

## Educational research

121. Primary teachers training institutions and teachers training colleges have limited their work to the training of primary and secondary school teachers. They have not engaged in education research. As a result, instruction has become rigid and stereotyped. The staff for the primary teachers training institutions is recruited from among the graduates of the teachers' colleges who have had several years of experience of teaching in high schools. This tends to be a sterile system because nothing new is being added. The result is seen in unsatisfactory teaching, in both primary and secondary schools. The demand for educational expansion requires additional primary teachers training institutions and teachers' colleges, but the quality of teaching will not improve without an infusion of new ideas, new methods and new information based upon research. The training institutions need reorientation and new inspiration. To this end each university should be encouraged to develop and strengthen a faculty and a department of education and to prepare students for the master's degree in education. As rapidly as possible, the staffs of the teacher training colleges and the primary teachers training institutions should be recruited from among these masters of education.

122. In addition to this extension of teacher education, it is proposed that at least one university in each Wing establish, within its department of education, an Institute for Educational Research. Each Institute should be staffed with a small group of highly qualified research professors and it should have funds to support research projects, issue publications and hold conferences. The Ph.D. degree in education should be offered by the departments in which the Institutes are established. The chief functions of the Institute would be :

- (a) To foster and conduct research in educational methodology, curriculum development and testing, with particular reference to the needs and capabilities of the children.
- (b) To publish the results of its research and to serve as a clearing house for information about educational development at home and abroad.
- (c) To maintain liaison with the colleges and primary teachers training institutions for the purposes of sharing information about problems and trends and of providing guidance in the improvement of their curricula, text books and instructional methods and of sponsoring conferences of the staff of teachers training institutions, head masters and principals.
- (d) To train specialists in the several branches of education for teaching, research and administration ; in curriculum, primary education, testing, vocational education, methods of teaching, supervision, etc.

123. The object of this emphasis on research and leadership in teacher education is to infuse new life and inspiration into the teacher training institutions and, through them, into the teaching profession. Reorientation of education, for which there is a universal demand in the country, must be a slow process and has necessarily to be started with the teachers. All are insistent that the schools of the future must release the inherent intellectual and manual creativity of our children, imbue their minds with our spiritual and moral values, familiarise them with democratic processes and acquaint them with the possibilities of social reconstruction. All are emphatic that present teaching methods and materials, devised in the past for another purpose will not achieve these ends. The teachers cannot change their methods on order ; they can make improvements only if trained in the techniques and if given constructive guidance and supervision. The responsibility for this teacher training and assistance falls heavily upon the teacher training institutions ; the old stylised courses in educational history, theory and methods will not suffice. The teacher, formerly trained to teach children by syllabus only must now be shown how to relate the learning process to high moral standards, to family and community living and aspirations and to the genius of each child.

124. As the institutes for educational research develop their programmes, they should be able to help the colleges and primary teachers training institutions renovate their old courses and substitute new ones, based on knowledge of our psychology and environment. University graduates in education will provide the future staff of these institutions. Many junior and other lecturers in the universities, colleges and primary teachers training institutions are not sufficiently committed to the profession of education. The more intensive and

advanced training of college and normal school teachers at the M.A. and Ph.D. levels will help to alleviate this situation. Ph.D. students may be used during their courses of study to teach courses and perform other services for colleges and primary teachers training institutions. From the beginning then, and increasingly with time, the Institutes should be able to inspire and lead the educational profession to a realisation and accomplishment of its high mission.

## VII

### ORGANIZATION AND ADMINISTRATION OF HIGHER EDUCATION

125. The strategic point in education lies in the colleges and universities. These institutions set the tone for primary, secondary and specialized education. They train the teachers, lawyers, doctors, engineers, scientists, philosophers, agriculturists, businessmen and government officials who provide leadership and establish the standards for moral, economic and social life. They are responsible for conserving knowledge, for keeping abreast of new knowledge and for adding to knowledge through research. Hence, our most diligent attention must be directed towards higher education. Such attention will be rewarded by the most immediate results in the implementation of the entire development Plan, and will bring the most lasting results in the structure and excellence of education, public administration, science, agriculture, industry and business.

#### Progress since Independence

126. The number of colleges in the country increased from 90 in 1948-49 to 148 in 1954-55. Of the 148 colleges, 114 are degree colleges, 11 of which offer post-graduate work to the master's level and 34 are intermediate colleges. The degree colleges also offer work at the intermediate level (the eleventh and twelfth years). Their combined enrolment in 1954-55 was 64,000—7.0 per cent of those in high schools and 1.4 per cent of those in primary schools. Twenty-seven of the intermediate colleges and seventy of the degree colleges are private—66 per cent of the total. The government colleges are financed and managed by the Provincial Governments through the departments of education, while professional colleges in engineering, agriculture, medicine are usually financed and managed by Government through the ministries of public works, agriculture and health. The private colleges are subsidized by government grants.

127. Our colleges do not hold their own examinations or grant their own degrees, as was the custom in the Muslim system of education in India. These are functions performed by the universities. This practice in higher education was established by the Wood Memorandum of 1854 which provided that universities be created with the function of conferring degrees or diplomas upon persons who had pursued a course of study at an affiliated institution and passed a prescribed examination. Although there was incidental provision for such universities to create professorships and offer instruction in various branches of learning, universities in India for almost thirty years continued to be purely affiliating bodies.

128. These universities had their origin in the Macaulay Minute and the Bentinck Resolution of 1835. The Bentinck Resolution stated that the "great object of the British Government ought to be the promotion of European literature and science amongst the natives of India and that all funds appropriated for the purposes of education would be employed on English education alone". The universities were modelled by the British upon the University of London. English was established as the medium of instruction and financial support was withdrawn from the madrasahs. Hence there was a sharp break in the pattern of higher education as encouraged by the Muslims from the middle ages, represented by madrasahs (colleges) which offered instruction in grammar, rhetoric, logic, geometry, algebra, astronomy, natural philosophy, medicine, theology and poetry.

129. At Independence, there were only two well-established universities—Punjab and Dacca, although a third, the University of Sind, had been authorised a few months before. There are now six universities, all of them authorised to perform examining, affiliating and teaching functions.

130. *Punjab University* at Lahore, established in 1882, is our oldest university. This university is primarily an examining and affiliating institution with only three colleges of its own—law, commerce and oriental languages. However, it offers post-graduate instruction in various fields, and seven new departments have been added since Independence. Forty-five colleges are affiliated to this University.

