for the purchase of books. The annual grant from the municipality or the district council and the collection from subscriptions together constitute a meagre amount. Every non-government school or college receives some allotment under capital grant but there is no such provision for non-government libraries. As a result, the accommodation of most of the libraries is inadequate and their condition generally lamentable.

30.35. Most of the aid-receiving non-government libraries are open for two or three hours in the afternoon or the evening. The readers actually using the library mostly read periodicals and journals. The paying members get books on loan. The demand cannot be met because a sufficient number of books cannot be purchased.

30.36. The librarians in non-government libraries are seldom trained, and most of them work on a part-time basis.

30.37. At present the information centres in the district and subdivisional towns are also serving as libraries. Many of these information centres are functioning as part of subdivisional and district libraries. There are also a few libraries in different parts of the country managed by the Bangladesh Council.

30.38. Central Libraries in a few developed countries of the world are cultural organisations whose expenses are met from the taxes contributed by the public and to which all people get free access and where one can get facilities for training throughout one's life. Pupils at various levels also extensively use these libraries, as they are much better stocked than college or university libraries. Persons engaged in higher research also get all necessary facilities in the libraries mentioned above including all books and manuscripts and data required by them which are collected for them from the different libraries of the country whenever necessary. In such countries, the libraries in different regions work according to certain co-ordinated principles. Instead of working on a competitive basis they co-operate with one another and try to make themselves self-sufficient by collecting books from different parts of the world. Through the system of mutual lending of books, the readers in one regional library can get the advantage of books borrowed from other regional libraries. In this matter, the regional libraries get the willing co-operation of all concerned. The list of books available in the whole country is prepared in the Central Public Library, so that one can get the picture of the entire book resources of the country through the Central Public Library. Copies of books or journals are sent to different parts of the country and sometimes even abroad through the country's co-ordinated library system.

Books are also made available to the inaccessible parts of the country through branch libraries and peripatetic book-vans. The libraries in the developed countries have reached their present level of excellence through many stages of development.

Our objective :

30.39. Our national objective should be to extend the library system throughout the country so that in the near future no citizen is required to travel more than one mile from his home to get the book or books he requires from the branch library or the peripatetic book-van. The realisation of the fundamental state principles, the expansion of educational and culture, the development of a high national character and the excellence of arts and crafts depend upon a country's overall education system. People oriented education need not be limited to educational institutions, and can be supplemented by libraries. So libraries should be set up all over Bangladesh.

30.40. We believe it is essential to enact suitable legislation for libraries as the first stage towards the realisation of our national objective. The introduction of a library tax, the creation of a directorate of libraries and the setting up of an advisory council for libraries should all be brought under the purview of the enactment. Pending enacting of legislation we make the following recommendations.

30.41. A government library should be set up immediately at Rajshahi.

30.42. The accommodation problem of the government libraries in Dacca, Chittagong and Khulna should be immediately solved and the allotment for the purchase of books should be increased at least three times.

30.43. The total allotment for non-government libraries should be immediately increased at least three times. Besides, a budgetary provision should be made under capital grant for taka one million, so that the district and sub-divisional libraries can be expanded and a few libraries set up at thana levels. The standard of the libraries at these three levels should be equivalent to that of the libraries attached to large, medium sized and small colleges.

30.44. A new office should be established as a preparatory measure for the setting up of the proposed directorate of libraries and the vacant post of the officer in-charge of libraries attached to the education directorate should be transferred there and he should be given new assistants as required. Later, he and his assistants will be absorbed in the directorate of libraries.

National library :

30.45. The national library should be the country's greatest research centre and serve as a cultural bridge for the outside world. This library must be given the right of copyright deposit, and the preparation of a national catalogue of books and its publication and the publication of books in different branches of knowledge should be among its responsibilities. Suitable legislation for the national library has to be enacted and this has to be developed as an autonomous organisation. In this connection we also recommend that three main libraries at divisional headquarters should also be given the right of copyright deposit.

30.46. The present central library can be developed as the national library. The branch of the national library attached to the present directorate of archives and libraries should be transferred to the above library.

30.47. The first step towards the establishment of a national library should be the creation of a post of chief librarian and the recruitment of an outstanding librarian to this post and the fixing of responsibility for work among the different librarians.

National Archives :

30.48. It is urgently necessary for the national archives to be developed without delay as an autonomous organisation and with all necessary facilities. The responsibility of this organisation should be the collection of important records relating to the preservation of individual and state rights and that of original documents and papers concerning our national history and their proper maintenance and distribution for the purpose of research. The documents piling up in the country's different offices, courts and administrative divisions are not properly looked after and are damaged or destroyed over the years. Those which remain are so piled up that the necessary papers cannot be found when they are needed. There is no arrangement for separating valuable papers or documents from this pile after proper examination and no care is taken for their preservation against insects. In this perspective the need for national archives becomes obvious.

30.49. Many in our country are not appropriately aware of the need of preserving government papers and documents of historical value. The national archives is an organisation where valuable and historical documents and papers and books can be preserved and rarely-used documents of great important can be kept.

30.50. We must take immediate measures for the establishment and development of national archives. A scheme for the preservation of written materials of historical and traditional value should be adopted in relation to national archives so that these can be used for the purpose of research when required. Besides, there is also need for the establishment of a national commission for archives.

30.51. The employees of Bangladesh national archives responsible for looking after documents should be sent abroad for training in the latest methods of preserving documents and papers. The latest facilities for the preservation of papers and documents must be available in our national archives. Enactment of legislation and a suitable scheme might be necessary for the collection of documents and papers of historical value. The directorate of archives under the Ministry of Education should be given the responsibility for the management and supervision of national archives.

Library training :

30.52. The present arrangement for library training is quite inadequate. At present there is provision for a post-graduate diploma course in library training and for a Master Degree course at the Dacca University only. Both are evening courses and of one year's duration. There is no provision for training in library science at any other university. The responsibility for providing courses in library training below the degree level is that of the Bangladesh Library Association. They started an evening certificate course in 1957

one course in a year. The teachers involved with this course have been doing the work free for many years. Recently, the Association has started two courses per year and training courses have also been started in the Khulna, Chittagong, Comilla and Rajshahi branches of the Association. The examination is of course conducted by the Central Office of the Association at Dacca.

30.53. The two courses at the Dacca University have been recognised as 'authorised courses' by the government and government servants can now be admitted to these courses on deputation. But the certificate course of the Library Association has not yet been so recognised although the certificate awarded by the Association is recognised for appointment of librarians and cataloguers in both government and non-government organisations.

30.54. A few thousand trained librarians and library assistants will be required for the management of libraries of the standard as laid down by use. The present training facilities are not at all adequate to meeting this need. We have recommended the inclusion of library science in the curriculum at the secondary and degree levels. This will also require trained teachers of a high standard.

30.55. A library department should be opened in our three general universities: Rajshahi, Chittagong and Jahangir Nagar.

30.56. An institute of libraries should be set up immediately for training at the post-graduate level. The responsibility for managing this institute can for the time being be given to the Bangladesh Library Association. There is need for a separate building for this institute but it can in the mean time start functioning in the present Central Library. Branches of this institute must also be opened in different parts of the country for extending the facilities of training.

30.57. There should be adequate provision of scholarships for pupils under training at both these levels.

30.58. The librarians and the library assistants are helpers and co-workers of teachers, pupils and those engaged in research. This truth has been recognised in the more developed countries: hence the libraries there are constantly achieving greater perfection because of the initiative, enthusiasm and inventiveness displayed by the librarians. We, therefore, recommend that trained librarians and other library employees of equivalent qualifications should be given the same status and remuneration as given to teachers. The librarians of course must not be included in the administrative cadre as this will be contrary to national interests. The overall responsibility for the management of libraries must be given to highly qualified librarians and they must enjoy full freedom in all library matters.

Museums :

30.59. To day the need is specially felt of setting up a museum at every educational campus for promoting educational excellence. Small and large models of many educational materials are more attractive to the pupils and have a greater bearing on reality than the pictures in black and white found in the text books. The evolution of national life and traditions can generally be traced through the museums. Teaching with the help of the museum inside or outside the educational campus becomes more lively and realistic. We must, therefore, set up museums throughout the country both inside and outside the educational campus.

30.60. It is not very expensive to start a museum at the campus of an educational institution; unlimited money is also not required for equipping the museum well. Many easily available exhibits can add to the attractiveness of the museum if selected carefully and displayed with imagination. The arts and crafts works of both teachers and pupils and of a certain standard of excellence can also be exhibited in the museum. The artistic achievement of the past can provide inspiration to, and stimulate the creativity of, the present generation.

30.61. Steps should be taken in the near future to set up museums at a few selected secondary schools. The necessary encouragement and financial grant can be of great help in establishing such museums. We must make a cautious but firm advance in this regard as part of a long-term scheme.

National Museum:

30.62. It can be said briefly that the national museum shall be our cultural research centre, an attractive demonstration centre of the objects of our national history and traditions; and a source of national awareness through creating opportunities for the common citizens for fruitfully enjoying their leisure.

30.63. We do not have any flourishing museum which can at present be given the status of our national museum. During the Pakistani regime, there was an attempt to make a scheme for the establishment of a large government museum in Dacca and the work of constructing the proposed museum in the Shahbag area had also made some headway. But the construction work was kept in abeyance when a supposed error in the blue print was found. The old Dacca museum under private management has not been able to make such progress either. Many archeological object and samples of rare historical value found in Bangladesh had been transferred to West Pakistan during the Pakistani regime. It has also been reported to us that many valuable specimens have been smuggled abroad. The 'Barendra Research Museum at Rajshahi, second in importance only to Dacca museum, had reached a moribund stage because of neglect. The museum was formally handed over to the Rajshahi University some time ago. Recently 'site museums' have been set up at Mainamati, Paharpur and Mohasthangar and the foundation of an archeological museum laid at Agrabad in Chittagong. An effort was made a few months ago to set up museums with regional collections and at local initiative as part of the Kishoreganj Library and adjacent to the Nazimuddin Hall in Dinajpur but the effort has not been successful. Once an attempt was made to set up a museum at Rangamati with the implements of the tribal people but the attempt did not go far. The inhabitants of the tribal area covering Chittagong Hill Tracts and Hazong and their way of life and habits and customs and dresses are of great research value and of special interest to foreign scholars. We have obviously not realised this, so the life of the tribal people has not been properly reflected in our museums nor a separate museum has been set up with the objects and implements collected from this source. With the approach of modern civilization the tribal people have been uprooted from their homes over an extensive area and their way of life is changing so fast that suitable samples and objects would soon be difficult to collect without seeking the help of foreigners.

30.64. Large museums in several fields of human knowledge are to be found in the modern world; such as science museums, industrial museums etc. We have so far given no thought to these museums. The establishment of these museums is a time-consuming process and requires a lot of perseverance and is also highly expensive.

Our recommendation :

30.65. The foundation of our national museum can be laid with the collections available at Dacca Museum; so let this be done. The area occupied by the Dacca museum is a small one and the building is smaller still. A high-rise building is not suitable for a museum. A museum requires an extensive area and should have ample provision for future development. We hear that five acres of land for the national museum and land of similar size for the national library have been set apart in the Sher-e-Bungla township. The whole of the land can be allotted for the museum and the land in the Shaibg area where a museum was being built should be set apart for the expansion of the national library, if our recommendation regarding the development of the central library to a national library and located in the Shaibg area is accepted. In this connection it may be mentioned that the new building of the present central library is being constructed adjacent to the site selected for the museum.

30.66. The national museum must be an autonomous organisation. The construction work of the archeological museum at Agrabad must be fast completed. In time this museum will get the status of the national archeological museum.

30.67. A long-term scheme should be made for setting up science museums and industrial museums in consultation with the experts concerned and cautious advance made in that direction.

30.68. The life of the tribal people must be reflected in a separate museum or in a particular section of the national museum. We believe that it will be easier to set up a separate museum for this purpose at a particular tourist centre.

30.69. Due weight must be given to the development of the "Barendra Research Museum" as the chief museum of the northern region.

30.70. At the first stage a museum in each division and at a later stage a museum in each district should be set up as part of a comprehensive scheme for people's education.

Documentation Centre :

30.71. The 'scientific documentation centre' set up at the provincial level under the Bangladesh Council of Scientific and Industrial Research during the Pakistani regime should be upgraded to a national documentation centre to create greater facilities and opportunities for research in scientific, industrial and technical fields. This will serve as the main centre for supplying data appropriate to research and this must have close relations with the more famous research centres of the world. The responsibility of the Centre shall be to collect calendars and periodicals containing research data or their copies and whatever else is required for the purpose of qualitative research. There is a national need for such a documentation centre. It is not possible for any single organisation, whether it be the University or the Atomic Energy Commission or the Jute Research Institute or the Cholera Research Institute to collect all relevant research data from different parts of the country or of the world and sometimes even the required information is not available separately to any of the above organisations. The need for a national documentation

centre, therefore, becomes obvious. A scheme relating to this must be formulated on a top priority basis with the help of the specialists concerned and firm steps should be taken towards the setting up of the national documentation centre.

Planetarium :

30.72. A planetarium is a must for a modern country for exploring the mysteries of space and of the astronomical world. The movement of stars and planets in the blue sky reflected through a film projector in the planetarium ceiling and the stirring commentary accompanying it can clearly implant in the Spectator's mind the significance of many difficult geographical and astronomical data in a matter of one or two hours which would not be possible even in one year merely through study. The data relating to geophysical research can be displayed through particular projection schemes to ordinary spectators according to their depth of curiosity and power of understanding and at the same time can be of considerable help to teachers and pupils at the higher levels and to highly educated viewers. The planetarium always attracts a large number of visitors, specially on holidays. The annual expenditure on the planetarium is partly met through admission fees.

30.73. We recommend that a planetarium should be established in Dacca in the very near future. In future, a planetarium should be preferably set up at every divisional headquarters.

LIBRARIES

SUMMARY

Libraries in educational institutions :

1. The library is like the heart of an educational institution. But the heart of most of our educational institutions is inactive. The development of libraries is not a matter of patch-work. The libraries in our educational institutions have to be thoroughly reconstructed if we intend to make our education system truly effective. (30.1.)

2. The standard and the scope for the development of libraries have been laid down in this report so that the administrative authorities and the development workers concerned can proceed in their work with a clear concept and a certain balance is achieved between school and college libraries. The standard laid down should be reconsidered at least once in five years. (30.2.-30.4.)

Primary school libraries :

3. The responsibility for creating an attraction for books and developing an attitude of respect to them and for forming the reading habit among the pupils is first that of the guardians and later that of the primary school concerned. But this responsibility is not being properly discharged. Till now the supply of books to primary schools has not been included in any development scheme. It is not possible to set up a library at every primary school. For the time being a library should be set up at every thana headquarters and books supplied from there to the primary schools falling under the thana jurisdiction. One or more than one primary school in every union should be used as a camp for distribution of books to all the primary schools in the union. Attractive books and journals for children should be published at government initiative and distributed at a low price. (30.5.-30.14.)

Secondary school libraries :

4. The secondary school libraries are also neglected. The paucity of books, the lack of accommodation, the want of a librarian and above all the reluctance for serious reading displayed by teachers and pupils alike reveal a pitiable picture of the secondary schools. The secondary school libraries should be built up throughout the country in accordance with a minimum standard carefully devised. The failure of the secondary school libraries is bound to endanger the proper functioning of college and university libraries. (30.15-30.22.)