131. *The University of Dacca*, established in 1921, was a teaching and residential university until Independence, when it was made also the affiliating institution for all colleges in East Pakistan. The university suffered a heavy loss by the migration of non-Muslim teaching staff in 1947, but has managed to continue its instruction programme. Fifty-six (eight professional and forty-eight non-professional) colleges are affiliated to the University. Six new departments have been created since Independence.

132. *The University of Sind* was established in 1947, only a few months before Independence. Created as an affiliating and examining University, it also provides academic instruction for a small number of resident students. The University was moved to Hyderabad in 1951 as one of the several consequences of the establishment of the Federal Capital at Karachi. Sixteen (five professional and eleven non-professional) colleges are affiliated to the University. Sixteen teaching departments offer post-graduate instruction.

133. *The University of Karachi* was chartered in 1950 by special legislation with the Governor-General as Chancellor. It is an affiliating and examining University and also provides instruction in several fields. There are now sixteen colleges (five professional and eleven non-professional) affiliated to this institution. Post-graduate courses are offered in twenty subjects.

134. *The University of Peshawar* was established as a residential and affiliating institution in 1950. The jurisdiction of the University was extended to the States of Swat, Dir and Chitral in 1951. A new campus complete with buildings has been constructed. Peshawar University is unique in that the professional colleges are integral parts of the University and under its administrative and financial control. Fifteen (four professional and eleven non-professional) colleges are affiliated. The University now has fourteen departments.

135. *Rajshahi University*, established in 1953, is our youngest University. It is the affiliating and examining authority for twenty colleges in the north of East Pakistan. This University was greatly strengthened by many Muslim teachers from the University of Calcutta. Residential facilities are now being constructed.

136. The Pakistan Educational Conference of 1947, through its University Education Committee, expressed great dissatisfaction with higher education :

“ It has been felt for a long time that the system of University education comprising the syllabuses, curricula, examinations and teaching methods is unsatisfactory and requires thorough review in order to bring it into line with our educational ideals and needs. Such reviews have been undertaken in the past by various committees and Commissions, but few practical steps have been taken to implement their recommendations. The Committee strongly feels that we should, without delay, lay the foundation of our educational system anew and urge that Government and Universities should take immediate action towards that end.”

137. The Six-Year Plan for Educational Development in Pakistan criticised the existing arrangements for higher education in equally strong terms, stating that academic standards were low, that buildings and equipment were inadequate and that teaching personnel was on the whole poor. Special reference was made to the deficiencies in science instruction. The universities were characterised as being examination-ridden and as having failed in their fundamental function of promoting research.

138. It is not difficult to understand the basis of these indictments. First of all, we have greater expectations of our higher education system than ever before. A system developed by a colonial government and restricted to a small proportion of the population could not hope to serve the new nation, no matter how well financed or administered. The system was, in fact, neither well financed nor particularly well administered ; and what was essentially wrong was its concern with the form rather than with the substance and quality of learning.

At Independence, to make matters worse, hundreds of teachers went over to India and subsequently to government and industry. Many students withdrew, but many more refugee students clamoured for admission. The excitement of political and social change threw students and teachers into a state of turmoil. Since that time the physical expansion of colleges and universities has far out-stripped the qualitative development of education.

139. Moreover, the colonial system of higher education was designed to supplant the traditions of Muslim learning by those of English and European learning, to emphasize curricula which would best prepare young men through literary education for posts in colonial business and government, and to impose a university and examination system lifted bodily out of the English practice then in vogue. While the English practice was modified substantially with time in the country of its origin, no improvements or modifications were made in colonial India ; those that were made tended to accentuate some of its weakest features. We recognise the rich alluvium deposited by the great stream of Western thought and scientific achievement ; but our educational development must be firmly rooted in the enduring sub-soil of our own culture.

140. The Plan period must be a period of consolidation, improvement and raising of standards. Some very major changes must be brought about to achieve the kind of higher education which people are demanding. These changes are of two kinds (a) improvement in the content and quality of instruction and research, discussed in the next section, and (b) reorganisation of the administration and the financing of institutions. The kinds of changes which need to be made in the organisation and administration of higher education have received much attention from such bodies as the Inter-University Board, the Punjab University Commission and the Central Advisory Board for Education. It remains to crystallize the suggestions made and to undertake vigorously the task of introducing them.

#### **An integrated system of higher education**

141. The two requisites of a stable, vigorous and economically sound system of higher education are : (a) a form of co-ordination and integration among the colleges and universities which encourages the development of strength and high standards and avoids wasteful competition and duplication, and (b) freedom, within the limits of general government policy, for the colleges and universities to make administrative and academic decisions pertaining to the conduct of educational institutions which will preserve and promote the spirit of scholarship and research. A corollary of these principles is that the administrative and policy heads of the colleges and universities must be held accountable for the excellence of their administration, and the moral and intellectual standards of their institutions.

142. Neither of these requisites of a sound system of higher education exists in our country today. With a few notable exceptions, the responsibility for the management of higher education is so diffused that it is difficult, if not impossible, to assign accountability for existing shortcomings. Higher education consists of poorly co-ordinated groups of private colleges, government arts and science colleges, and government professional colleges. For the most part, the professional colleges are branches of the departments concerned : engineering colleges of the departments of public works, medical colleges of the departments of health, teacher training colleges of the departments of education, and agricultural colleges of the department of agriculture. Although the Government arts and science colleges are in the department of education, private colleges also are subject to close government supervision as a condition of receiving grants upon which almost all of them are dependent. Although there are varying methods and degrees of control, in the last analysis, the several government departments independently decide the budgets of the several colleges and select the teaching as well as the administrative staffs. Thus, there are not one but several systems of higher education in each Province. New colleges and new courses may be and are established without consideration for existing facilities or needs. Standards of equipment, personnel and instruction vary widely. Developed without sufficient regard for each other, the colleges are not in a position to share teachers, students, courses and facilities, which results in much unnecessary duplication and less than full use of existing resources.

143. This situation is unsatisfactory because of the inherent wastage of money, facilities and personnel. It is educationally unsatisfactory, in addition, because until institutions of higher education become primarily educational in nature and an integral part of a unified system of education rather than adjuncts of government departments with limited functions, they cannot achieve their highest purpose of intellectual, academic and professional growth and service to the country. The present system is a direct inheritance of the colonial system, which had the purpose of training people for specific jobs by specific government agencies. The "professional" colleges were established, and survive, as high-grade technical branches of government departments with the particular and narrow function of training students for established positions in those and related departments. In an independent country, however, which desires to develop its men and women for a fuller and higher life, it is the function of a professional college to prepare its students not only for specific technical duties essentially limited in scope and purpose but also for playing their full part as members of progressive society and for a successful and fruitful life individually and socially, with capability for their own growth as well as for contributing to the growth of the community.

144. The integration of higher education into one system, in which educational standards and values are preserved and promoted, can be achieved by affirming the leadership of universities and making it real and effective as well as progressive and beneficial. The appointment of Grants Committees with the duty of evaluating and originating long range plans and assisting the universities and colleges financially, educationally and administratively to put them into effect, would create favourable conditions for initiating and accelerating this process. We do not yet foresee the time when the individual colleges would emerge as independent institutions depending for the support of the community on their ceaseless effort to improve their standards by trying new ways of approach through studies and experimentation. Our universities will continue to command extensive territorial jurisdiction for the purpose of prescribing standards, curricula and syllabi and holding examinations. Simultaneously they will continue to conduct their activities in a directly constructive manner by developing their teaching and research functions on a broad and comprehensive basis at their respective headquarters centres.

We consider that the universities should be supported in promoting an integrated system on the following lines :

- (1) They should be put unambiguously in the position of leadership in organising and developing an integrated system at their headquarters in which maximum use is made of all resources whether in the colleges or in the universities. Post-graduate teaching and research should be directly under their control in order that fullest use is made of the limited resources in terms of libraries, laboratories and superior staff.
- (2) The Peshawar University offers a model on which professional colleges located in university centres should be incorporated in higher educational organisation. This measure is feasible and should be adopted in the interest of preserving and promoting educational values.
- (3) The Leadership to be provided by the universities for institutions which cannot form part of the headquarters organisation has to be developed in accordance with its functions and responsibilities as a purely affiliating and examining body. The universities should be suitably staffed to enable them to perform their functions in this respect efficiently. It will be concerned with three types of institutions each of which requires separate treatment : private arts and science colleges, government arts and science colleges, and professional colleges. We suggest that their problems could be approached on the following lines :
  - (a) The universities should have proper arrangements for the regular inspection of all institutions. The reports should be followed up by effective action.
  - (b) It is particularly necessary in respect of private colleges that conditions of service of their teaching staff should be fixed with the approval of the university. Members of the staff should have the right of appeal to the university against measures of punishment.
  - (c) The university should have the right to send its representatives to the meetings of managing bodies to explain its views.

- (d) Whenever possible, professional colleges should be transferred to the control of universities to emphasise and develop their character as educational institutions instead of training adjuncts to technical departments.
- (e) For government colleges, the Ministry of Education should set up advisory committees with representatives of the university, the government and the institutions themselves to consider all problems concerning them and to make recommendations to the government. This is desirable to ensure that the values and principles which inspire our higher educational system are not denied to any of its parts. The universities are agents of the governments and the nation and not of the departments of government, as such they must be held responsible for guarding, promoting and developing the values and principles which inspire the nation. It is inevitable that a government department should make, by and large, an administrative approach only which is inadequate. All talent and learning available to the nation for guiding and developing education on the desired lines should be concentrated in one place. This place positively and undeniably is the university : the potential centre of learning and research through which alone the nation can hope to express and develop its spiritual and moral aspirations and ideals. The shortcomings of universities are our own shortcomings and whatever they may be, the failure to support them must be regarded as a disservice to the present and future generations of Pakistan.
- (f) All grants to private colleges should be channelled through the universities. Allotments to government colleges should be fixed on the recommendations of the advisory committees we have suggested. With the formation of University Grants Committees the system will need some adjustment but the essential principle of the leadership of universities should be preserved.

The measures we have outlined above are in conformity with the views held and expressed by our leading educationists. We are confident that action on these lines will help establish an integrated educational system in the country to the benefit of the nation.

#### **Clear distribution of responsibility**

145. This proposal for a co-ordinated higher education under the leadership of the universities, requires universities which have the power, the responsibility and the strength to furnish the necessary leadership in achieving excellence in college and university education. The universities are organised as separate statutory bodies and their autonomy is recognised in principle. In practice, however, they are meticulously controlled by the government and are so unwieldy in administration that vigorous action to correct deficiencies is difficult to initiate and accountability for failure is almost impossible to assign.

146. It is proposed that the universities be freed from the detailed administrative control of government departments, that they be provided with effective and responsible managing bodies, and that they be held accountable to government for adherence to the policies which have been mutually agreed upon by the government and the universities for excellence of performance. These proposals can be implemented by :

- (a) Laying down (i) clear but broad policies which the universities must follow and (ii) programmes and targets which they have to achieve.
- (b) Authorising each university to enact its own statutes concerning the formation of departments, standards of affiliation, courses of study, modes of administration, etc., to handle its own financial transactions and to make its own appointments—all without prior government approval but within the limits of policies and programmes sanctioned by the Government.
- (c) Vesting these and other powers for the conduct of university affairs in a reconstituted syndicate of a reasonable size. It may contain not more than two or three persons holding government offices but none from amongst those responsible directly for advising the government on the policies and programmes of higher education. The senate, which is a large and representative body, should meet annually to review the budget and programme and to make advisory recommendations to the syndicate.

- (d) Holding the syndicate accountable to the government for the discharge of its functions. For this purpose, it should prepare and publish an annual report and financial statement, publish its statutes, and announce its appointments and other decisions of importance. Official nominees on the senate and syndicate should be fully aware of the approved policies and programmes, and they should be held responsible for making a report to the government of serious failures on the part of the university. The government should retain the power of revising, within a reasonable period, any decision of the syndicate on the ground that it transgresses a clear provision of the law, or involves an abuse of power likely to result in gross injustice or maladministration, or is calculated to defeat the approved policies and programmes. Before taking such action the government should give an opportunity to the university to explain the reasons for its decision. The orders of the Government to reverse a decision of the university should be passed only with the approval of the cabinet and should be published with a clear and full statement of reasons.