College libraries :

5. The deficiencies of our college libraries are more or less similar to those of the secondary school libraries. The libraries attached to government colleges are a little better, but non-government college libraries face a desperate situation. Recently intermediate colleges have been raised to the degree level and some colleges have started honours courses, and even post-graduate courses are available in a few colleges. But no effective measures have been taken for the development of the libraries attached to these colleges. We have laid down the minimum standard for college libraries after dividing the colleges into large, medium-sized and small colleges. Urgent measures should be taken to implement the recommendations regarding the size, the allotment and the management of libraries. (30.28.)

University libraries :

6. In our opinion the library system in our universities is also not satisfactory. Steps should be immediately taken for the development of university libraries. The effectiveness and weaknesses of the libraries at this level should be independently assessed. A library committee comprising well-known librarians should be set up to advise the university in all library matters and to formulate a development scheme on the basis of the above assessment. We draw the attention of the university grants commission to this.

The allotment for books and periodicals should be considerably raised at the university level, the reference division has to be strengthened to make all research work more active and an adequate amount of foreign exchange should be allotted for the import of foreign books and films. (30.29-30.31.)

People's Library :

7. Central Libraries in the developed countries are cultural organisations whose expenses are met from taxes contributed by the public and to which the people have free access and where one gets all facilities for learning throughout one's life. The pupils also extensively use these libraries. Our national objective should be to so extend the library system in the country that no citizen is required to travel more than one mile from this home for getting the book or books he requires from the people's library. A library tax approved by the legislature, the setting up of a directorate of libraries and the formation of a library advisory council will be necessary for this purpose.

A government library should be set up immediately at Rajshahi. The accommodation problem of the government libraries in Dacca., Chittagong and Khulna has to be forthwith solved and the allotment for books for these three libraries has to be raised at least three times. Government grant to non-government libraries should also be raised and non-recurring grants provided according to necessity. The Bangladesh Central Library should be raised to the status of a national library and given the right of copyright deposit and must be developed as a statutory autonomous organisation. (30.32-30.47.)

8. It is necessary to set up a directorate of archives, to give all necessary facilities to national archives and to appoint a national archives commission for the preservation of valuable records regarding state and citizenship rights, for collecting and preserving original papers and documents in respect of national history and for a well-ordered research system. (30.48-30.51.)

Library Training :

9. A few thousand trained librarians and library assistants will be needed for the able management of libraries in accordance with our recommendations. The present training system is not at all adequate to meeting this need. We recommend that a library department should be opened at Rajshahi, Chittagong and Jahangir Nagar universities and an Institute of Libraries set up at Dacca. Librarians of equivalent qualifications should be given the same status and remuneration as given to the teachers. (30.52.-30.58.)

Museums :

10. The need is specially felt of setting up a museum at every educational campus for promoting educational excellence. The evolution of national life and traditions can be largely traced through the museums. Teaching with the help of the museum inside or outside the campus becomes more lively and realistic. Museums should, therefore, be set up all over the country both inside and outside the campus.

A national museum should be built up as an autonomous organisation centering round the Dacca museum. A museum should be set up at every divisional headquarters and every encouragement should be given to the establishment of museums at district levels with regional and local objects and samples. (30.59-30.70.)

Documentation Centre :

11. A documentation centre under the Council of Scientific and Industrial Research was set up at the provincial level. This has to be immediately raised to the level of a national documentation centre to create greater facilities and opportunities in scientific, technical and industrial fields. A scheme has to be formulated in this regard on a priority basis after consultation with the specialists concerned. (30.71.)

Planetorium :

12. A planetorium should be set up at Dacca to enable the common people to fruitfully enjoy their leisure. In future, a planetorium should be preferably set up at every divisional headquarters. (30.72-30-73.)

CHAPTER XXXI

EQUALISATION OF EDUCATIONAL OPPORTUNITY

31.1. If we intend to build a classless, exploitation-free society we must abolish all class distinctions in the educational field and achieve an equalisation of educational opportunity. Education under the old system had become the monopoly of a small privileged group. As a result, the talent of the children belonging to the working class and to lower middle classes remained undiscovered. This in its turn impeded the country's advance. Educational standards throughout the country should be more or less of the same order for the sake of social integration and for the purpose of development. It must be ensured in the new education system that every talent gets proper scope for development irrespective of the financial status of his parents, his place of residence, his religion, his sex and his age.

31.2. The existing class distinctions in our society have created privileged groups in the field of education. But this is also true that the education system, through an appropriate scheme, can be used as the chief weapon to remove class distinctions. At present our country is at the preparatory stage towards transformation to a socialistic way of life. A large section of educated people in our society is conservative. It is difficult for them to shed their conservative outlook on life and their natural propensity to safeguard their class interests. This section of society is naturally hostile to the idea of the equalisation of educational opportunity. If the above hostility can be countered and if appropriate measures are taken for implementing the following recommendations, the objective of the equalisation of educational opportunity can be achieved.

31.3. The right of every citizen to get equal facilities in the field of education has been recognised as a universal principle. This is one of the fundamental principles of the United Nations and the international bodies associated with it. This has been included in the declaration of human rights prepared and approved by the United Nations. Our country has accepted this principle as a key to establishing social justice and as a step towards building a new exploitation-free society. This principle has been incorporated in our constitution and it has often been said in the first five-year plan and in many government hand-outs and declarations that this principle will be firmly implemented.

31.4. Equalisation of educational opportunity is a social and state principle essential for the development of personality, for the freedom of society and for an independent life, and social justice is established and various class distinctions removed through the application of this principle. In other words it can be said that the principle of equalisation of educational opportunity is an important means of establishing and supplementing human rights and the state can use education as the chief weapon to remove all social and class distinctions.

31.5. Much has to be done in support of the principle of equalisation of educational opportunity. The responsibility for the full and complete development of the latent powers of every citizen is that of the society and of the State. The social and State responsibility in regard to this would be discharged mainly through the education system and the equalisation of education opportunity should be considered as a basic human right. Nothing else should be regarded as a justification for unequal provision of educational opportunities

except the differing inclinations, merits and capacities of the pupils. As far as possible efforts must be made to raise the overall social standard through raising the standard of the pupil in an educational environment where facilities and opportunities are equally available for every pupil. The help of society and government and their encouragement and patronage should be distributed to educational institutes of the same kind or at the same level on the basis of equity and equality. The personal inclination of every citizen to improve himself through education should be regarded as a natural right and the education system should be employed in the furtherance of this inclination. At the level of higher education or in the field of professional education, personal inclinations, talent and physical and mental attributes should receive due consideration. Above all government must take energetic measure for the removal of the mental and environmental causes which lead to educational inequalities.

31.6. For various reasons, our education system has fallen a prey to these inequalities. The existing education system in our country grew up during the imperial and the colonial regime. The foreign rulers established a system of education encouraging class distinctions and forming privileged group for their own selfish interests. The system suited their policy of exploitation very well indeed. Besides, the social, economic and geographical differences existing in the different regions of our country also contribute to educational inequalities. Various social superstitions, fatalism, pessimism, selfishness, a conservative attitude and above all our economic misery are largely responsible for creating distinctions in the social as well as in the educational field. On analysis it would appear that most of the things contributing to educational inequalities can be removed through appropriate social and governmental measures.

31.7. We must adopt different schemes in our education system designed to help realise the objective of equalisation of educational opportunity. We will discuss here some of the more important methods.

31.8. Free primary education must be made compulsory and universal up to class VIII. Educational development and economic progress are inter-dependent. Economic progress can be achieved only through free and compulsory primary education and universal education can be introduced only a reasonable stage of economic development—for universal education is something which evolves over the year. In most of the industrialised and developed countries universal education up to age sixteen is now compulsory but at the beginning the age level was considerably lower and the duration of universal education was raised step by step with the development of economic resources. Bangladesh must make all possible efforts to catch up with the more advanced countries at a much shorter time than was taken for the evolution of universal education in those countries. We must at the same time realise that we do not at present have the resources to introduce universal education equivalent to that prevalent in the more developed countries. The chief thing we should consider is how we can reach the necessary stage of free and compulsory education for the purpose of building up educated citizens and accelerating economic progress. We have already recommended for the acceptance of compulsory education up to class VIII as a basic principle. Free primary education must be made compulsory and universal up to class VIII if we intend to realise our objective of building up good citizens and accelerating our economic progress. In our country poverty is the main impediment to education. Our people are so poor that they cannot in most cases bear the expenses of education of their children. Besides, poverty forces children of tender age to do manual work to the exclusion of everything else. Many children for this reason cannot go

to school. The weight of additional expenses which poor parents have to bear for the education of their children must be lightened if we intend to make the introduction of compulsory education up to class VIII effective. If essential educational implements and one set of school uniform can be supplied every year and text books distributed at a low price and if education up to class VII is made free, it may be possible to retain most of the children in school. In addition, if provision can be made for cheap tiffin in every school, it might be assumed that most of the parents will feel inclined to send their children to school instead of employing them on the field or the farm. Measures must also be taken for raising educational standards in the rural areas to the level of those in the urban areas. We have also made recommendations for raising the standards in secondary education as well as in higher education. These of course will involve considerable financial expenditure and the guardians, schools, colleges and the universities must all make a combined effort to meet this increased expenditure.

31.9. There should be provision for multilateral courses at the secondary level to make possible the full development of every pupil according to his talent, his inclination and his enthusiasm. All pupils do not naturally equally like all subjects but have different inclinations and propensities and hopes and aspirations. When a pupil does not find any scope in the educational scheme for pursuing his own particular line, he is forced to choose a subject for which he has no particular enthusiasm. Of course sometimes a choice is made because of ignorance of the facilities available or lack of self-confidence. It is also seen that a pupil chooses a particular subject or follows a particular profession merely to please his parents or his guardian. This waste of manpower must be prevented and the pupil concerned guided to choose a subject best suited to his particular type of talent and to the particular nature of his propensities. The particular talents and inclinations of the pupils must not only be determined and measured but multilateral courses must also be introduced for the full utilisation and development of these qualities. We have therefore made several recommendations for the introduction of different vocational courses at the secondary level and for arranging multilateral courses beginning from this level. We must also bear in mind that experience of productive labour and of social service should be given due weight together with the academic performance of the pupils while considering them for admission to the college or the university.

31.10. All the nations of the world have today realised the need of discovering their best talents and devising a suitable education system for them. The economically advanced countries, too, are also active in this matter. The reason behind this world wide search for talents is that today's life is heavily dependent on science and technology. The two most prominent characteristics of this age are fast change and keen competition. The need for far-sighted and enthusiastic people able to make adjustments to changing times has perhaps never been felt more keenly before. But the pace of economic development will be considerably slowed down if we are unable to discover our talents and provide suitable training for them. The importance of finding out talents has therefore greatly increased. Even the relatively prosperous countries are making frantic efforts to find out suitable men and train them for making necessary contribution to national development. The need for finding out our talents and to help them fully develop their capabilities has assumed a great urgency in Bangladesh. We are engaged in nation building activities are particular juncture of history when many technically trained workers under a dynamic leadership are needed. These workers are necessary for economic development, but our economic backwardness make it difficult for us to find these workers. As our economic condition is far worse

than that of the industrialised countries, we are unable to bear the expenses of the kind of education system needed for economic development. The only way in which this problem can be tackled is the full utilisation of our manpower. There are many countries in the world today which have been able to build up a developed economic system owing to the skillful use of their manpower and in spite of their lack of raw materials. Of course the country's resources are the basic ingredient of an industrially developed society. We may not be able at once to collect correct data about our resources but we have a population of 75 million and with suitable training this manpower can be developed into a great and permanent asset of the country. We must provide for suitable education and training specially for those who have been able to demonstrate their gifts and capabilities.

31.11. Government must make due provision for scholarships for the meritorious pupils beginning from the secondary level so that they are not deprived of educational and training facilities because of their lack of means. As long as our per capita income is low, even our most talented students will find it difficult to bear the expenses of their higher education. As a result, there will be a great paucity of trained and capable people in the country. So scholarships must be provided at different levels and in different fields for those pupils who can reasonably be expected to contribute to the general welfare because of their outstanding gifts and capabilities. A meaningful equalisation of educational opportunity can be achieved through the above provision of scholarships.

31.12. A large number of the country's talented children do not get the opportunity to discover their capabilities through the education system. On the other hand those who actually get the facilities of higher education are often not physically and mentally in a position to be fully benefited by them. It is injudicious to let our limited educational facilities be wasted and our manpower be misused. The greatest handicap to educational advancement of our talented pupils is their economic want. We must not allow poverty, in our national interest, to be an impediment to the full development of our talents or to stand as an obstacle to the necessary development of talents for the progress of the country. Our recommendations for provision of scholarships for pupils to attain equalisation of educational opportunity should also make it possible for suitable pupils to be sought out and to arrange appropriate training for them. At school, college and university levels, all efforts must be made to discover talented pupils and to help them as far as possible. In other words, government must make extensive provision for scholarships for poor but meritorious pupils at all levels. To ensure that the meritorious pupils belonging to poor rural families are not deprived of the facilities of higher and professional education the entire expenditure of constructing hostels in respect of these pupils must be borne by the government. According to prevalent rules, the fee is waived in regards to many poor but meritorious pupils. The present system generally is to grant full free-ships to ten per cent of the total number of pupils and help free-ships to an equal number of pupils. There is also provision for student concessions in the colleges. All these privileges must be kept intact. But in the matter of awarding scholarships the suitability of a pupil must be given special consideration.

31.13. The rate of scholarships should be such as to enable the pupils enjoying them to carry on their studies without any financial hardship. The chief consideration in awarding scholarships should of course merit. Provision must be made for different classes of scholarships, such as scholarships for general students covering their fees and incidental expenses and residential scholarships covering fee and boarding, lodging and incidental expenses.

31.14. Scholarships again must be provided for talented pupils to encourage them to take part in different constructive activities. A balance must be achieved between the number of scholarships and their relevance to the country's total development programme. For example, when the need for science teachers appears to be greater, the number of scholarships in science subjects must be increased to attract competent pupils to science teaching. The number of scholarships may be decreased in fields where the need is not so great. While conducting the search for talented pupils and providing encouragement to them it must be remembered that talent does not always mean intelligence. It would be wrong to confine our attention to only intelligent pupils. We need technicians and engineers of different kinds for our economic development. Those pupils with clearly marked propensities in this direction should be given all possible facilities to train as future technicians and engineers. The latent possibilities of every pupil have to be discovered and way evolved of measuring them if we intend to identify are particular type of talents mentioned above.

31.15. Special care has to be taken of really outstanding pupils in the interest of social welfare. It must be ensured that every talented pupil is able to received a type of education equivalent to that found in the more developed countries irrespective of his or her social surroundings. At the same time we must see to it that the children belonging to the working class and to lower middle classes are not handicapped in any way when the selection of talented pupils is made.

31.16. The greatest of the various problems which are faced by our education system is how to make education people-oriented. The needs of the society of common people and of the pupils belonging to this society must be placed above all other needs in our education system. Our new education system must serve as a weapon to achieve the desired social transformation. One main duty in this perspective is the removal of class distinctions in the field of education. This will become possible when our whole education system is nationalised. Nationalisation in this case mean will that all educational institutions are brought under government control, that the standard of education in rural areas is raised to the level of that in urban areas and that equity is achieved in determining the salaries of school teachers on the basis of experience and output and quality of work. This, we realise, is going to be an expensive proposition. Nevertheless we must gradually move forward towards supplying, through a well thought-out scheme, the required number of furniture-items, educational implements and qualified teachers for all educational institutions.