147. We believe that the introduction of this system of checks and balances will tend to inculcate the needed sense of responsibility on the part of universities and affirm unequivocally the responsibility of the government if any maladministration or abuse of power takes place. The provision for publishing the decisions of the government will ensure that they will be reached after due care and deliberation and at the highest level. We wish to emphasise that our proposal that the decisions of the university should not be set aside except by orders of the cabinet, and that they should be published for general information with a full statement of reasons, is an essential part of a system in which the universities will be free to perform their responsibilities to the nation with a due sense of responsibility and in which the government cannot disclaim responsibility if things go seriously wrong and the prescribed programmes fail to be achieved.

148. There are now six universities, four of which are of recent origin. They are adding teaching departments rapidly, perhaps too rapidly, and have further plans for expansion without sufficient consideration for the situation of higher education as a whole. Schemes to create still other universities should be held in abeyance until the existing universities gain the needed strength in facilities and personnel. It would be a mistake to spread the limited staff and equipment resources available for universities even more thinly. The very large requirements of new university buildings and campuses must be met over a period of years and in conjunction with the studies of needs in higher education. In this connection, the location of existing as well as new universities must be carefully considered. The feasibility and soundness of schemes to move universities to new campuses are usually open to serious doubt because such locations are unsuited to the function of co-ordinating the use of college resources, because of excessive initial and continuing costs, and because of the further handicaps that would be created for the poorer students.

149. The Pakistan Educational Conference of 1947 was fully alive to these problems when it recommended the creation of the Inter-University Board. That Board, brought into being by a resolution of the Ministry of Education in 1948, is composed of the Vice-Chancellor and two other representatives from each university. It is charged with the duty of exchange of information and views among the universities : liaison with foreign universities ; encouragement of private endowments ; removal of inter-provincial barriers and inter-university competition ; periodic visits to the universities with a view to co-ordinating their activities ; equalisation of degrees and diplomas ; standardisation of curricula and syllabi ; inter-change of staff and students ; and co-ordination of facilities for scientific and industrial research. Although this Board meets annually, and sometimes oftener to consider common problems of policy and practice, none of its specific functions has been effectively discharged. One of the main reasons for this failure is that the full-time Secretary and staff proposed in the resolution have not been provided. This staff should be created promptly. Also, the Board should require to publish annual reports of its activities and progress in accomplishing the highly desirable purposes for which it was created. The Central Government should consider these reports in consultation with the Provincial Governments, communicate their comments to the Board and publish them for public information.



## Financing higher education

150. Another major reason for lack of progress in inter-university co-ordination and planning is that these functions are not related to the budget process. Unless there is insistence that the contemplated planning and co-ordination be accomplished before budget proposals are made, there is no way to assure that those processes will be satisfactorily completed. We propose the creation of provincial university grants committees and a central university grants commission to meet this and other deficiencies in the control and financing of higher education.

151. Each Province should create a university grants committee provided with a whole time chairman and a secretary. Its functions would be :

- (a) To prepare long-range plans for the development of higher education and to submit them to the government for approval.
- (b) To advise the government in respect of the budget requirements of higher education with due regard to the long-range plans and suggest the amounts of recurring and non-recurring grants to be made.
- (c) To receive the government grant in block and distribute it among the various beneficiaries to meet their needs on the basis of the actual progress of their plans. The functions of the committees will extend to all institutions, universities, arts and science colleges, and professional colleges, whether private or public. The grants should be made for a period of three years to guarantee the undisturbed fulfilment of the plans to which they are related. At the same time, care should be taken to prevent the funds being retained by any institution in excess of immediate needs.

152. In order to discharge its functions, the committee should be empowered to visit the institutions and to call for any information or documents it requires. The committee should also be empowered to appoint sub-committees of non-member experts to advise it on the several aspects of its works. One such sub-committee should develop long-range building plans in keeping with authorised schemes of development. The committee should retain the services of a firm of consulting architects to supervise and assist with the design of building and campuses. No new specialized college or university departments should be approved without a finding that such colleges or departments do not unnecessarily duplicate institutions already available and that they are consistent with arrangements for university specialisation worked out by the Inter-University Board.

153. These grants committees should assist each college and university to increase its financial resources from private donations and endowments. Higher education the world over has been developed by an informal partnership of government and private enterprise. It is highly desirable that each institution develop an endowment fund from unrestricted private gifts, the income from which may be used to enrich the institution's facilities and curriculum. Such gifts should be solicited from graduates, and from business and industry. In addition, systematic relationship should be entered into with the various segments of industry to provide financial support for specific schemes of mutual benefit to industry and education. Grants might be made for scholarship and teaching chairs in particular fields, or for research of immediate concern. A co-ordinated approach to private philanthropy is desirable to avoid undue competition among the colleges and to give assurance to the donors that their contributions will be wisely spent.

154. In this connection it should be noted that private colleges make up 66 per cent of the total number of colleges. It is hoped that as time goes by an even larger percentage of college education will be privately supported. This arrangement will contribute to the freedom of experimentation which is the essence of higher education : it will broaden the base of citizen participation and support, and will contribute to the autonomy of higher education. Government grants to private colleges, now made on an *ad hoc* and irregular basis, should be systematised and related to a national purpose ; they should be made only for temporary periods. The private colleges should be encouraged and aided to stand on their own feet rather than to remain dependent upon government grants.



155. Although the universities, with the exception of Karachi, are financed primarily by the Provinces, the Centre has been making *ad hoc* grants in support of university education. It is clear that such financial assistance must continue to supplement the resources of the Provincial Governments to give concrete recognition to the Federal Government's special interest in higher education and to encourage development in conformity with the over-all social and economic plans of the country. It is proposed that a central university grants commission be created composed of a chairman and four members, two from West Pakistan and two from East Pakistan, distinguished by scientific, professional and intellectual achievement. The chairman and the secretary should be whole-time officers. No member should concurrently hold a university or college post. The function of the commission will be to assist the provincial committees in the formation of their plans, the determination of policies and targets and the assessment of their needs ; make recommendations to the Central Government regarding the bases, purpose and amounts of grants that should be made from federal funds towards the plans of the provincial committees ; receive and distribute the grants sanctioned by the Central Government and obtain reports on the progress and prepare its own report to the Government on the state of higher education in the country.

156. The central grants commission would not give unconditional grants because this would prevent the Central Government from exercising influence on the direction of development. The Central Government would like to see that progress is made in accordance with approved plans and use its resources to promote that objective.

157. With the appointment of provincial university grants committees and the central commission the ability of the universities to move forward with vigour and confidence will be increased and a more effective and favourable environment for their co-ordinated and orderly growth will be provided. By holding the Inter-University Board accountable for the performance of specific functions, the government will be assured that high standards will be achieved without having to set and enforce those standards itself. Our recommendations are intended to promote a climate of understanding based on partnership among the Federal Government, Provincial Governments, the universities and the colleges in performing a most vital service to the nation and to affirm the principle of responsibility instead of control and subordination. We believe that the implementation of these proposals will enable all institutions of higher education to grow and expand with confidence in their mission and in their ability to fulfil it.

## VIII

### TEACHING AND RESEARCH IN COLLEGES AND UNIVERSITIES

158. To improve the content and quality of college and university instruction and research is the main objective of the organisation of higher education. Colleges and universities must continue to improve their curricula, syllabi and text books in order to keep them abreast of new knowledge and to assure their relevance to the changing needs of the students and the nation. Intensive attention to these matters is required at present in order to complete the process of adapting our action to the requirements of goals as identified in the context of our independent national life and the consequent needs for trained personnel and organised research.

159. Higher education is now composed of two intermediate years after matriculation—the eleventh and twelfth ; of two years leading to the bachelor's degree—the thirteenth and fourteenth ; of another two years leading to the master's degree ; and of two or three years additional work leading to the doctor's degree. Some colleges and universities also offer a three-year honours course above the intermediate level. It is the goal of our educational leadership to lengthen the educational process by adding one or both of the intermediate classes to secondary education and by adding a third year to the course leading to the bachelor's degree. This step would greatly strengthen secondary education in its efforts to establish a system more useful to those who do not go on to college. It would also permit the colleges and universities to develop greater unity in higher education. During the Plan period, however, this change would be difficult to introduce. The money, equipment and

personnel required are needed more urgently to improve the quality of existing courses, and for the upgrading of standards to produce better matriculates and graduates. In addition, longer courses instituted at this time would result in a diversion of trained men and women from the many urgent development programmes. The transition should be viewed as a gradual process in which all opportunities that present themselves should be seized for advancing towards the goal until resources permit its full achievement.

### Curriculum deficiencies

160. Four major problems concerned with curriculum have been emphasised by various committees and conferences which have revised the situation :

- (a) College courses before Independence, being deficient in instruction in Islamic history, literature and morals, failed to inculcate sufficiently the attributes of character and idealism. Much emphasis is now being placed on this type of instruction, as may be seen in the creation of departments and institutes of Islamic studies, and such emphasis should be encouraged.
- (b) English is the medium of instruction in the colleges and universities. Many, probably the majority of students, however, have such an inadequate knowledge of that language that they suffer a severe handicap and the level of teaching tends to be lowered to the level of language comprehension. The remedy is to emphasise practical, not literary, English at the intermediate level and to insist upon a high standard of reading, writing and speaking comprehension for admission to the degree class. Thereafter, English should not be a compulsory subject dominating the college curriculum. To accomplish this result, however, it is necessary for teachers of English to renovate rather completely their methods of instruction and a properly thought out scheme on a national basis should be instituted to help them. The purpose of the scheme should be to teach teachers the methods of assisting pupils to grasp salient ideas and information presented in oral and written English and to express what they learn and what they think in simple workmanlike written and spoken English. Much research and experimentation will be required to carry out this scheme—functions which may suitably be assigned to the proposed Institutes of Education.
- (c) Because of their origin, most colleges, both Government and private, are deficient in the teaching of physical and biological sciences. This deficiency has had the effect of leaving the so-called educated man actually uneducated in a large area of knowledge and life. It has had the additional serious effect of leaving the country without a sufficiently large supply of men and women prepared to perform the many scientific tasks required for the industrial and agricultural development of the country and for the improvement of the health and welfare of the people.
- (d) The deficiency in science education exists, at the post-graduate as well as at the degree level. The Plan provides for the purchase of equipment and supplies, for the teaching of science and the purchase of books and periodicals for libraries. This should in due course enable the universities to take the leadership in science education throughout the country and to undertake advanced instruction and basic research as a foundation for the nation's future scientific progress.

161. Many, indeed, most of the colleges are overcrowded, under-staffed, and poorly equipped. As a matter of policy, this situation can be alleviated somewhat by selective enrolments to keep within the number which can be reasonably accommodated in the existing institutions. This, however, would not go far to relieve the problem and additional buildings will have to be provided to meet the existing needs of degree students and to satisfy the growing demand for college education. In undertaking this building programme, it is proposed that, for the most part, new structures be provided at suitable sites for degree students, thus relieving the present college buildings of some of their surplus students and collecting the degree students in buildings of appropriate size. Some additions to existing buildings which would accommodate intermediate colleges must be made as well. This approach to the problem of building is consistent with the ultimate goal separating intermediate from degree classes so as to make the former a part of secondary education structure. At present both the intermediate and degree classes, being joined together in the same building as one integrated system of university education, neither of them lends itself conveniently for development with its own distinctive aims and purposes.

## Examinations

162. The examination system is generally recognised as one of the unsatisfactory features of higher education and the major institutional barrier to higher learning. It is a formidable obstacle in the path of curriculum revision. Accompanied as they have to be by prescribed syllabi and text books, the centrally prepared external examinations stifle teacher and college initiative and experimentation. The slow and cumbersome process which is required to revise syllabi and change text books forces teaching to lag behind the current state of knowledge and inhibits the introduction of new knowledge and new ideas by the teacher. The teacher himself has little or no incentive to keep himself or his students up-to-date. Exclusive reliance upon the examination system also has adverse effects on the teaching and learning process. The teacher is judged by the number of his students who pass an examination which is prepared by someone else, and not on his success in inspiring their understanding and independent thought. The student's diligence and the excellence and creativeness of his work are not the subject of judgment or guidance by the individual teacher, by the college—or indeed by any one. It is small wonder that about three-fourths of the degree candidates fail to pass their examinations. Reading for two years without discipline in preparation for a single examination does not encourage habits of industry and thought. On the contrary, the system develops pressure from the students for procedural changes—more time, simpler examinations, lower passing grades, etc.—all resulting in lower standards and indiscipline.