31.17. The income derived from student fee in our non-government secondary school and colleges, coupled with government grant, is generally wholly spend for the salaries of teachers. The salaries of teachers in non-government schools and colleges must be brought to the level of those for government schools and college teachers, if all our educational institutions are nationalised. As a result, the recurring expenditure of government in regards to the salary of teachers will be increased many times. To meet this contingency, a ten-year scheme must be prepared.

31.18. The increased salary of teachers is not the only expenditure involved in nationalising educational institutions. There is a popular demand for education up to the lower secondary level to be made free and for making education up to class VIII universal. If education from class VI to VIII is made free, government expenditure on this account will be considerably increased. Besides, large allotments have to be gradually made for bringing the school building and educational implements up to the required level in respect of a large number of secondary schools.

31.19. The great disparity existing at present in the educational institutions in regard to teachers, educational implements and educational standards must be removed. This disparity is particularly prominent between government and non-government educational institutions. The salary of teachers in most of the non-government educational institutions is lower than that of teachers in government educational institutions. An appropriate number of qualified teachers is required to raise the standard of teaching in non-government educational institutions. Most of the non-government educational institutions are unable to appoint the required number of suitably qualified teachers for want of money. The low standard of building, classroom and furniture in these educational institutions is visible to all, and there is hardly any provision of a playing field or a hostel for them. Suitable school buildings, classrooms, furniture and facilities for games and sports must be provided in all educational institutions for raising the national standard of education. It is undeniable that there is considerable want of educational implements in these institutions and those actually available are of a low standard. Suitable educational materials of the required standard must be provided for these educational institutions, otherwise, the national standard of education will be lowered. Measures should be taken for increasing the salary of teachers in non-government schools and colleges on the basis of ability and suitability. It, therefore, becomes clear that extensive government help and aid must be provided to the non-government educational institutions to raise their educational standard as long as the nationalisation of educational institutions is not possible.

31.20. The number of educational institutions has to be raised in different parts of the country in the perspective of our national requirements and in consonance with the population and geographical location of the parts concerned. Professional institutes should receive priority in the above expansion of our education system. The economic possibilities and the production potential of the different regions should be taken into consideration while setting up the professional institutes. Provision should also be made for educational expansion in relatively backward areas. The expansion of women's education, we must remember, is of particular importance.

31.21. Special care has to be taken of physically and mentally handicapped pupils in the interest of social welfare and a special education system introduced for them according to necessity. Facilities for formal and non-formal education should be available for the workers who have had no opportunity for formal education so that they can develop the required skills in accordance with their inclinations and capacities.

31.22. There are many educational institutions in our country under the management of missionaries and under private ownership. Although the same syllabus is followed in these institutes, they have nevertheless accentuated class distinctions because of the unequal facilities obtaining in them regarding

management, salaries of teachers, etc. The only effective way in which these class distinctions can be removed is, we believe, to bring all these educational institutions under government control so that the same principle is followed in all of them in regard to the matters mentioned above. Besides, these educational institutions have to be reconstructed in conformity with our state principles.

31.23. We realise that it will take time to implement all the recommendations made by us for removing the class distinctions in the field of education which have arisen out of the long colonial exploitation of our country. Huge material resources and manpower will be required to introduce peoples education of the same standard at all levels of our society and throughout the country. But gradual progress must be made towards the realisation of the above objective after determining appropriate priorities so that we can introduce an education system of the same standard throughout the country and up to the highest level within, 1985.

EQUALISATION OF EDUCATIONAL OPPORTUNITY

SUMMARY

1. We must abolish all class distinctions in the field of education and achieve an equalisation of educational opportunity. The educational standard throughout the country must be more or less of the same level for the sake of social cohesion and progress. It must be ensured in the new education system that no talent is deprived of the opportunity to fully develop his potentialities because of the financial condition of his parents or his place of residence or his religion. (31.1.)

2. Class distinctions have arisen in regard to educational opportunity out of the existing social inequalities. The education system can be used as a dependable weapon to remove these distinctions through a suitable scheme. The main responsibility for providing appropriate opportunities to every citizen for the full development of his latent powers is that of the society and of the state. In this matter, the above responsibility should be generally discharged through the education system. Apart from the pupil's inclinations, intelligence and capacities, nothing else should be a matter of consideration in diversifying educational facilities. The raising of the overall social standard must be achieved through raising the standard of the pupil in an educational environment where equal facilities are available for all pupils. Social and government help, patronage and encouragement should be distributed on the basis of equity and equality to educational institutions of the same kind or at the same level. Personal inclinations, intelligence and physical and mental attributes must receive due consideration in the field of higher education and in particular fields of professional education. (31.2.—31.6.)

3. Different schemes have to be adopted in our education system designed to achieve the objective of equalisation of educational opportunity. Free primary education must be made universal and compulsory up to class VIII. Ways must be devised for lightening the burden of excess expenditure on the parents when education up to class VIII is made compulsory. The supply of essential educational implements and the school uniform and of text books at a low price must be given special consideration. Besides, if provision can be made for cheap tiffin in every school the parents will be encouraged to send their children to school instead of employing them on the field or the farm. (31.7.-31.8.)

4. Multilateral courses must be introduced from the secondary level to give an opportunity for the full development of the particular capacities and inclinations and interests of the pupils. Different vocational courses at the secondary level and multilateral courses beginning from this level must therefore be provided in the matter of admission to the college or the university, the pupil's work-experience in a productive field and his experience in social service should be given due weight together with his academic achievement. (31.9.)

5. Suitable facilities for higher education and training must be provided for pupils of outstanding merit. For this purpose, government must introduce a large-scale scholarship system for the meritorious pupils beginning from the secondary level. In order to ensure that the children belonging to poor

rural families are not deprived of the opportunity of higher and professional education, government must bear the entire expenditure of constructing hostels for the meritorious pupils among them. (31.10-31.13).

6. Scholarships should be provided to talented pupils to encourage them to participate in different constructive activities. A balance must be achieved between the number of scholarships and their relevance to the county's total development programme.

7. Special care has to be taken of pupils of outstanding merit in the interest of social welfare. It must be ensured that meritorious pupils are able to get the type of education prevalent in the developed countries irrespective of their social surroundings. We must see to it that the children belonging to the working class and to lower middle classes are not handicapped in any way when the selection of meritorious pupils is made. (31.15).

8. A scheme must be formulated to remove the great disparity that exists in our educational institution in relation to suitably qualified teachers, salaries of teachers, educational implements, facilities, and amenities, and the standard of education after nationalising all our educational institutions and bringing them under government control. As long as the objective of nationalising our educational institutions and bringing them under government control is not realised, extensive government help and aid will be needed for raising the standard of education in non-

9. The number of educational institutions has to be raised in different parts of the country in the perspective of national requirements and in conformity with the population and the geographical location of the parts concerned. The number of professional institutes has to be increased. The production potential and economic possibilities of different regions must be taken into consideration while up setting professional institutes. Provision must be made for educational expansion in relatively backward areas and the fast expansion of women's education must get top priority. (31.20).

10. Special care has to be taken of physically and mentally handicapped pupils in the interest of social welfare. Facilities for different kinds of formal and non-formal education should be available for the workers who have had no opportunity for formal education so that they can develop the required skills according to their inclinations and capacities. (31.22.)

11. The educational institutions under missionary or private management should be reconstructed in accordance with our state principles. (31.23.)

12. We must gradually advance towards the spread of education of the same standard at all levels and throughout the country after determining the priorities so that an education system of unvarying standard and up to the highest level can be introduced within 1985.

CHAPTER XXXII

STUDENT COUNSELLING AND GUIDANCE

32.1. Student counselling and guidance is an integral part of the modern education system. But this has not been given much weight so far in our country's conventional education system. As a result, our educational institutions have not been able to produce skilled manpower. It is today universally admitted that every man is different from every other man in respect of intelligence, intervals and inclinations. As the full development of one talent is beneficial to one's own advancement so it is also necessary for producing skilled manpower for national welfare. The traditional educational method followed in the class-room is not at all adequate to meeting this need, although counselling and guidance has been recognised as a necessary supplement to the modern education system.

32.2. Objectives of student guidance:

- (a) To discover the latent qualities of every pupil and to develop them fully.
- (b) To help the pupil co-ordinate his physical, mental, social and emotional attributes for the formation of his personality and for his overall development.
- (c) To help the pupil solve his daily problems, to create in him an interest in learning, to make him fully realise his own qualities and to encourage him to expand his horizon of knowledge.
- (d) To help him determine his future educational course and his profession in accordance with his own intelligence, interests and propensities.
- (e) To help to pupil to be self-reliant and self-critical.

32.3. The principles of guidance:—Below are mentioned certain principles according to which a guidance programme can be formulated at the different educational levels. In this connection it must be remembered that 'counselling' is very much a part of professional guidance. We used the term 'guidance' in its broadest sense:

- (a) Guidance must be student-centered. Its chief aim should be not to solve the pupil's problems but to help him find his own solutions to his problems.
- (b) Guidance is a continuous process like the education system itself. It is a necessary right from the primary level and up to the University level.
- (c) The guidance programme will of course differ according to the level and in institutes of higher learning as required.
- (d) Specialists are needed for the successful management of the guidance programme. But the success of this programme will of course depend upon the combined effort and wholehearted co-operation of pupils, teachers, social workers, administrators and guardians.

32.4. The subdivisions of the guidance programme.—The guidance programme is the sum total of certain co-ordinated activities. Some of these activities are indicated below:

(a) The activity relating to the collection of data about the pupil; this activity should consist of collecting all necessary data about the pupil and recording them separately so as to get to know the pupil well and to evaluate his attributes. The data collected should include the gradual development of the pupil's characteristics, his educational experience, the state of his health, his family environment and his own relation to the family, his personal hopes and aspirations, his objectives and his plans for his future life. A scientific method has to be devised for collecting and recording the above data right from the primary stage. An individual record should be maintained for every pupil showing the gradual development of his personality and attributes. This record can serve as a full and dependable introduction for the pupil. This record can again be used as a reliable document for determining the pupil's present and future courses of action.

(b) The activity relating to the supply of the above data: this activity should include the supply of at least three kinds of data and their proper arrangement. Data relating to educational facilities, analysed data relating to the provision of employment and data relating to self-evaluation in the social and economic perspective. A pupil particularly aware of his own attributes and having the advantage of a carefully prepared record of his activities inside and outside the educational institution can determine his own future course of action and his obligations to society much better than through mere familiarity with the text books.

Different methods should be adopted if the above activity is to be made successful. 'Orientation programme', a handbook prepared by the pupil's own school or college, a booklet indicating possible sources of employment and related methods will be of particular use to the pupil.

(c) The activity relating to counselling: This activity is the very heart of guidance. This, therefore, requires trained specialists. The pupils should be encouraged to approach their counsellor with their various problems and to seek his expert guidance as to how these problems can be solved. The pupil should not hesitate to seek the help of his counsellor even in regard to problems which are highly personal or very complex. The problems need not always be educational and may arise from family or social surroundings.

(d) The activity relating to job counselling: the pupils going out of the college or the university should be given every possible guidance as to how opportunities for employment should be exploited and if necessary help in the matter of getting jobs. At the primary level this type of counselling should be directed towards determining the class for which a particular pupil is suited and solving the difficulties relating to the pupil's co-existence with his class-fellows. At the secondary level such counselling can be used in relation to the pupils going in for higher education or those who want to terminate their education at this stage and enter the professional world.

(e) The follow-up activity counselling and guidance should remain available even for those pupils who have completed their education. If any pupil feels the need of seeking guidance or counselling from his old counsellor even after employment, he must not be refused the benefit. Besides, this activity should include maintaining contacts with old pupils and those taking leave of their educational institution.

32.5. A counselling and guidance programme should be adopted in our education system for raising the standard of practical education and for our overall national welfare. Trained specialists, suitable text books and guide books written in Bengali, appropriate measures for evaluating the pupil's intelligence, interests, inclinations and special talents and many such preparatory activities will be required for the successful implementation of the above programme. The following steps should be taken for the materialisation of the counselling and guidance programme:

(1) 'A guidance and testing institute' should be set up without delay as a preparatory measure for the wide-spread introduction of the guidance programme. The chief function of this institute shall be:

- (1) To take suitable measures for publication of the various forms, questionnaires, books and booklets required for counselling and guidance.
- (2) To take the responsibility for evaluating individual talents, interests, inclinations, personality, special skills and knowledge and to take preparatory measures for a psychological test fit to be used at different levels.
- (3) The collection of various data suitable for the guidance programme with the help of applied research and to take effective measures for their proper use.
- (4) To train guidance and testing specialists. The guidance programme in all the educational institutions of the country should be successfully related to the activities of the above Institute. The work relating to the guidance programme can be undertaken by the Institute of Education and Research attached to the Dacca University pending establishment of the proposed guidance and testing institute.

(b) The training programme for counsellors must be undertaken by the Institute of Education and Research, the Education Extension Centre and Teacher Training Colleges. Provision should also be made for the training of teachers at work.

(c) A counselling and guidance division should be started in the Education Ministry and in the Regional Education Directorates and experts appointed there.

(d) The guidance programme should be started without delay in those educational institutions which are more or less ready for it and this must start functioning in all educational institutions according to a phased programme within the next ten years.

STUDENT GUIDANCE AND COUNSELLING**SUMMARY**

1. Guidance and counselling should be regarded as an integral part of the education system. (32.1.)

2. A 'Record Card' should be prepared for every pupil. This should incorporate the gradual development of his characteristics, his family environment, his personal hopes and aspirations and inclinations his plans for his future life and his academic progress. (32.4.a)

3. Orientation programmes, school or college handbook and booklets indicating the possible sources of employment will be of great use to the pupils. (32.4.b.)

4. A counselling programme must be introduced to help the pupil solve his personal and other problems. (32.4.c.)

5. A follow-up programme should be introduced for the benefit of outgoing students so that they can continue to get the advantage of counselling and guidance from their old counsellor. (32.4.d.)

6. A 'guidance and testing institute' should be set up as a preparatory measures for the widespread introduction of the guidance and counselling programme. Meanwhile, this work may be undertaken by the Institute of Education and Research. (32.5.a.)

7. The education of Institute and Research, the Education Extension Centre and Teacher Training Colleges must provide facilities for the training of counsellors. (32.5.b.)

8. 'Guidance and Counselling' experts should be appointed in the Education Ministry and in the Regional Educational Directorates. (32.5.c.)

9. The guidance programme should be started without delay in those educational institutions which are more or less ready for it and this must start functioning in all educational institutions according to a phased programme within the next ten years. (32.5.d.)

CHAPTER XXXIII

STUDENT WELFARE AND NATIONAL SERVICE

33-1. To realise the objectives of education we must try to create in our educational institutions an environment favourable for the physical and mental development of the pupils and helpful for their uninterrupted Academic progress. The encouragement given to pupils by reducing their educational expenses, the help provided to them for making themselves physically fit for full and effective participation in their study programme, the construction of hostels for students and the development of co-curricular activities are all intimately connected with educational reconstruction.

33-2. We have elsewhere in this report made recommendations for making education from class I to class VIII gradually free and for the provision of scholarships. In addition, it is necessary to set up libraries and distribute text books at a low price at the primary and secondary levels. A student welfare fund should be set up in every educational institute with subscriptions from old students, donations from the public and financial help from government. This fund should be utilised for helping distressed students. Moreover, provision should be made for scholarships for poor but meritorious pupils and facilities provided for them to read in residential educational institutes.

33-3. Nutrition presents a problem in the environment from which most of our pupils come. We must be active to see that the lack of nutrition does not become an obstacle to manual labour on the part of pupils and that manual labour does not aggravate the nutritional deficiency of the pupils.