163. The examination has come to serve other than education purposes—chiefly as measure of qualification entitling students to admission to a higher level of education or for government or other employment. It has become an end in itself, rather than the means to an end, that is, to guide the students and the teacher, along with other measures, in determining what supplementary course of effort is desirable in the student's growth. Many students, if provided with sufficient guidance and measures of progress, would pass final examinations, rather than fail. Other students would realise in a short time that their aptitude or interest did not warrant their remaining in college. Great intellectual and economic savings could be made by placing the external examination in its proper perspective.

164. These and other deficiencies of the examination system have been analysed in great detail by individual educators and distinguished committees including the Inter-University Board. Remedies along the following lines could be instituted by the universities with advantage :

- (a) University examinations should be limited to degree examinations. As noted in the section on secondary education, boards of secondary education should take over the responsibility for matriculation and eventually for intermediate examinations, and such examinations should be in terms of student progress in accomplishing the particular purposes of secondary education.
- (b) Only colleges which satisfy reasonably high standards of library, teaching and laboratory facilities, qualifications of teachers and financial stability should be recognised for affiliation to the universities and such affiliation should be reviewed on the basis of an inspection made not less frequently than every third year. Only affiliated colleges should be permitted to present students for degree examinations ; this should not restrict any facilities that may be permitted for private students. Only affiliated colleges should be eligible for grants-in-aid, but a grant-in-aid should not be a condition of affiliation.
- (c) The principles for regulating admissions into the colleges and universities need careful study. Professional colleges usually have satisfactory arrangements based on test and interviews in addition to other prescribed conditions. There is a general feeling among educationists that some process of selection should be introduced for regulating admissions into the universities and their affiliated colleges. This is considered desirable to ensure that only those students are admitted who are expected to derive maximum benefit from the limited higher education facilities. Support is lent to this view by the large numbers of casualties due to failures or other reasons. Several methods of approach have been suggested for this admittedly important problem, but none of them is free from serious objections. A refusal to admit third division matriculates would bar the door to many who could be expected to fulfil reasonably high standards in the subjects which they proposed to pursue.

in the universities. Some colleges, which admit first and second division matriculates only, do not show distinctly better results than others where the majority are third divisioners; this would tend to show that there is no real substitute for personal attention by the teachers and hard work by both the teachers and the students. A general exhortation that all institutions should arrange their own tests based on past performance, teacher evaluation, aptitudes, etc., would be ineffective against influential pressures on colleges which need such changes most. The problem bristles with difficulties, but it is nevertheless of great importance for achieving reasonable standards in higher education and for making the best use of our limited resources. A policy of drift, resulting from the seemingly formidable character of difficulties, is leading to serious wastage in all forms, one of them being the misdirection of pupils who would do well to look elsewhere in preparing themselves for future life. We recommend that the Government should invite a committee consisting of vice-chancellors and a few selected principals of colleges to consider this matter and make recommendations on which the Central Government in consultation with Provincial Governments could announce their considered views for the guidance of universities and colleges.

- (d) Affiliated colleges should present students for degree examinations, provided that in their judgment the students have satisfactorily completed the prescribed course of study. They should certify that they have made systematic progress over the whole period through prescribed courses of study as measured by teacher evaluation, class room work and reading objective tests and aptitudes.
- (e) Principals of colleges should be encouraged to make suggestions regarding syllabi and text books and the universities should have some system of consulting them before decisions are taken.
- (f) The universities should encourage the institution for B.A. degree examinations of the unit course system of teaching, each unit extending over 12 to 18 weeks. Under this system pupils would be able to concentrate on a small group of subjects at a time and complete them by satisfying prescribed tests which would include examinations, credit for work in the class and cumulative records of achievement.
- (g) In prescribing the syllabi for the degree examination and administering the teaching, emphasis should be put on understanding and not on memory. In achieving this aim the collaboration of the colleges should be secured and a persistent policy and campaign should be pursued over a period of years.
- (h) It would be a common place to say that teaching in higher education institutions should not be dominated by the qualifications prescribed by employing authorities. This tends to distort the purpose and perspective of education. Government and private employers should aim ultimately to devise their own particularised measures of job qualifications. India is considering whether the conditions of a university degree should not be eliminated from the rules for admission to superior services. A measure of this kind, if found practicable, would go a long way to free the minds of pupils from the spectre of employment specifications of a mechanical character, distinguished by labels only. The conditions are not favourable for making such a change in the immediate future, but in view of its importance it needs to be studied and borne in mind.

165. It is believed that revision of the examination system in these ways will encourage the student to learn rather than cram for an examination ; it will encourage him in better habits of study and workmanship. Teachers would be encouraged to show greater initiative and take more responsibility. Greater diversity and experimentation in college curricula and teaching methods would be possible.

166. A re-orientation of the system on these lines, would not abolish the external examination. It would, however, make the examination only one measure of student accomplishment while encouraging, though not requiring, teacher and college initiative in improving teaching and measurement techniques and in keeping the curriculum alive and vital with new and important information and ideas. Finally, and most significantly, these changes would provide a much improved environment for the student to develop qualities of industry, intellectual curiosity, and moral strength. The revision of the examination system along the above lines will remove the greatest single impediment to the growth of excellence in teaching and learning in our colleges and universities.

### The role of research

167. Research is one of the paramount functions of the university. Although universities provide guidance and leadership to colleges through the processes of affiliation and examination, these processes would be sterile and the entire educational system would stagnate were not provision made for advancing the frontiers of knowledge. Moreover, the applied and technological phases of research will falter if opportunities are not provided for fundamental research. Finally, advanced learning at the master's and particularly the doctor's level is empty unless it is combined with research and training in the techniques of inquiry. University instruction should be developed only in connection with research. The Pakistan Education Conference invited attention to the role of fundamental research in universities. We believe that for some years the resources in men and money available for fundamental research would remain limited and more attention will generally be given to the adaptation of scientific advances for use in our country. Nevertheless it is essential to support fundamental research in the universities. Some valuable work is already being done by some of them but research needs to be promoted and strengthened in all universities wherever opportunities are available and facilities can be provided. Those who are inclined towards such research and well fitted for it should be encouraged by research stipends as also scholarships for students to work in foreign universities. Where facilities in any university are adequate for this purpose, eminent scientists from abroad should be employed for guiding research students and laying sound foundations for research.