(a) Some nutritional food should be provided for all pupils (between five and fifteen years old) at the primary and lower secondary levels. The tiffin fee at present collected from the pupils may continue but the school authority and government must both provide greater help in this regard. If necessary, government may seek the help of UNICEF and similar international organisations in this matter.

(b) There should be provision for a canteen or cafeteria in colleges and universities subsidised by the respective authorities to make available nutritional food at a cheap rate for the pupils. The authority concerned must fix the standard and price of all food-stuffs and employ teachers to see that these are properly followed. If possible a joint committee of teachers and pupils should be put in charge of management of the canteen.

33-4. Necessary measures should be taken for preserving the pupils' general health. Our recommendation in this matter are as follows:

(a) There should be provision for a health service which can be utilised by every pupil as soon as he begins his academic life. The school concerned must maintain proper health records for every pupil. When a pupil leaves school, his health records should be handed over to him which he should deposit with the educational institution where he is next admitted.

- (b) There should be provision for free medical treatment for every pupil in all educational institutions. The hospitalisation expenses for the pupils, if any, must be borne by the educational institutions concerned.
- (c) A doctor should be appointed at every union for the school health service. A doctor at thana headquarters should be given the responsibility for the proper management of this health service in his area.
- (d) A Medical Centre under a qualified physician should be attached to every college. The actual number of doctors should of course be determined in relation to a college's enrolment.
- (e) A properly equipped Medical Centre with a lady doctor and as many other doctors as required should be attached to every university.
- (f) A trained physical education instructor and a physical education counsellor should be appointed in every educational institution for the development of the physical and mental health of the pupils.
- (g) Provision should be made for suitable gymnasiums and playing-fields for the pupils.

33.5. Where the constant presence of the pupils at the campus is necessary for requirements of the particular curriculum as (in many vocational institutes), residential accommodation for the pupils must be provided. Residential accommodation must also be provided for those students who live far away from their educational institutions. We consider it desirable that the following principles should be followed in this connection :

- (a) Residential accommodation for 40 per cent. of the pupils should be available in every college, and for 60 per cent. of the pupils in every university. This principle should specially be applicable, within the next five years, in the case of colleges in district and subdivisional towns.
- (b) Admission to the hostel must be regulated according to the facilities available as in the case of the educational institution itself.
- (c) If possible a subsidised cafeteria should be set up for the pupils in residence. The facilities of statutory rationing should be extended to cafeterias and dining halls attached to educational institutions.

33.6. **Study Centres for the day-scholars**—Study centres should be opened for the day-scholars at the higher levels of education. Facilities for study at home in urban areas on the part of pupils are extremely limited. A library and a cafeteria should be attached to the Centres. Provision should be made in these Centres for at least one-fourth of the day-scholars.

33.7. It is desirable to increase the extra-curricular activities of the pupils. We have elsewhere in this report recommended for the setting up of a library in every educational institution for the use of pupils. Here we propose :

- (a) A drama group, a literary group, a debate group, a music group consisting of interested pupils should be set up at the school level under the leadership of a teacher. The elected student unions at the college

and university levels should regard these activities as among their responsibilities. The expensive cultural functions organised with professional artists in our colleges and universities must be forthwith discontinued.

(b) It is desirable to provide for educational tours at different levels. The aim of these educational tours should be :

1. To get familiar with the more prominent objects and samples or the way of life of a neighbouring area.
2. At the university level, familiarity with the relics or objects relevant to the particular subject of study. These educational tours should be confined to the country except where outside tours are educationally imperative.

(c) The pupils' efforts to maintain cleanliness and orderliness in their respective educational institutions and hostels should be encouraged.

33.8. As soon as the pupils' consciousness of their civic and social responsibilities is aroused, they should be encouraged to participate in activities relating to national service. This will not only develop their sense of moral responsibility but many difficult problems will also be solved in the country's present condition by the participation of the large student force in national service activities. Hence we recommend the compulsory participation of all pupils in such activities for at least three months during their academic life. The certificate of participation in national service should be given due weight together with the candidate's academic achievement when considering him for employment.

33.9. National service can for the time being be divided into two categories,

- (a) The campaign against illiteracy, and
- (b) Social service.

The pupils will have the option of joining any of these two groups after their H. S. C. examination is over. Every educational institution must be regarded as a centre for the removal of illiteracy for this purpose and the pupils choosing the first group should take part under a teacher's leadership in the first against illiteracy in their own centre or in an adjacent area. The workers belonging to the second group should participate as volunteers in local development projects.

33.10. The pupils appearing in the first degree examination may work for three more months under a country-wide scheme relating to national service. At this level, the medical students can work in rural health centres, the engineering students in some development projects (preferably in rural areas), the agricultural students in some agricultural projects and others in similar projects or for the removal of illiteracy.

STUDENT WELFARE AND NATIONAL SERVICE

SUMMARY

1. There should be provision for distribution of text books at a low price to poor pupils at the primary and secondary levels. Besides, every educational institution should have a student welfare fund to help the poor pupils as necessary. (33-2).

2. Some nutritional food must be supplied at the primary and lower secondary levels to fight against malnutrition. Government may consider seeking the help of UNICEF and similar international organisations in this matter, if necessary. Subsidised cafeterias should be provided in colleges and universities for the supply of nutritional food at a cheap rate to the pupils. (33-3).

3. There should be provision for free medical treatment of every pupil under an appropriate health service. Every college and university should have a properly equipped medical centre attached to it. (33-4).

4. Provision for residential accommodation of 40 per cent of the pupils should be made in every college, and of 60 per cent of pupils in every university. (33-5).

5. 'Study Centres' should be opened for the day-scholars. A library and cafeteria supplying food at a cheap rate should be attached to each of these centres. (33-6).

6. Pupils must be encouraged to participate in cultural and co-curricular activities. It is desirable to make provision for educational tours at different levels. (33-7).

7. Every pupil must compulsorily participate in national service work for at least three months during his or her academic life. After the H. S. C. examination is over, the pupils should take part in the fight against illiteracy under the supervision of teachers or work as volunteers in local development projects. The pupils appearing in the first degree examination may work for three more months in the field of national service. (33-8-33-10).

CHAPTER XXXIV

EDUCATIONAL ADMINISTRATION

34.1. Many education commissions and committees were set up prior to independence but no particular attempt was made to study the effectiveness of educational administration and to raise its standard except in a few minor matters. No leadership had emerged from among the educational administrators for educational reforms rather their conservative attitude and at times their inefficiency had actually impeded the effort to improve our education system. If the old administrative system continues to prevail in the field of education even in the altered circumstances of freedom, our desired educational reform is not as in the past likely to materialise. The reconstruction of the administrative system in the field of education has therefore become imperative.

34.2. We must first of all know the difficulties and drawbacks in our system of educational administration before any recommendations can be made as to how the system should be reconstructed. The main difficulties and drawbacks of our system of educational administration are as follows:

(a) One chief drawback of our educational administration is the excessive centralisation of powers and responsibilities in the country's capital. At present there are two directorates under the Education Ministry: Education Directorate and Directorate of Technical Education. Education Directorate is subdivided into four divisional directorates. The responsibility of the divisional directorates is confined to the school level (up to class X). Besides, the administrative and financial powers given to the divisional directorates are very limited and not at all adequate to the responsibilities discharged by them. As a result, most of the administrative and financial matters relating to the school level have to be referred to the Education Directorate at Dacca for their approval. This slackens the progress of work in many cases and as a result the educational institutions and the people concerned face considerable difficulty. On the other hand, the Education Directorate has direct responsibility for the financial and administrative matters of the colleges. The administrative and financial powers given to the colleges are extremely limited and in most financial and administrative matters the colleges are dependent on the approval of the Education Directorate and through it of the Education Ministry. The supervision and management of colleges is thus considerably hampered and their work progresses at a very slow rate. The technical and engineering schools and colleges in the country are directly dependent on the Directorate of Technical Education in administrative and financial matters. They too are required to take the approval of their Directorate and through it of the Education Ministry in most administrative and financial matters. They also face the same difficulties in the matter of management and supervision as faced by the general colleges. The excessive centralisation of educational authority is therefore commonly regarded as one of the chief defects of our system of educational administration.

(b) Another main defect of the system is the greater value given to administrative convenience rather than to the views of educational experts while determining educational policies and the cavalier treatment of the views of educationists in the matter of framing educational schemes. Every educational administrator whether in the professional field or in the field of administration, must have

a dependable knowledge of the education system under which he is working and of the educational principles and problems of other countries if he is to arrive at correct decisions. It is extremely difficult for a person to suddenly acquire the attributes and competence required of a successful educational administrator, if he has no practical experience of different kinds of educational programmes and an extensive knowledge of educational principles and methods and if he has not spent his professional life in trying to find solutions to educational problems. If a person has the experience and knowledge mentioned above and combines them with foresight he can successfully formulate realistic educational schemes and evolve sound educational principles. It is commonly seen that the views of the educationists and specially those of divisional educational executives are given very little value while determining our education policy and formulating final development schemes in the field of education. As a result, the education policy determined and the development schemes formulated are often defective from the point of view of sound educational principles although they may be administratively convenient. This arrests educational progress and does not make possible any improvement in educational standard.

(c) One of the great defects of our system of educational administration is the duplication of work and consequently waste following from the division of educational administration into the Education Ministry and the Education Directorates. We have already mentioned that the Education Ministry has two Directorates under it: Education Directorate and the Directorate of Technical Education. Generally speaking the responsibilities of the Education Ministry are as follows: to determine educational policies, to achieve cohesion in educational policies, to co-ordinate and harmonise the different levels of education, to formulate educational schemes and to make allocations of money all inter-ministry matters, all foreign and international matters relating to education culture and sports, universities and all autonomous educational organisations appointments to the higher posts in the education department, etc. And the responsibility of the two Education Directorates is to implement all educational projects in relation to existing educational policies and current development schemes and to generally supervise the branches of educational administration which are under them. In actuality, however, the above system of educational administration was not effective in the past or it was not found possible to make it so and this is not effective at present and there does not appear to be much chance of this system succeeding in future because of the radically changed circumstances of today. The duplication of work in the Education Directorates and in the Education Ministry has continued for a long time and it has not been found possible to draw a firm line between the responsibilities of the Education Ministry and those of the Education Directorates. As a result this duplication of work is largely wasteful.

(d) The conservative attitude of our educational administrators and the decrease in administrative efficiency are largely responsible for emasculating our system of educational administration. It has so far been seen that the highest posts of the Education Ministry and sometimes of the Education Directorates have been filled by people belonging to general administration. The people belonging to the Education Department were never considered for the higher posts in the Education Ministry outside the two Education Directorates and as the latter are under the former the decisions of the Education Ministry have always been final in all educational matters. But the people responsible for taking these final decisions are not those who have professional experience in the field of education or experience in actual educational administration

As a result, many decisions are taken in the field of educational administration which do not help educational development but are merely indicative of the conservative attitude of the administrators.

(e) Another defect relating to the above system is the relative negligence shown to the lower levels of education and the concentration of attention on the higher levels. The posts at the lower levels of our education system have no proper weight and importance in our whole administrative system in matters of pay and status and only the posts of the Education Secretary and the Heads of the two Education Directorates and those of officers immediately under them have a certain respectability. Most of our education officers are unable to play an effective role as they are not given their due place in the actual working field. The adverse effect of this is naturally reflected in the entire system of our educational administration.

(f) There is lack of co-operation and co-ordination in the different divisions of our education system and at the different levels of the same division. There is no co-ordination between the school and the inspecting division on the one hand and the college division on the other. Likewise there is lack of proper co-ordination at the different levels of the school and inspecting division. For example, the lack of co-ordination between the primary and secondary levels in the school and inspecting division is inimical to the efficient management of the educational administrative system.

(g) There is also considerable paucity of properly trained and competent educational administrators and the facilities for administrative training in the educational field are very limited. At present no training is required for appointments to administrative posts in the Education Department. These posts are usually filled by teachers and there is no arrangement for their training in matters of general administration. There is no arrangement for training even for the directly appointed educational administrators at the lower levels. As a result, the steps required to be taken for strengthening educational administration cannot often be adopted.

(h) The tendency to introduce an educational policy through an administrative order instead of obtaining the approval of the legislature is one of the chief drawbacks of our system of educational administration. This tendency springs from the lack of realisation that educational policies are very much an integral part of national policies. As long as educational policies are not given the same importance as national policies, it would be difficult to properly implement the former.

34-3. In the perspective of the above analysis it would appear that our system of educational administration is defective and that it needs to be reconstructed in the altered circumstances of today's society. We therefore feel that the following measures should be taken to remove the defects of the above system:

1. The Education Ministry and the two Education Directorates should become one single organisation and an educationist should be appointed Adviser to the reconstituted Ministry and its *ex-officio* Secretary. Many education and administrative commissions and committees have made this recommendation over the years. This recommendation has been made effective in many provinces and states of India and Pakistan after independence.

2. All administrative powers and responsibilities and authority should be decentralised and transferred to divisional and district levels, and in relation to educational institutions above the secondary level. The decentralisation must be achieved as needed and as far as possible centering round the educational institutions concerned.

3. After the reconstruction of the Education Ministry has been made as indicated above and after decentralisation has been achieved, the responsibilities of the Education Ministry shall be as follows: to determine and co-ordinate education policies, to achieve relevance and co-ordination at different levels of education, educational planning and allocations of funds, inter-Ministry matters, foreign and international matters relating to education, culture and sports, the different subjects concerning universities and autonomous educational organisations, appointments to the higher posts in the education department and other matters which are outside the scope of the administration relating to universities, autonomous educational organisations, divisional education directorates and district education authorities. The question here arises of devising the necessary structure for the Education Ministry and providing for the required number of educational administrators. We are of the opinion that the Education Ministry should be reconstructed on the basis of different divisions of education. The divisions should again be divided into subdivisions in accordance with the different branches and responsibilities of education. We visualise a group of highly qualified people in different fields of education attached to the Education Ministry whose opinions and views will be able to attract the respect of educationists both at home and abroad. Above everything else, these people should have the particular capacity needed properly discharging the responsibilities of the Education Ministry. The Education Ministry must be expanded if we expect to get the sort of work required for today's changed society from the Education Ministry. The responsibilities, the structure and the necessary number of educational administrators have all been shown in the proposed establishment chart of the Education Ministry attached as an index to this report.

4. There shall be four divisional education directorates, one in each administrative division, directly under the Education Ministry. General secondary education, vocational secondary education and all other branches of education at the secondary level should be placed under the supervision of these divisional directorates. The responsibility for inspecting primary schools will also devolve upon them. The number of children fit for primary and secondary education in Bangladesh will be at present twenty-two and a half-million. This number will be increased to over twenty five million within the next ten years. This number is double the total population of the Australian Continent. A decentralised education system is far more desirable than a centralised one in regard to the proper education and training of this very large number of children. Besides, all matters outside the administrative power and authority of educational organisations above the secondary level (such as general colleges, technical schools and technical colleges) should also be placed under the supervision of the divisional education directorates, that is, the administrative powers and responsibilities and authority concerning general colleges exercised by the Education Directorate and by the Technical Education Directorate concerning technical schools and colleges should generally be transferred to the divisional education directorates. Of course the educational institutions above the secondary level must be given greater administrative authority and financial powers. The necessary responsibilities and authority and administrative and financial

powers and the power of expenditure must be given to the proposed divisional education directorates for the proper discharge of their duties. The responsibilities, the authority, the administrative powers, the power of allocating and spending funds at present given to the Education Directorate and the Technical Education Directorate and to their respective heads should generally be transferred to divisional education directorates and their respective heads. If this is done, educational activities will become relatively more smooth. The structure of the proposed divisional education directorates and the number of education officers required for them have been shown in the establishment chart of divisional education directorates attached as an index to this report.