### Scientific and industrial research

168. That same body recommended the formation of a Council of Scientific and Industrial Research to develop applied research. In the wake of World War II a Council of Scientific and Industrial Research was established in India to achieve the integration of science with industry. With the partition of the country, that Council and its laboratories remained with India; there was a complete break in these activities in Pakistan. A Council of Scientific and Industrial Research was, however, established in Pakistan as an autonomous body in 1953. The Council consists of prominent scientists, industrialists, and representatives of Provincial and Central Governments. The Council's function is to promote and foster scientific research having a bearing on industrial development and utilization of natural resources to the best economic advantage.

169. The various measures the Council uses for the discharge of its functions include full utilisation of the facilities available for scientific research at the several universities. The Council is establishing a central laboratory at Karachi and regional laboratories at Dacca, Lahore and Peshawar to take care of industrial problems specific to the respective areas. Nucleus laboratories at these centres have already been established and have started functioning. As far as possible these laboratories will be located in proximity to the universities; at Peshawar, for example, the university has placed at the disposal of the Council one wing of its new science college building. These plans soundly conceived, should be executed as promptly as possible, and the development Plan provides for them. They will produce rapid results in the development of our resources. In addition, they will be of considerable benefit to the universities by greatly relieving them of the pressure of "problem solving" research.

### University research

170. The universities, however, should lay careful plans to organise research programmes of their own. Each department should develop its research along with its instruction, since the two go hand in hand. The overall development will be greatly facilitated by the creation of research institutes—institutes of physical and biological research, institutes of research in the social sciences and institutes of Islamic studies. (Institutes for educational research are proposed in the section on "Education and Research in Teaching").

171. Various allied departments of study in a university are grouped under faculties, but this grouping is more a matter of convenience of nomenclature. For instance, physics, chemistry and biology are grouped under the Faculty of Science, but in no university in Pakistan is the work of any of these constituent departments co-ordinated with the work of other departments. Such research as is being done in the science departments of our universities is *ad hoc* and unrelated, often tending to be haphazard. It will be the purpose of the Institutes to

plan research, to assign definite items of work to post-graduate and doctorate students and to continue to check up on their progress in a helpful, co-operative and effective manner. This work cannot be entrusted to the dean of the faculty, who has no official status to co-ordinate the work of the departments of his faculty and is usually elected every year or every second year and therefore cannot ensure continuity in research programmes. Owing to these inherent lacunae he cannot be held responsible for organising and co-ordinating inter-departmental research.

172. These institutes should be inter-departmental in character so that full use will be made of existing staff and facilities. Each institute should be headed by an eminent scholar and governed by the professors of the universities. The functions of each institute should include the following :

- (a) The stimulation of research by university staff and teachers ;
- (b) Sponsorship of research requiring the participation of more than one department ;
- (c) The making of research grants, or research appointments for short periods, to individuals or teams of individuals ;
- (d) The collection and dissemination of information about research in progress and research needed for purposes of co-ordination ;
- (e) The publication of research results ;
- (f) The provision of library and laboratory facilities, or the supplementing of existing facilities ; and
- (g) The co-ordination of activities with other research bodies, such as the Council of Scientific and Industrial Research.

173. The Plan contains provision for starting these research institutes in all universities and supporting them during the Plan period. It is emphasised that the institutes can get under way without waiting for the construction of additional buildings. Such buildings should be constructed only as the nature of the research facilities needed becomes clear. The immediate function of the institutes would be to encourage and support individual and group research with financial assistance on the basis of proposals made by teachers and students.

#### Islamic studies and research

174. Additional comments about physical and biological research and about social science research are made elsewhere. A special reference should be made to Islamic studies also, because of their potential influence in building the character of our people. The Pakistan Educational Conference of 1947, and meetings of the Advisory Board of Education since then emphasised the significance to education of the Islamic characteristics of universal brotherhood, tolerance and justice. The institute of Islamic studies should have the high scholarly purpose of rediscovering the truth in Islam and showing the applications of this truth to the solution of our problems.

175. Our religious educational centres in the undivided sub-continent served the useful purpose of preserving and disseminating Islamic knowledge ; but their approach was rigidly theological and did not help to interpret Islam in the midst of new social and economic concepts of a revolutionary character arising in response to a dynamic situation in human history. The proposed institutes of Islamic studies will undertake study and research in the basic principles of Islam, the social and political institutions that have been used over the centuries to express and realise them in actual life, and the impact Islam has made on the human mind and the progress of civilisation. They will also conduct a survey of Muslim people and the institutions and problems and a critical and comprehensive study of the life of the Prophet and his influence on the history, culture and morals of Muslim people.

176. Departments of Islamic studies seem to need a clearer sense of purpose and mission. Our social values and institutions face a challenge of an unprecedented character from the advancing tide of modern industrialism. There is no clear vision about the form and purpose of the society which will eventually appear as

a result of the revolutionary changes that are in progress. Surely this should inspire those engaged in Islamic studies with an earnest purpose and a deep and overpowering sense of mission. Institutes or departments of Islamic studies in our universities should visualise themselves as centres from which light should radiate so that our sense of purpose and direction should remain firm and clear.

### Organisation of research

177. Emphasis is placed upon effective organisation for university research because the shortage of qualified personnel and equipment inevitably means that the development of this function must evolve slowly. Priority must be given, during the development period, to applied research. By careful arrangements, however, a good start may be made. Every effort should be put forth, for example, to utilize the laboratories of the Council of Scientific and Industrial Research, of other government agencies, and of industrial concerns for the purpose of fundamental research by university and college staff and students. The location of the Council's laboratories near the universities will facilitate these arrangements. The co-ordinate specialization of the Council's laboratories will encourage specialization on the part of universities as well. In addition, the universities themselves through the Inter-University Board, should co-ordinate their research plans so as to avoid unnecessary duplication and thereby cover more ground than any one of them could individually. Finally, each university should encourage the full use of the staff of its constituent and affiliated colleges and their libraries and research laboratories and facilities in its research programme. Research, well-done, is very costly and we cannot afford the luxury of multiplying laboratories and specialised staffs which compete with one another for equipment and personnel.

178. By taking these precautions, the universities can perform their most important role in research, namely to set high standards of performance. It is more important that research be done thoroughly and decisively and with integrity, than that it be done on a large scale. The spirit of research will produce more useable results, in and out of the universities, than many haphazard investigations by incompetent persons. It is the unique function of the universities to instil this spirit of research and respect for sound research, not only into its faculties, teachers and students, but also into the leaders of business, industry and government.