5. The budget allocation of funds for all the educational institutions under the divisional education directorates should be given to the latter. The capacity of the divisional education directorates for educational administration and expansion will be increased if this is put into effect.

6. The administrative and financial powers of the heads of the educational institutions should be increased to enable them to be administratively more effective. The administrative and financial powers of the heads of the secondary schools are very limited indeed and they face considerable difficulty in the discharge of their duties because of this. We realise the need for increasing administrative and financial powers of the heads of secondary schools. There is need for considerably increasing the financial and administrative powers of college principals. The responsibility for spending funds for colleges provided in the budget according to the existing rules and regulations should be given to the college principals. Many of the difficulties of the teachers and officers will be removed and they will be able to work with greater effectiveness of the proposed decentralisation takes place.

7. We have discussed the administrative and financial powers and authority of the engineering colleges in the relevant chapter of this report. Similarly, our views on such matters concerning medical colleges will be found in the appropriate chapter.

8. At present the agricultural university is under the general control of the Education Ministry. The agricultural education imparted in schools and general colleges is also under the control of the Education Ministry through the Education Directorate. But the agricultural college is under the control of the Ministry of Agriculture. This hampers the overall development of education. We believe the existing agricultural college and those that will be set up in future should be brought under the control of the Education Ministry, as is the case with the agricultural university. This will bring the control of agricultural education and the control of general education, technical education, technological education and commercial education under the same Ministry and will make it easier for achieving the necessary co-ordination between different branches of education to meet national requirements.

9. The opinion expressed above is also applicable in the case of medical education. Serious consideration should be given to bring medical education also under the control of Education Ministry. This matter has been discussed in some detail in the chapter on medical education.

10. The recurring grants to non-government colleges can be given direct; but the development grants and the contingent and other grants should be given to non-government colleges through the University Grants Commission. The responsibility for giving development grants and for allocation of funds in respect of colleges and educational institutions engaged in honours and

post-graduates teaching, apart from the universities, should be given to the University Grants Commission. Otherwise, we fear, the educational standards in the above institutions will be lowered and the expenditure on the University Grants Commission unnecessarily heavy.

11. A primary education authority should be set up at the district level for the organisation, management, supervision and development of primary education (up to class VIII). This authority shall have the power to conduct the public examination at the primary level. The district education authorities must be developed as autonomous organisations to make them more effective and efficient. The district primary education authority should be constituted with representatives from heads of local educational institutions and with representatives of educationists and persons employed and engaged in educational activities. The chairman of the district primary education authority shall be a senior educationist of that district chosen by the Education Ministry and its secretary shall be a full-time district primary education officer selected by the district primary education authority. An executive committee should be attached to the district primary education authority for the effective implementation of its programmes. The senior educationist chosen by the Education Ministry shall be the chairman of the executive committee. The district primary education officer shall be its secretary. The necessary number of officers and employees must be appointed by the district primary education authority for its proper functioning. The funds provided in the budget for primary education should be made available to the respective district primary education authorities.

34.4. Suitable measures should be taken for the improvement of self-management at the educational institutions together with measures for the improvement of educational administration. An executive committee and a managing committee should be attached to educational institutions at all levels and effective representation of teachers and guardians on these bodies must be ensured. Besides, an advisory council should be set up in educational institutions up to the secondary level with representatives from distinguished persons of the locality and suitable representation from the teachers and the guardians, and with the head of the educational institution as its chairman. For the successful implementation of educational projects at every level of education, the teacher-student ratio must be established on a rational and scientific basis. It must be ensured that the pupils get the necessary facilities in regard to hostels, sports and games, medical attention, tiffin and healthy enjoyment of leisure. It must again be ensured that all educationists with the same qualifications and experience and of the same standard and engaged in discharging their responsibilities in the same circumstances, whatever they may be employed, get the same pay and facilities. A code embodying the terms and conditions of service in respect of teachers and other employees in non-government educational institutions must be immediately formulated to make them aware of their responsibilities and also to provide them security. Apart from reasonable pay scales, measures for provident fund and retirement benefits regarding the above teachers and employees should be introduced. The teachers and other employees and the educational organisations where they are employed should both make contributions to these funds during the tenure of the former's service to relieve them of anxieties in times of sickness and economic hardship at the time of retirement.

34.5. At all levels of educational administration suitable educationists must be appointed as a matter of principle and only educationists should hold the posts of officers in the Education Ministry. Education is a complex,

and at the higher level a specialised, field. For effective administration at this level, professional and technical ability, administrative skill and full knowledge of the educational methods and advancement as well as of educational problems the different countries of the world are, therefore, absolutely necessary. The educational adviser must be fully familiar with all educational programmes, with qualitative educational standards, with specialised training skills, with the trends of curriculum development and with the appropriate evaluation methods of teachers and pupils. He must also be closely familiar with the educational methods prevalent in other countries. He requires a highly developed skill for determining the professional competence of teachers and educationists for the purpose of making appointments to different posts and the effecting their promotions and transfers. At the higher level, these responsibilities should be discharged by the same officer and he has to take decisions about all professional issues and problems brought before him. He, therefore, requires to be fully familiar with the education system under which he is working and with educational methods prevalent in other countries and with different educational problems and their solutions to be able to arrive at correct decisions in either the professional or the administrative field. No person can suddenly acquire these attributes if he has no actual experience of educational programmes of different kinds, if he is not conversant with educational methods and principles and if he has not spent all his professional life in identifying educational problems and trying to find solutions to them. Only a person combining the above attributes with foresight is in a position to evolve a realistic and coherent education policy. If we intend to make our system of educational administration effective and well-organised we must choose such an educational administrator who will be able to face different problems not only with skill but also with professional competence. There is hardly any scope for a difference of opinion regarding the desirability of appointing suitable educationists to all administrative posts in the Education Ministry and at all levels of educational administration.

34-6. The officers in the education department must be given pay and status according to their qualifications and ability and the highest administrative posts should be open for them. The more talented among our young people are not at present attracted to the education department. Previously direct recruitments were made to the highest posts in the field of education in this sub-continent. These recruitments were made in accordance with standards similar to those laid down for the civil service and similar qualifications were required. Their scale of pay and their qualifications were at the same level as in the case of former I. E. S. officers even after education was made a provincial subject and the I. E. S. posts were replaced by provincial senior service posts. The policy adopted in 1939 of filling these posts by promotion and reducing the pay scale resulted in qualitative deterioration in the field of educational administration. We would like to make it clear with we are not opposed to the principle of promotion but we are firmly of the opinion that young people of outstanding merit should be recruited to these posts along with people of long experience, high competence, demonstrated ability and endowed with leadership qualities. It does not matter whether they belong to the education department or not. But those appointed to the different posts in educational organisations must all be highly talented and endowed with leadership qualities. Their professional competence has to be determined and their promotion should always depend upon their demonstrated ability. The people recruited to the higher posts in the field of educational administration must be both talented and eminent as the responsibility for managing our education system will devolve on them and as they will

be required to provide leadership in the matter of introducing and expanding all educational programmes. The tone and quality of educational programmes will depend on the quality of their views and opinions. The personality and character of these people should be such as to arouse confidence in the minds of their co-workers

34.7. For the successful realisation of the above objective, the posts in the education departments should be built up on the same level as that of the civil service in regard to monetary attraction, professional facilities and scales of pay. At each level of educational administration there should be posts equivalent to those at the comparable level of civil service in the matter of pay scales and related facilities. If we are able to build such a structure we can induce our young people to choose their professional careers not for considerations of future advancement and financial benefits but out of genuine professional attraction. Appointments to the highest posts in the education department should be made in three different ways. In a few cases, direct recruitment of people between 21 and 25 years of age should be made; in some other cases, these posts may be filled by promotion; in the remaining cases people of proved professional competence and leadership qualities should be recruited from schools, colleges and universities.

34.8. The pay and social status of officers in the education department should be determined on the basis of individual ability and competence. The present situation is far different. The salaries of education officers are not at all related to their particular levels of ability and they seldom get any recognition for their professional achievement. Often they are required to work in such surroundings that even the most courageous get disheartened and they also have no assurance of a reasonable remuneration. In such circumstances, talented people are not attracted to this profession. Continuous efforts have to be made by the education department and by those actually employed in educational jobs, in co-operation with the educated section of society, to achieve universal recognition of the full social value of educationists and teachers. It is not possible for educationists and teachers to get respect from the public through legislation, although government can take certain measures designed to achieve this objective. This respect has to be earned by the educationists and teachers themselves, aided by suitable governmental measures. To what extent the educationists and teachers will be respected will depend on how well they are able to serve the student community and provided the necessary leadership to them.

34.9. All educational officers must be trained prior to their appointments to administrative posts. The officers directly recruited to administrative posts must undergo training for a while in general and professional fields. Those appointed at a relatively young age should be made to follow a one-year educational programme related to schools and colleges. In addition, they must be given on-the-spot training for one-year. The young officers must acquire practical knowledge of the problems connected with education and their peculiarities during the above training period. A short term training course should be arranged for the more elderly people recruited from outside to make them familiar with departmental rules and regulations and to further develop their particular type of knowledge. It is absolutely necessary to raise the competence of officers already serving. Fixed courses will be required for these officers. It will also be necessary to arrange training courses of different duration for raising the professional competence of headmasters, officers working in the inspectorate and officers connected with the management

of divisional educational administration. The quality of their performance in this training programme must be assessed for deciding their promotions and their future appointments to new posts. Indeed it will not be prudent to appoint anyone to a higher educational post unless he has successfully participated in the full training course and demonstrated the professional administrative and personal qualities required for the purpose.

34.10 Provision should be made for the training of educational administrators from time to time to make them familiar with the new evolving method of administration. A large number of people holding administrative posts at different levels of education are not trained, so continuous efforts have to be made to make them suitable for their professional work. Besides, no person can be considered fit for professional work in the field of education if he does not attend suitable refresher courses from time to time even after undergoing training once. This principle has been recognised in all developed countries where there are opportunities for teachers and educational administrators to get familiar with new educational trends at appropriate intervals. We must regard refresher courses as an integral part of our education system if we intend to preserve and raise our educational standards. We, therefore, recommend that a refresher course should be arranged at least once in five years to allow educational administrators to get familiar with the latest administrative methods in their own field. The above training, for all officers working in the inspectorate and for headmasters, can at the initial stage be arranged at the Education Extension Centre. A special staff has to be appointed for managing the refresher training courses.

34.11. We have recommended that education officers should be trained prior to their appointments to administrative posts. We have also stressed the need for providing training to educational administrators to allow them to get familiar with the latest methods of educational administration. There are about 9 thousand educational institutions between the secondary level and the university level in our country, including the universities and the other institutes of higher learning. Heads of these institutions and the administrative and financial officers attached to them must also undergo the training mentioned above. A suitable institution has to be set up for this purpose. We propose that a national training institute called 'Academy for Training of Educational Administrators' should be set up. The proposed Academy should function as an autonomous organisation under the Education Ministry. A high-ranking director with ample authority, the necessary number of suitably qualified teachers and a special staff have to be appointed for the efficient management of this Academy. The necessary allocation of funds for this Academy must also be made. This Academy shall arrange training programmes for educational administrators directly recruited. The responsibility for providing training to the educational administrators already working (those not trained) will also devolve on this Academy. In addition, the above organisation must arrange training programmes from time to time to enable educational administrators to get familiar with the latest methods of educational administration. It must also take the responsibility of providing training for officers connected with educational planning and development. Educational planning and management are at present in a moribund condition in most of our educational institutions. Headmasters of schools, college principals and even the planning and development officers at the universities seldom attain a high level of professional competence in educational planning and development; the chief reason for this is the lack of training in the matter of institutional and financial

management. No practical experience can be a substitute for this training. A large number of officers will be required for planning and development at divisional and district centres of educational administration after the decentralisation of administrative powers and responsibilities and authority.

34-12. The improvement of the inspecting system relating to our schools and colleges is an urgent necessity. The responsibility for inspecting primary and secondary schools is that of district inspectors of schools and district education officers respectively both under the Education Directorate. Divisional education directorates and the Boards of Intermediate and Secondary Education grant recognition and extend the period of approval on the basis of reports submitted by these officers in respect of lower secondary schools and secondary and higher secondary schools respectively. The Boards of Intermediate and Secondary Education have no separate inspecting officers for secondary schools and in this matter they are dependent on the inspectors under the Education Directorate. But the Boards have their own inspectors for the purpose of inspecting intermediate colleges and determining whether or not they fulfill the conditions for recognition or extension of approval. Similarly the country's three general universities have also their own inspectors for the purpose of inspecting degree colleges and granting them, recognition or extension of approval.

34-13. The number of inspectors available for inspecting the primary and secondary schools is totally inadequate to the actual need and the inspection itself is therefore of a very perfunctory nature. At present the inspectors are required to do the work of a clerk and a police-man simultaneously. Besides, the services of the inspectors are often requisitioned for non-educational work. As a result, many schools are not inspected year after year. And when the actual inspection is made, no thoroughness is aimed at. This situation must be changed fast. The principle followed in this matter in the developed countries should also be introduced in our country. At present the work of our school inspectors is often adversely discussed and criticised. The work of the inspectors, we feel, should not be confined to assessing the financial condition and the administrative management of the schools but must show persons initiative in the matter of introducing new trends and thoughts and providing encouragement for raising the qualitative level of the school work, both administrative and teaching. If the inspectors concentrate on the essence of their job and do not discharge their function in a mechanical manner they will be able to bring about a qualitative improvement in all types of school work. Indeed, the work of an inspector should generally be that of an educationist. While visiting schools for surveying the actual working of their educational programmes the inspectors should preferably be accompanied by specialists. This method is being increasingly adopted in other countries and it can be expected to have a beneficial effect on our education system if it is introduced in our country. The inspectors must be widely read in all educational matters and be familiar with the leading educational periodicals and journals published in different parts of the world and with the relevant books and booklets published by UNESCO and similar international organisations.

34-14. It is urgently necessary to provide for more frequent inspections of the schools. For this purpose, the inspectors must be completely free from all non-educational work. Besides, the necessary number of inspectors has to be appointed. The number of inspectors we consider essential for doing all inspection and related work satisfactorily is shown in the establishment chart of the proposed divisional education directorates. It should also be mentioned in this connection that one of the two thana school inspectors recommended by us should preferably be a lady.

34.15. We have already mentioned that the Education Boards do not have their own inspectors for inspecting secondary schools and that in this matter they are dependents on the Inspectors under the Education Directorate. It is just not possible for this inadequate number of inspectors to inspect all the secondary schools in time. As a result, the recognition of secondary schools and the extension of approval cannot be given in time and the assessment of the quality of educational programmes in schools is also delayed and in consequence deterioration sets in the educational field. In this perspective we consider it necessary that the Education Boards should have their own inspectors for inspecting secondary and higher secondary schools. The work of the inspectors under the Education Boards should be co-ordinated with the work of the inspectors under the Divisional Education Directorates.

34.16. The existing arrangement and the actual number of inspectors in the Education Boards and Universities for inspecting colleges are both unsatisfactory. There are about six hundred intermediate and degree colleges in the country. Of this, the number of degree colleges with the intermediate section attached to them will be about three hundred, that is, every degree college has an intermediate section attached to it. There are only four college inspectors in the Country's four Education Boards. It is not possible for these four college inspectors to visit and inspect all the intermediate colleges and the intermediate sections of degree colleges. Likewise, it is hardly possible for the three university inspectors of colleges to visit and properly inspect three hundred degree colleges. The survey and inspection of matters relating to the administrative management of colleges, their financial condition and the quality of their educational programmes cannot be done properly or in time. The need for, increasing the number of inspectors of colleges therefore becomes obvious. The inspectors of colleges should preferably be accompanied by specialists while visiting colleges for a detailed analysis of their educational programmes and for assessing the educational standards obtaining in them. There should be provision for the inspection of every college at least once a year. Besides, special inspections of colleges must be arranged according to need.

34.17. The authority and powers required by headmasters of schools and colleges principals are not given to them and there is constant interference with their work. Our headmasters should be given the same authority and powers which are exercised by headmasters in the developed countries of the world for the effective management and supervision of all school affairs. The headmaster must himself be an outstanding teacher able to provide leadership to both teachers and pupils and possessing personal attributes which the pupils might feel inspired to emulate and whose opinions are likely to carry weight with all concerned. All this is also applicable in the case of college principals. The headmasters and college principals should not be appointed merely on the basis of academic qualifications. The discrimination and caution shown in the selection of captains of ships and of army generals must also be shown in relation to the selection of headmasters and of college principals. We have in the past neglected the great importance of the personal attributes and leadership qualities of people to whom we entrust the charge of our adolescents. We must remember that complaints about students restiveness and poor quality of work are seldom received in relation to educational institutions managed by really capable people.

34.18. At present most of the primary school teachers are local people. We have received complaints for many quarters that they are not doing their

duties properly. Ways must be found of inspiring them to do their work conscientiously and the concerned authorities also must take all suitable measures. If necessary, the question of transferring local primary school teachers to far away schools must also be considered.

34.19. The secondary and higher secondary system of education (from class IX to class XII) is under the management and control of Boards of Intermediate and Secondary Education. The organisation, control, supervision and development of secondary and higher secondary education are the responsibilities of these Boards. The Boards of Intermediate and Secondary Education are therefore required to grant recognition to secondary schools and Intermediate Colleges, to determine the curriculum and syllabus for this level of education and to conduct public examinations at the end of class X at the end of class XII

34.20. The number of secondary schools and Intermediate Colleges has dramatically increased in the past few years. A large number of secondary schools and Intermediate Colleges has been set up which do not fulfil the conditions laid down by the Boards. In most cases, the authorities of these schools and colleges do not have the necessary resources to properly and efficiently manage them. Recognition should not be given to schools and colleges where there is a marked shortage of teachers, educational implements, furniture and accommodation. No effort to reform the educational system will be successful if the conditions for recondition are not scrupulously followed. We recommend that immediate measures should be taken for rectifying the deficiency of the past in this matter. Recognition should be withdrawn from schools and colleges unable to fulfil the conditions for recognition. We consider it the duty of the relevant authority to postpone granting recognition to schools and colleges if found necessary and to withdraw recognition from those which are considered unnecessary.

34.21. The total number of secondary schools and Intermediate College under the Boards of Intermediate and Secondary Education will be about eight thousand and their total enrolment will be approximately eight hundred thousand. It is not possible for the four Boards of Intermediate and Secondary Education to organise, control, supervise and develop this huge number of educational institutions. The number of pupils under each Board is increasing every year. In 1972 the number of candidates for the secondary certificate examination under all the four Boards was two hundred and twenty five thousand and that of candidates for the H.S.C. examination one hundred and fifty thousand. In 1973 the total number of pupils taking the S.S.C. examination rose to two hundred and fifty thousand, although the total number of candidates for the H.S.C. examination in the same year remained more or less the same. In 1970 the numbers were two hundred thousand and one hundred and twenty five thousand respectively.

34.22. At present the four Boards of Intermediate and Secondary Education at Dacca, Rajshahi, Comilla and Jessore are so engrossed in their own problems that they hardly find any time to devote the necessary attention to the problems of Secondary Schools and Intermediate Colleges and to finding means of arresting the gradual deterioration of their educational standards. The Boards no longer find it possible to see if conditions relating to the admission of students, the appointment of teachers and financial and administrative matters are properly followed in the approved schools and colleges in addition to holding public examinations in a well ordered manner. As a

result,* the educational standards in these institutions are fast deteriorating and student restiveness there is also increasing. The situation is becoming gradually more complex.

34.23. The education system relating to the intermediate or higher secondary level was under the control of the universities up to 1961. In that year the control of this stage of education was transferred by legislation to the Boards. Simultaneously the decision was taken that the two classes forming the intermediate section should be separated from degree colleges and form classes XI and XII of the higher secondary stage. In most cases, the two Intermediate classes were separated from government degree colleges to constitute intermediate colleges. But later this arrangement was cancelled as a result of the agitation carried on in 1962 against it. The two intermediate classes have once again been joined to the degree colleges. Only in the matter of the public examination held under the relevant Board of Intermediate and Secondary Education is the intermediate level regarded as the higher secondary level. In all other matters this level is known as the intermediate level as in borne out by the title of the Boards. The title actually is 'Board of Intermediate and Secondary Education' and not 'Board of Higher Secondary and Secondary Education'. Classes XI and XII either constitute intermediate colleges or form the intermediate sections of degree colleges. For all practical purposes, therefore, the higher secondary level or the intermediate level is an integral part of the colleges.

34.24. The same teaching methods are followed in our colleges regarding both intermediate and degree classes. The system of examination is also the same for both. There is hardly any connection between teaching methods at the secondary level and those at the intermediate level. The examination system is not also the same for both. Most of the students at the intermediate level read in the intermediate section of degree colleges. But the education system at the intermediate level is under the control of the Boards and that at the degree level is under the control of the Universities. The degree colleges having the intermediate section attached to them face several problems as they have to work under the control of two separate authorities. Difficulties arise in relation to approve of courses, inspection of colleges, registration of students and many administrative matters as a result of the different rules and regulations followed by the Education Boards and the Universities. These difficulties create confusion and affect educational standards in the degree colleges. There is hardly any parallel for one educational institution being under the control of two separate authorities.

34.25. If the experiments we have recommended for the introduction of the eleven year school system are successful, the ten year school system will be replaced by it. In that case class XII will become the first year in degree colleges and hence there will be no intermediate level of education to be controlled by the Boards. But this will take time to materialise.

34.26. In the perspective of the above analysis we have arrived at the conclusion that the four Boards of Intermediate and Secondary Education should be freed from the responsibility of organising, controlling, supervising and developing the education system at the intermediate level. The intermediate colleges and the intermediate section of the degree colleges should be transferred to such an organisation which will be able to pay full attention to the problems existing at that level of education. Our considered recommendation therefore is that the whole education system at the intermediate level should be brought within the purview and under the control of the proposed

affiliating universities. We believe that the affiliating universities will be in a position to tackle actively the educational problems at the intermediate level and to make vigorous efforts to find suitable solutions for them. This will result in the considerable improvement of the curriculum and syllabuses and of teaching and examination methods at this level. This improvement in its term will be reflected in the whole education system. The college authorities will thus be able to achieve greater autonomy and the Education Board to concentrate their whole energy and attention on organising, controlling, supervising and developing the entire education system at the secondary level and on holding the S.S.C. examination in a proper manner. The boards will also find the time to give undivided attention to their own problems and to seek satisfactory solutions to them. All this will result in the improvement of educational standards at the above levels and consequently the whole education system of the country will be benefited.

34.27. In this connection it must be pointed out that the above problems cannot be solved by merely setting up a few more Boards of Intermediate and Secondary Education. Nor can the above objective be realised by setting up separate organisations like the Board of Intermediate Education or the Higher Secondary Education Board. The question of setting up such organisations does not arise at all in view of the experiments we have recommended for introducing the eleven-year school system.

34.28. If our recommendations in regard to vocational and technical education are implemented, the question whether the existing Technical Education Board should continue as a separate organisation has to be seriously considered. It should also be examined whether the present Madrasah Education Board should continue as a separate organisation. The responsibility for the education system up to the secondary level at present discharged by the Technical Education Board and the Madrasah Education Board can be transferred to the Secondary Education Boards freed from the responsibility of the intermediate level of education. The education system above the secondary level now controlled by the Technical Education Board and the Madrasah Education Board can likewise be transferred to the proposed affiliating universities.

34.29. In the field of higher education the universities should function as fully autonomous organisations under the general control of the Education Ministry. Of the six universities in the country, legislation has recently been enacted in relation to four. These universities are Dacca University, Rajshahi University, Chittagong University and Jahangir Nagar University. The legislation relating to these universities is about to be implemented. We understand that the formulation of laws and regulations regarding Engineering and Technological University and the Agricultural University is at the final stage. It must be mentioned in this connection that before formulating the above laws and regulations government had accepted the recommendations of a committee consisting of teacher representatives and the Vice-Chancellors of all the Universities and with the Chairman of the Education Commission as its President. In this respect we do not think that there is much scope in this report for a detailed discussion of administrative matters concerning the universities. We have discussed the administrative structure of the proposed affiliating universities and the formation of their faculties and syndicates in chapter XIII. As and when the affiliating universities are set up, the regulations in respect of the existing universities will have to be amended.

34.30. It is necessary to set up a high-powered National Education Association to ensure the gradual improvement of our education system at all levels. One of the responsibilities of this Association shall be to co-ordinate and

harmonize education at the university level with education at all other levels and to see that educational standards do not suffer in the process. The National Education Association should be constituted with representatives of educationist and educational authorities from all levels, including the university level, for the realisation of the above objective. The Education Minister and the State Minister for Education shall be the Chairman and the Vice-Chairman respectively of this Association. The Educational Advisor and ex-officio Secretary shall be the second Vice-Chairman of this Association. The Member-Secretary of this Association shall be an officer of the Education Ministry not below the rank of a Joint Secretary.

34.31. The education system of the country is managed and controlled by the rules and regulations relating to the Education Boards and the Universities and by an 'Education Code' which lays down detailed rules and regulations regarding the appointment of teachers, the admission of students, the supervision of hostels, the maintenance of discipline in educational institutions, the award of scholarships to pupils and the holding of examinations, etc. There has been no edition of the Education Code after 1931 and no new Education Code has been formulated. In the meantime, many changes have occurred in the field of education, many new educational organisations have been set up and many educational rules and regulations have been amended and added to. Besides, many new rules and regulations have been formed and directives given to meet the requirements of the changed situation. It has become a national duty to make a collection of all amendments to old rules and regulations and of the new rules and regulations that have been introduced since 1931. We, therefore, recommend that a post **should** be created with the rank and status of a Secretary for at least two years for the purpose of preparing a new Education Code, and an able and experienced man appointed to it. To help him in this work he should be given the necessary number of assistants and other facilities required for the purpose.

EDUCATIONAL ADMINISTRATION

SUMMARY

1. No co-ordinated effort was made in the past, apart from making certain minor amendments, to make our system of educational administration effective or to raise its standard. The educational administrators never provided leadership for educational reform and the effort to improve the quality of our educational administration was in fact impeded by their conservative attitude and at times by their inefficiency. If the old system of educational administration continues to prevail even in to day's radically altered circumstances, no effort at educational reform is likely to succeed. The reconstruction of our system of educational administration has therefore become an urgent necessity. (34·1)

2. The chief defects of our system of educational administration are as follows :
 - (a) The excessive centralisation of administrative powers and authority in the capital. (34·2.a.)
 - (b) Greater attention paid to administrative convenience rather than to the views of educational experts in the formulation of education policies and of educational schemes. (34·2.b.)
 - (c) The division of the system of educational administration into the Ministry of Directorates with the consequence duplication and waste of work. (34·2.c.)
 - (d) The conservative attitude of the educational administrators and the lowering of administrative standards. (34·2.d.)
 - (e) The concentration of attention on the higher levels of education and the relative negligence of the lower levels. (34·2.e.)
 - (f) The lack of co-operation and co-ordination between different divisions of the education system and the different levels of the same division. (34·2.f.)
 - (g) The paucity of suitably trained and competent educational administrators and limited facilities for administrative training. (34·2.g.)
 - (h) The tendency to introduce educational policies through administrative orders ignoring the legislature. (34·2.h.)

3. The following steps should be taken for the removal of the chief defects in our system of educational administration.
 - (1) The Education Ministry and the two Education Directorates should be made one single organisation. An educationist has to be appointed Educational Adviser and ex-officio-Secretary to the reconstituted Education Ministry. (34·3.1.)

(2) Administrative powers and responsibilities and authority should be decentralised and transferred to divisional and district educational authorities and in relation to educational institutions above the secondary level decentralisation should as far as possible be centred round educational institutions. (34-3.2.)

(3) After the Education Ministry has been reconstituted and decentralisation has taken place the responsibilities of the Education Ministry shall be; to determine and co-ordinate education policies, to co-ordinate and harmonize different levels of education, to formulate educational schemes to make allocations of funds, all inter-Ministry affairs, all international matters relating to education, culture and sports, all matters concerning universities, appointments to the higher posts in the education department and such matters which are outside the scope of administration of the Universities, autonomous educational organisation, divisional education directorates and district education authorities.

The Education Ministry should be reconstituted on the basis of the different divisions of the education system and the divisions again must be sub-divided on the basis of different branches of education. (34-3.3.)

(4) There shall be four divisional education directorates directly under the Education Ministry, one in each of the four administrative divisions of the country. General secondary education, secondary education and all other systems of education at the secondary level shall be under the control and supervision of the divisional directorates. They will also have the responsibility for inspecting primary schools. Besides, all matters outside the power and authority of educational institutions above the secondary level must also be looked after by the divisional education directorates. The proposed divisional education directorates must be given the necessary power and authority for the efficient discharge of their various responsibilities in addition to appropriate allocations of money and the power of expenditure. (34-3.4.)

(5) The allocations of money made in the budget for all educational institutions under the control of the divisional education directorates should be made available to the latter. (34-3.5)

(6) The administrative and financial powers of heads of educational institutions should be raised for more efficient discharge of their responsibilities. (34-3.6.)

(7) Engineering colleges and medical colleges should be developed as autonomous organisations and their administrative and financial powers increased. (34-3.7.)

(8) The existing agricultural college and those that will be set up in future must, like the Agricultural University, be brought under the control of the Education Ministry. The question of bringing the medical education system, including the medical colleges, under the control of the Education Ministry should be seriously pondered.

(9) The recurring grant to non-government colleges may be given direct to them but the development and special grants for these colleges should preferably be routed through the University Grants Commission. The responsibility for allocating development funds to the colleges which offers honours and post-graduate courses should be given to the University Grants Commission. (34.3.10.)

(10) A 'district primary education authority' should be set up at the district level for organising, directing, supervising and developing primary education (up to class VIII) and for holding the public examination at this level. The district primary education authority shall be constituted with representatives of heads of educational institutions and of administrative heads at different levels of education and with representatives of local educationists and of those actually engaged in educational activities. The Chairman of this authority shall be a senior educationist of the district concerned selected by the Education Ministry and a full-time primary education officer chosen by the authority shall be its secretary. There shall be an executive committee attached to this authority for implementing its schemes and programmes and it must have the necessary number of officers and employees for this purpose. The money provided in the budget for primary education in a particular district must be given to the district primary education authority concerned. (34.3.11.)

4. An executive committee and a managing committee should be attached to educational institutions at all levels and the proper representation of teachers and guardians on these bodies must be ensured. An advisory council should also be set up in all educational institutions up to the secondary level with representatives of distinguished citizens, guardians and teachers and with the head of the educational institution concerned as its Chairman. The teacher-student ratio must be determined on a rational and scientific basis for making educational activities at all levels fruitful. Terms and conditions of service regarding the teachers and other employees of non-government educational institutions should be codified to make them conscious of their responsibilities and to give them the necessary feeling of security. (24.4.)

3. Properly qualified educationists should, as a matter of principle, be appointed to administrative posts at all levels of education and the posts of officers in the Education Ministry must invariably be held by educationists. (34.5.)

6. Officers in the Education Department having the necessary qualifications and competence should be given the opportunity to hold the highest administrative posts (in respect of salary and status) available in the country's service structure. The posts in the Education Department must be made equivalent to the posts in the civil service in matters of monetary attraction, scale of pay and professional facilities. At every level of educational administration there should be posts equivalent to those at the comparable level of civil service and the pay at every level must also be the same. (34.6.-34.8.)

7. The officers belonging to the Education Department should be given the necessary training before they are appointed to administrative posts. Provision should be made for training courses of different duration for raising administrative and professional competence. A refresher course should be arranged for educational administrators at least once in five years to allow them to get familiar with the latest methods in educational administration. (34.9.-34.10.)

8. An 'Academy for Training of Educational Administrators' should be set up as a national organisation and this Academy should be developed as an autonomous body under the Education Ministry. (34·11.)

9. The following measures should be taken for improving the inspecting system relating to our schools and colleges:

(a) The necessary number of inspectors and inspectresses should be appointed for the proper inspection of primary and secondary schools and of colleges.

(b) The work of an inspector is primarily that of an educationist. While visiting schools, colleges and educational institutions for inspecting and evaluating their educational programmes and activities, inspectors should preferably be accompanied by specialists in the relevant fields.

(c) The inspectors should be freed from all non-educational work.

(d) There should be provision for two inspectors in every thana and one of them should preferably be a lady.

(e) The Education Boards should appoint their own inspectors for inspecting the secondary schools under their respective jurisdiction. The activities of the inspectors under the Education Board should be co-ordinated with those of the inspectors under the Divisional Education Directorates.

(f) Provision should be made for the inspection of every college at least once a year. (34·12.-34·16)

10. The authority and power required for the efficient management of educational institutions should be given to headmasters of schools and to college principals and outside interference with their work must be eliminated. (34·17.)

11. At present most of the primary school teachers are local people. Complaints are received from different quarters that they neglect their duties. As a corrective measure, the question of transferring them to far away schools may be seriously considered. (34·18.)

12. A large number of secondary schools and intermediate colleges have been set up which do not fulfil the conditions laid down by the Education Boards. Recognition should be withdrawn from such educational institutions which are considered unnecessary and from those which are unable to fulfil the conditions for recognition (34·20.)

13. The four Education Boards at Dacca, Rajshahi, Comilla and Jessore must be freed for the responsibility of looking after the intermediate level. This responsibility should be transferred to the proposed affiliating Universities as it is expected that they will be able to discharge it successfully. The quality of the curriculum, of syllabuses and of teaching and examination methods at this level will consequently improve and this in its turn will raise the standard of the entire education system. The college authorities will also be able to achieve greater autonomy. The Education Boards will then be able to concentrate their full attention on organising, controlling, supervising and developing the

secondary schools under them and on holding the public examination at this level in a proper manner. They will also get the time to devote themselves fully to finding solutions to their own problems. As a result, the educational standards at this level will be raised and thus the whole education system of the country will be benefited. (34-21-34-27)

14. The question whether the Technical Education Board should continue as a separate organisation after our recommendations for vocational and technical education have been implemented must be seriously considered. The same holds true in case of the Madrasah Education Board. (34-28.)

15. The universities should be developed as autonomous organisations under the general control of the Education Ministry. (34-29.)

16. A high-powered 'National Education Association' should be set up to ensure the gradual improvement of education at all levels and to achieve the co-ordination and development of the different levels of education. This Association should be constituted with representatives of educational authorities at the University and other levels and with representatives of educationists. The Education Minister shall be the Chairman of this Association. (34-30)

17. The country's education system is managed by an 'Education Code' containing rules and regulations for the management of education institutions. The existing Education Code has not been revised after 1931. A post with the rank and status of a Secretary should be created for at least two years to formulate a new Education Code and to achieve coordination between the Code and rules and regulations relating to Education Boards and Universities, and an able and qualified man appointed to it. He should be given the necessary number of assistants and all other facilities for the successful completion of his work. (34-31)

CHAPTER XXXV

ALLOCATION OF FUNDS FOR EDUCATION

35.1. To-day social scientists are all agreed that education has a tremendous effect on the formation of a modern society and on all developmental activities. Up to the middle of this century it was a fashion with the economists to treat education not as an investment in human resources but as an expensive social-service work. Undoubtedly, at least partially, this attitude to education was motivated by the fact that education is unable to provide a ready-made profit and loss account as is done in industrial and business concerns. With the great progress made in the fields of industrial and agricultural production as a result of the application of principles of science and technical education, the truth has been gradually realised that the people trained in science, engineering and technical education to a large extent determine the country's economic condition. Such trained people cannot be built up if the necessary instruction is not imparted in accordance with highly developed educational methods. Locked at from this angle, the investment in education can be regarded as productive as an investment in industries, that is, as an essential means of increasing national resources.

35.2. The relation between education and production is of course most clearly seen in scientific, industrial and agricultural fields. But the above reasoning is applicable in all fields of education. It has been seen in the more developed countries of the world that general education able to train a large number of people who can easily respond to the requirements of training and at the same time keep pace with the fast changing modern society has made a distinct contribution to industrial development. The developed countries have been able to recognise the fact that if the discoveries of scientists and the inventions of engineering and agricultural experts can be used in the practical field by a large number of trained people, it is bound to have a beneficial effect on the country's production. Such discoveries and inventions can be applied in the practical field only when the general people are trained in their proper significance. It can therefore be said that primary education and adult education are both related to economic production as the above education systems are able to produce the necessary number of people who can put the thinking of the experts into practice. Moreover, the sense of personal responsibility of the trained labourers is much greater than that of untrained ones and the former are also able to more easily understand the importance of industrial development. As a result, they work with greater competence and provide incentive to the expansion of mills and factories. It is not only the leading economist in the industrially developed countries who hold this opinion but a large section of the business community and ordinary people also subscribe to this view.

35.3. Qualitative education, specially science, engineering technical and agricultural education, is expensive. Neither the government nor the public would be willing to spend a large amount of money on building up an education system, however well-conceived, unless powerful reasons are advanced in favour of making sacrifices for ultimate national benefits. We expect that both government and the public will realise the close relationship which exists between education and economic production and thus feel encouraged to provide the required amount of money for building up a meaningful and effective national education system.

35-4. As we ourselves are firmly convinced about the above necessity, we have laid the appropriate emphasis on universal primary education, on the expansion of vocational, technical and agricultural education and on the programmes for adult education. We have also laid great stress on raising the standard of education at every level so that the proper foundation can be laid for higher education in scientific, engineering and agricultural fields and in those fields which are closely related to the national economic development. Considerable importance has been given in this report to the development of an attitude and of the formation of habits imperatively required for the acquisition of competence through hard work, and to creating the necessary sense of values for the above purpose. But we are fully convinced that the quality of the educational effort will ultimately depend on the ability of the teachers and on the provision of suitable facilities for them. The ability of teachers again is a great inducement for the government and the public to be willing to provide the amount of money required to put a well-developed educational system fully into effect. We hope and trust that all concerned will realise that education is one of the ways in which resources can be created; not merely in the sense of providing an easeful personal life but in the far more important sense of directly helping the country's economic development. All highly industrialised countries have realised the truth of this through their own practical experience. Education is essential to a country's economic progress and this has been realised more and more by the government and public of the countries mentioned above with the result that they do not hesitate to allocate large sums of money for educational expansion as they are fully convinced of its utility.

35-5. The question of allocation of funds for education can be considered in three ways ;

- (a) What proportion of our G.N.P. or national income should be spent on education for realising the national objective of fast social and economic development ?
- (b) How will this allocation be distributed to the different branches and different levels of education ?
- (c) What shall be the methods of providing money for the education sector ?

35-6. There is no universally recognised way of replying to these questions. But it would be reasonable to apply the method of determining the required manpower for national development in this case. In the above method the different skills required to realise the objective of the country's economic progress and social development are used as determining principles. We must also be mindful of the fact that the other objectives of education are also realised simultaneously with the objective of economic development. Due precaution has to be taken that no schemes are formulated on erroneous calculation of manpower requirements. The more dependable is our assessment of manpower requirements, the easier will be the detailed formulation of educational schemes. Even if no fully dependable assessment can be made of our manpower requirements, a generally correct long term estimate of the manpower required in relation to basic personal classification can considerably benefit our educational schemes. It, therefore, becomes absolutely necessary to formulate a scheme for assessing our requirements of educated manpower for realising our long-term objectives of economic progress and of social development.

35.7. We have at present no dependable estimate relating to our future requirements of manpower which can be used even as an experimental base for determining our educational needs in the next ten or twenty years. In such circumstances, we can adopt certain principles derived from the data available in the other countries of the world.

35.8. The more developed countries of the world spend a large part of their national income on education. In the first few years of the sixties government expenditure along on education in the more developed countries was between five to eight per cent. of the national income, but during this period our allocation for education was only one per cent. of the total national income, and in 1972-73 this proportion was raised to 1.8 per cent. These figures are far less favourable than even those in our neighbouring countries. In relation to other countries, our government has been markedly negligent in providing appropriate funds for education. Often the argument is advanced that the expenditure on education must be related to the total economic condition of the country and from this point of view an appropriate allocation is made for education. It is further said that our resources are limited and we are heretofore unable to spend a large amount of money on ambitious educational programmes. Of course there is an element of truth in this. We cannot all of a sudden expect to build an education system which would be comparable with the education system of the countries whose resources are far greater than ours. But the argument that the required amount of money cannot be spent for education because of our limited resources is contrary to all economic planning. The fact of the matter is that we all must be willing to make additional sacrifices, precisely because our resources are so limited, so that we are able to build up an effective education system which will help to augment our resources in future.

35.9. Where we evaluate our efforts for educational expansion in relation to our resources and compare them with these in other countries, we observe that the other countries having the same resources as ours spend a larger portion of their national income and of their total revenue on education. Our financial effort in this direction is negligible in comparison with that of those countries which are like us struggling for reasonable standard of living, not to speak of the more developed countries of Europe and North America. We must face the truth that the recommendations made in this report cannot be implemented unless a larger part of our national income and of government expenditure is spent on education. In this connection it may be mentioned that a proposal recommending the allocation of 4 to 5 per cent. of the total national income for education was accepted at a conference of Education Ministers in Tokyo in 1962.

35.10. Considering all these factors we recommend that our expenditure on education should be immediately raised to at least 5 per cent. of our total national income and that we must try, as a national objective, to increase this amount to 7 per cent. in the near future. That this is a very difficult task becomes evident when we compare our national income with the government's revenue income, but we must find out ways of achieving the above objective without minimising the importance of other development programmes. The easiest and quickest way of achieving the above aim is to control the population increase and to raise our national income at a faster rate.

35.11. We must take the experience of other countries into account when faced with the task of distributing the total amount of money allocated for

education to different branches and to different levels of education. The countries which are new developed spent a relatively smaller amount of money on education at their primary stage of development and most of this money was earmarked for school education. As their income gradually increased with their higher pace of development they were able to set a part larger and larger amounts of money for higher education and research.

35.12. The total budget provision for education in Bangladesh in 1973-74 has been distributed as follows:

	Recurring	Non-recurring or Capital.
1. Primary Education	61.5%	17.9%
2. Secondary Education	14.5%	18.8%
3. College Education -- --	6%	5.8%
4. University Education	9.2%	13.2%
5. Technical Education -- --	3.3%	12.8%
6. Miscellaneous -- --	5.5%	31.5%

When Japan began its programme of educational expansion in 1815, 84 per cent. of its total allocation for education was spent on primary education (six years' duration), 7.8 per cent. on secondary education (six years' duration; the first three years compulsory) and 8.2 per cent. on higher education and in 1963 these figures were 42 per cent., 45 per cent. and 13 per cent. respectively.

35.13. We have to pay special attention to the education of our children belonging to the 5—13 age group (*i.e.* up to class VIII). The pupils receive their basic knowledge during this period so the education of children of the above age group must be made compulsory as soon as possible. If we want to make education up to 13 years of age compulsory within 1983, we must provide for educational facilities for 20 million pupils instead of the present 8 million. That is, we must make 15 per cent. expansion at this level of education. If we are able to achieve this we will not only be discharging our social and political responsibilities but also the building our edifice of education on a broad base and a strong foundation. This will also help increase our production capacity and the rate of our economic progress.

35.14. The type and extent of education beyond the primary level and its quality must be determined in relation to the manpower required for the country's gradual economic progress. Considering the existing structure of our education system it can be said that we should lay greater stress on science and technological education rather than on arts education with a view to producing at a faster rate the skilled manpower required for different developmental activities. Although we do not have reliable data about the expenditure per pupil at different levels of education, we nonetheless recommend, on the basis of experience of other countries, that 5 per cent. of our national income should be allocated for education and, generally speaking, 16 per cent. of this spent on primary and adult education, 25 per cent. of vocational education and teachers training and secondary education and special types of education, and the remaining 15 per cent.

on the different levels of college and university education. The total allocation for secondary education should largely be spent on the technical and vocational courses at that level. Likewise, the larger part of the allocation for college and university education should be spent at that level on science, agricultural, technological, medical and commercial courses.

35-15. The above allocation has to be so distributed that the mushroom growth of educational institutions not required for our developing economy is discouraged and the indiscriminate admission of pupils is checked. Admission to higher education must be regulated on the basis of the pupils' individual merit, the requirements of social life and how society is made to bear the expenses of education beyond the primary level. For the above purpose it has to be determined how far a particular skill is required for the country's development. The pupils will have the freedom of choosing their own subjects from among the fixed ones at the higher levels of education in accordance with the requirements of our national life, but no student who has not the necessary ability and intelligence for higher education should be admitted to it.

35-16. If the number of students coming out of our general schools and colleges is not in harmony with our economy, the above educational institutes may be converted according to need to vocational schools or colleges. It would not be desirable to provide educational facilities for pupils in excess of the actual need in any field of the higher stage of education. Our existing economic condition will not permit us to employ all or most of our youths between 14 and 22 years of age in full time educational activities not related to any productive work. We must provide educational facilities only for these whose productive potential indicates that they can make an effective contribution to the country's economy.

35-17. If primary education (up to class VIII) is made compulsory within 1983, the total amount of money needed for the purpose on the basis of present expenditure will be two thousand seven hundred million taka. Because of our limited resources it will not at all be easy to raise this huge amount of money. The conventional methods will not do in this case and extraordinary measures have to be taken for eliminating all wasteful expenditure and for making the best possible use of the country's potential in every field. If the responsibility for raising the required amount of money for universal primary education is decentralised and transferred to local authorities the complexity of the problem will be lessened. Local labour has to be used for constructing the school building. Non-recurring or capital expenditure can be reduced if, as interim measures, a double shift is introduced, the same building is used by more than one primary school of the community centre or the sitting room in the houses of more affluent rural people or even the stalls in the village market are used. Our limited resources should be primarily used for appointing teachers and bring books and other educational implements and a certain amount of money will also be needed for procuring black-boards and chalks etc. The land required for the school building can be acquired from big land holders through a land reform scheme.

35-18. The large number of teachers that will be required for making primary education universal cannot all be in our present circumstances, trained teachers. The shortage of teachers can be met by appointing teachers from among the untrained candidates or by requisitioning the services of educated youths for a fixed time under the compulsory 'National Service Scheme'. Free distribution of text books among the poor pupils and the fixing of schools

holidays keeping in view harvest requirements are necessary for popularising primary education among the poor. If changes in the syllabus are made with proper emphasis on the agricultural and rural life, the village children and their guardians will feel a greater attraction for education.

35.19. About 75 per cent. of the total expenditure on education comes from government funds. If we intend to nationalise the education system or to make the standards at each level of education uniform, all educational institutions must be brought under the control of government or of local authorities and the entire expenditure on education must be met from government funds. It is not possible for us to say anything definite about national income, per capita income or government revenue on account of the present condition of our national economy and the lack of relevant data. But we believe that revenue taxation should be raised to 18 per cent. from the present ten per cent of national income and the proportion of government expenditure on education should be raised from the present seven per cent to at least twenty five per cent. to make our education system fully effective. Wealth tax, inheritance tax and land revenue should all be increased for the realisation of the above objective. A special education tax can be imposed on cigarettes and gasoline and the amusement tax increased for the purpose. An education tax can also be levied on water development and electricity development boards and on similar organisations. A special tax can likewise be imposed on industrial organisations to collect the money for the vocational courses under technical education appropriate to those organisations. All municipalities having a population of more than one hundred thousand people should bear the financial responsibility for universal primary education in their respective areas. The other municipalities will be required to bear two-thirds of this expenditure and the district council concerned should be able to collect 35 per cent. of the initial expenditure. All necessary inducements, including the inscription of the donor's name in the school building, may be given to encourage private donations.

35.20. Even after government raises the allocation of money for education through new taxes as recommended by us, additional amounts of money will still be needed which must be collected from student fees and private donations. All sections of people must be ready to make some financial sacrifice so that the additional amounts of money mentioned above are made available. We recommend that 50 per cent. of the expenditure on secondary education and on college education should be met from student fees and the remaining 50 per cent. from other sources and from government funds. In such a case the parents and the guardians will be required to make a suitable financial sacrifice. They must realise that although school and college education may be free money will still be required for the salaries of teachers, for purchasing educational implements and for the construction and maintenance of school and college buildings. Student fee at the university level has also to be increased and the public must be ready to bear the additional expenditure. We believe that the public will not be found wanting in making the required sacrifice for the general welfare. They themselves will eventually be benefited by education and their children will be able to enjoy far greater facilities after they have received the benefit of education. The direct financial benefits of education will be the higher standard of living and a more secure social life. Education is an integral and essential part of permanent economic welfare and the only way in which education can be made universal is through greater sacrifice on the part of every individual.

35-21. Our industrial concerns do not generally help in the spread of education, not even in the spread of technical education which is of direct benefit to them. Technicians, skilled workers, mechanics supervisors and engineers are employed in industrial concerns but they are not required to meet the educational expenditure of these employees. The industrial concerns will all be benefited if the programmes for technical education recommended in this report are properly implemented. We, therefore, recommend that a certain percentage of the expenditure on education, specially a large part of the expenditure on technical and vocational education, should be borne by the industrial concerns. We have recommended above that a direct tax should be imposed on industrial concerns for meeting the larger part of the expenditure on technical education. This tax must of course be used for the exclusive benefit of technical education. Such a tax has already been imposed in many countries, including France, Spain and Yugoslavia. The expenditure incurred in this connection by the industrial concerns should be shown by them as production expenditure.

35-22. The expenditure relating to raw materials, labour and implements, and technicians and consultants is included in the statement of income and expenditure of development schemes. But once the schemes are implemented, the expenses relating to management or those required for the education and training of people to be employed in similar schemes are not usually included in the statement of income and expenditure. The expenditure relating to the education and training of the people required for implementing our development schemes should be met from development funds. And we recommend in this connection that a suitable percentage of expenditure on the main development schemes relating to irrigation, communication, transportation, electrification, etc. should be set apart for science, engineering, agricultural and technical education. This money should be spent on vocational, technical, engineering and science courses at college and university levels. A similar system is prevalent in other countries. For example, the Coal Board, the Gas Council and the Central Electricity Authority allot a certain percentage of their funds for education. This may have the effect of raising the prices of many commodities initially but the price level will soon come down because of increased production as a result of employing trained technicians and skilled workers. The required amount of money for vocational, technical and engineering education can be collected in the manner indicated above. At the beginning the public will have to bear the burden of this additional expenditure but later they and the whole country will be benefited.

35-23. In the countries where economic development is considerably influenced by foreign aid, schemes for educational expansion are also implemented with programmes for general economic development to boost the latter. Educational schemes must therefore be incorporated in our development programmes to make the most effective utilisation of foreign aid. We have, of course, received foreign aid for setting up the Engineering and Technological University, the Agricultural University and the Polytechnic and we are grateful to the authorities concerned for this. But the volume of this aid is not commensurate with our present needs for educational expansion. Foreign aid is usually given on request from the government of the country requiring it. We want that a just proportion of this aid should be spent for educational training necessary for implementing development schemes at different levels.

35-24. Money must be found for education in all possible ways. Among the possible sources are student fees, education taxes, donations from private and philanthropic bodies, development funds and foreign aid. The kind of revenue

schemes required to be formulated for this purpose must be formulated by those who are familiar with educational problems and sympathetic to educational needs and at the same time have a high degree of proficiency in their own field. We are of the opinion that a branch consisting of a few officers experienced and knowledgeable in determining revenue tax and in laws relating to economic development should be attached to the Education Ministry. This branch should be familiar with the requirements of funds at different levels of education and with the country's economic condition as well as with the government's revenue policy and with the principles and methods of appropriating funds for education followed in other countries. We hope that the proposals for appropriating funds for education and the efforts to generate new funds will thus be related to the existing economic condition of the country.

35-25. We have mentioned many ways of appropriating funds for education. We have indicated that money can be raised for education through increasing the rate of certain existing taxes imposition of new taxes raising student fees, appropriations from general development funds and foreign aid. But a Committee should be set up to advise government on the practical means of raising money for education through the above and other sources. This Committee should comprise education administrators, economists and tax-experts.

35-26. As there is at present no dependable estimate of our future manpower requirements it is difficult to formulate any long-term development schemes. This estimate is an essential requirement for formulating development schemes for the country's overall benefit. So necessary measures must be taken for the survey relating to manpower, for collection of detailed data in this regard and for proper analysis of the data. We recommend that a Manpower Commission should be set up for this purpose.

ALLOCATION OF FUND FOR EDUCATION

SUMMARY

1. The social scientists are all agreed about the tremendous effect of education on forming a modern society and on all development schemes. For this reason, governments of different countries spend a large amount of money for educational and manpower development. A huge amount of money must be set apart for education if we intend to realise our national objective of economic and social development. Adequate social and economic development is possible only through proper investment in the type or types of education required for the development of particular skills. Education must be regarded as an investment in human resources and not as an expensive social service activity. (35.1.-35.5.)

2. The question of appropriation of funds for education can be considered in three ways :

- (a) What proportion of our g.m.p. or national income should be spent on education for realising the national objective of fast social and economic development?
- (b) How will this allocation be distributed to the different branches and different levels of education?
- (c) What shall be the methods of providing money for the education sector. (35.6.)

3. There is no universally recognised way of re-lying to these questions. But it would be reasonable to apply the method of determining the required manpower for national development in this case. In the above method the different skills required to realise the objectives of the country's economic progress and social development are used as determining principles. We must be mindful that the other objective of education are also realised simultaneously with the objective of economic development. Due precaution has to be taken that no schemes are formulated on erroneous calculation of manpower requirements. The more dependable is our assessment of manpower requirements, the easier will be the detailed formulation of educational schemes. Even if no fully dependable assessment can be made of our manpower requirements, a generally correct long term estimate of the manpower required in relation to basic personal classifications can considerably benefit our educational schemes. It therefore becomes absolutely necessary to formulate a scheme for assessing our requirements of educated manpower for realising our long term objectives of economic progress and of social development. (35.7.)

4. We have at present no dependable estimate relating to our future requirements of manpower which can be used even as an experimental base for determining our educational needs in the next ten or twenty years. In such circumstances, we can adopt certain principles derived from the data available in the other countries of the world. The more developed countries of the world spend a large part of their national income on education. In the first few years of the sixties government expenditure alone on education in the more developed countries was between five to eight per cent of the national income. In this connection it may be mentioned that a proposal

recommending the allocation of 4 to 5% of the total national income for education was accepted at a conference of Education Ministers in Tokyo in 1962. Considering all these factors we recommend that our expenditure on education should be immediately raised to at least 5% of our total national income and that we must try, as a national objective, to increase this amount to 7% in the near future. The easiest and quickest way of achieving the above aim is to control the population increase and to raise our national income at a faster rate. (35.8-35.11).

5. We must take the experience of other countries into account when faced with the task of distributing the total amount of money allocated for education to different branches and to different levels of education. The countries which are now developed spent a relatively smaller amount of money on education at their primary stage of development and most of this money was earmarked for school education. As their income gradually increased with their higher pace of development they were able to set apart larger and larger amounts of money for higher education and research. We recommend, on the basis of experience of other countries, that 5% of our national income should be allocated for education and, generally speaking 60% of this spent on primary and adult education, 25% on vocational education and teachers' training and secondary education and special types of education, and the remaining 15% on the different levels of college and university education. (35.18-35.17).

6. If primary education (up to class VIII) is made compulsory within 1983 the total amount of money needed for the purpose on the basis of present expenditure will be two thousand seven hundred million taka. Because of our limited resources it will not at all be easy to raise this huge amount of money. The conventional methods will do in this case and extra-ordinary measures have to be taken for eliminating all wasteful expenditure and for making the best possible use of the country's potential in every field. If the responsibility for raising the required amount of money for universal primary education is decentralised and transferred to local authorities the complexity of the problem will be lessened. Local labour has to be used for constructing the school building. Non-recurring or capital expenditure can be reduced if, as interim measures, a double shift is introduced, the same building is used by more than one primary school of the community centre or the sitting room in the houses of more affluent rural people or even the stalls in the village market are used. The large number of teachers that will be required for making primary education universal cannot all be in our present circumstances, trained teachers. The shortage of teachers can be met by appointing teachers from among the untrained candidates or by re-qualifying the services of educated youths for a fixed time under the compulsory 'National Service Scheme' (35-18-35-9).

7. If we intend to nationalise the education system or to make the standards at each level of education uniform, all educational institutions must be brought under the control of government or of local authorities and the entire expenditure on education must be met from government funds. It is not possible for us to say anything definite about national income, per capita income or government revenue on account of the present condition of our national economy and the lack of relevant data. But we believe that revenue taxation should be raised to 18 percent from the present ten per cent of national income and the proportion of government expenditure on education should be raised from the present seven percent to at least twenty-five per cent to make our education system

fully effective. Wealth tax, inheritance tax and land revenue should all be increased for the realisation of the above objective. A special education tax can be imposed on cigarettes and gasoline and the amusement tax increased for the purpose. An education tax can also be levied on water development and electricity development boards and on similar organisations. A special tax can likewise be imposed on industrial organisations to collect the money for the vocational courses under technical education appropriate to those organisations. All municipalities having a population of more than one hundred thousand people should bear the financial responsibility for universal primary education in their respective areas. The other municipalities will be required to bear two thirds of this expenditure and the district council concerned should be able to collect 35 per cent of the initial expenditure. (35,20)

8. Even after government raises the allocation of money for education through new taxes as recommended by us, additional amounts of money will still be needed which must be collected from student fees and private donations. We recommend that 50 per cent of the expenditure on secondary education and on college education should be met from student fees and the remaining 50 per cent from other sources and from government funds. Student fee at the university level has also to be increased. (35,21)

9. A certain percentage of the expenditure on education, specially a large part of the expenditure on technical and vocational education, should be borne by the industrial concerns. (35,22-35,23)

10. In the countries where economic development is considerably influenced by foreign aid, schemes for educational expansion are also implemented with programmes for general economic development to boost the latter. Educational schemes must therefore be incorporated in our development programmes to make the most effective utilisation of foreign aid. (35,24)

11. The kind of revenue schemes required to be formulated for levying educational taxes must be formulated by those who are familiar with educational problems and sympathetic to educational needs and at the same time have a high degree of proficiency in their own field. The Education Ministry should have a separate branch for this purpose. (35,25)

12. A Committee should be set up to advise government on the practical means of raising money for education through increasing the rate of certain existing taxes, imposition of new taxes, raising student fees, appropriations from general development funds and foreign aid. This Committee should comprise educational administrators, economists and tax-experts. (35,26)

13. A dependable estimate of our future manpower requirements is a must for the successful formulation of long-term development schemes. So it is necessary to set up a Manpower Commission for conducting a survey relating to manpower, for collection of detailed data in this regard and for proper analysis of the data. (35,27)

CHAPTER XXXVI

CONCLUSION

36.1. Our education system at present faces many complex problems. It is not possible to solve all these problems at once and no effort in that direction will be realistic. So the main problems have to be solved on a priority basis.

36.2. The subjects on which we have laid a special stress in this report are as follows:

- (a) The four state principles must be clearly reflected at all levels of education.
- (b) Bengali has to be used as the medium of instruction at all levels of education.
- (c) Primary education must be extended up to class VIII and made universal. Education up to class V has to be made free and compulsory within 1980 and education up to class VIII has to be made free and compulsory within 1983.
- (d) Science education and agricultural education must be given due weight right from the primary stage and their standards at all levels must be raised as far as possible.
- (e) The necessary expansion must be made at the higher levels of technical and technological education for creating wide opportunities for vocational education beginning from class IX at the secondary level. A close relationship should be established between the vocational and technical institutes and the concerned employing agencies for making technical and vocational education realistic.
- (f) A work-based curriculum should be introduced at all levels.
- (g) Illiteracy must be removed from the country within 1980 by a country-wide concerted effort and with the active co-operation of all the educated people of the country.
- (h) The present examination and evaluation methods have to be radically reconstructed.
- (i) The existing disparities between government and non-government educational institutions must be removed as soon as possible. A ten-year scheme for the gradual notification of non-government educational institutions must be put into effect.
- (j) Educational administration must be recognised and made more wide-embracing and cohesive.
- (k) It must be ensured that no talented pupil is deprived of the benefit of education—according to his merit and inclinations—merely because of his poverty or for lack of opportunities.
- (l) The youth of the country has to be motivated to render national service.

- (m) The education service must occupy a top place in the country's service structure to be able to attract the fittest persons to it.
- (n) Education must be treated an investment in human resources and not as an expensive social-service activity. The proportion of government expenditure on education must be raised to at least twenty-five per cent from the present seven. This expenditure must be immediately raised to five per cent of the g.n.p. and increased to seven per cent as soon as possible.

36.3. We have also considered the question of structural changes in our education system. We have recommended that experiments should be made regarding the introduction of the eleven-year education system and the three-year degree course. We are hopeful that the outcome of these experiments will be favourable. The structure of the education system must then be accordingly changed and the changed made effective. If we are able to make steady progress towards the realisation of our overall objective, the actual improvement made in the educational standards may be reviewed and evaluated after five years to seriously consider the feasibility of a ten-year school system and a four-year degree course.