### Atomic energy

179. The discovery of atomic energy has opened a new era in the progress of mankind with incalculable potentialities. Recent developments have paved the way for its employment in peaceful uses. These developments are of special significance to a country in the early stage of technological development. There is no reason why Pakistan should pass through all the technological stages which have been witnessed in advanced countries. We must take full advantage of all developments and adopt a vigorous and imaginative attitude. The application of radio-isotopes to medical and agricultural problems should be taken up at research stations in both Wings. A suitable research reactor should be installed as soon as possible. Eventually there should be two research reactors, one in West Pakistan and the other in East Pakistan. Effort must be directed towards education and training, growth of libraries, research and exploration for radioactive minerals and organisational development. Development will probably be limited by the availability of trained men and we must therefore utilise fully all opportunities that present themselves for this purpose.

The Government have set up an Atomic Energy Council consisting of a Governing Body and an Atomic Energy Commission. Its functions include the procurement, supply, manufacture and disposal of all radioactive substances, carrying out of surveys of radioactive materials, assessing the country's requirements and taking necessary steps for their fulfilment, and the planning and establishment of atomic energy and nuclear research institutes at suitable centres. We understand that progress is being accelerated in several ways. A training programme is in hand and several of our men have received training abroad. Exploration is underway for radioactive minerals. Necessary steps are being taken and a site chosen for the installation of the first research reactor. A library of more than 60,000 books and reports has been assembled. The good beginning thus made should be followed up with vigour so as to compensate for past delays.



## Social science research

180. Whereas physical and biological research applied to the country's resource and industrial development is receiving increased attention and support, research in the social sciences—economics, political science, sociology, cultural anthropology—has not been similarly recognised. Pakistan needs a council of social science research, just as it has a Council of Scientific and Industrial Research in the physical and biological sciences.

181. The need for social science research is great. The people and the government at all levels are making plans for social and economic progress. Great quantities of information must be collected and analysed to make such plans valid and realistic. Numerous illustrations of unanswered questions are available ; the size, composition, distribution and rate of growth of the population ; the economic status of families, villages, provinces and the nation ; the patterns of life and organisation of families and villages ; experiences in various forms of local government ; patterns of employment and vocational skill, etc. These needs are recognised by the establishment in recent years of such agencies as the Boards of Economic Enquiry in the former Punjab and former North West Frontier Province, the East Pakistan Statistical Bureau, the Research Advisory Board in the former Punjab and the Central Statistical Office.

182. The problem is not so much the recognition of the need for social science research as the method of meeting it. The number of persons in our country skilled in research methodology is very small. The courses in the colleges and universities in economics and political science, even at the postgraduate level, are generally weak and include practically no training in research. Courses in such fields as sociology and cultural anthropology are just now being considered. The professional organisations, although making a good beginning, are not active in the field of research. In short, our country lacks strong leadership in the field of social science research.

183. To remedy this deficiency it is proposed that the government charter a Council of Social Science Research to give leadership in the field by assisting and keeping abreast of research and research needs and bringing them to the attention of the universities and appropriate government departments ; by conducting seminars on research methods and otherwise increasing the number and quality of research workers, by advising on the framing of research projects ; and, above all, by giving encouragement and financial support to individuals who show competence or promise in the field. The Council should not undertake research itself, and it should not pass judgments upon research findings ; it should be a non-political body.

184. In general, the Council of Social Science Research should be organised by and be composed of a few first rate social scientists of the country at the invitation of the Inter-University Board. After it is organised and chartered, it should be an independent body responsible for its own membership and organisation. The Council might be managed by an executive committee and staffed by a small number of competent social scientists. The Council should be free to employ outstanding foreigners as staff members or consultants. The creation of this Council, with a small grant for operating purposes and a larger grant for development, would in itself stimulate the advance of social sciences in our country.

185. In as much as organised research on a large scale is new to us, we have the advantage of being able to set the standards high at the outset. The most certain method of developing and maintaining such standards is to give full freedom and support to those scientists whose devotion to and competence for research distinguish them from other men. Such scientists should be provided with adequate personnel assistance and funds for travel and freedom from other duties, as well as with research facilities. This kind of recognition and encouragement essential to genuinely productive research, should bring our scientists to the fore in world scholarship very soon, even though their number may be relatively small until a broader base can be built. But such scholars, with their students, will be the centres of research development and until they are found and supported, research will be insignificant or second rate. By avoiding the mistakes of too rapid expansion, by creating an environment for high standards of performance, and by finding, encouraging, and supporting men and women with the scientific spirit, the universities will perform their research function responsibly and serve the country best.

### College and university teachers

186. The quality of higher education, deeply affected as it is by curriculum and facilities, depends in the last analysis upon the ability, competence and interest of teachers and students and their interaction upon one another. By and large, colleges and universities in the long run will bring together teachers and students, who, other factors being favourable, have a deep interest in knowledge, intellectual pursuits, and ideals. But this process cannot be left entirely to chance. There is a dearth of properly qualified teachers in our colleges and universities, and the shortage will become more pronounced as development schemes are undertaken, unless constructive measures are taken to forestall it. Three kinds of measures are called for :

- (a) To make the best use of the limited number of qualified persons now available.
- (b) To provide for an increase in the supply of trained teachers.
- (c) To increase the incentive for competent men and women to enter and remain in the field of college and university teaching and research.

187. The tremendous upsurge of scientific and industrial development is outstripping the growth in the supply of scientifically trained personnel all over the world. Such personnel is in great demand in scientific laboratories, government agencies, and industrial establishments as well as in colleges and universities : inter-agency and inter-institutional competition for their services is keen. The long-term needs of government and industry cannot be met unless the higher education institutions can be staffed, and staffed well, because the quality of scientific personnel depends upon the excellence of college and university training.

188. In order to make the best use of existing scientific personnel and particularly for the purpose of assuring colleges and universities of competent staff, it is proposed that the Council of Scientific and Industrial Research and the Inter-University Board form a joint committee on scientific personnel, to which they should invite representatives of industry. The functions of this Committee will be to develop a scientific personnel roster, to encourage the use of such personnel up to their fullest capacities, to arrange for the coordination of offers for jobs made to persons whose names are on the list, and to assist the respective agencies to fill their vacancies. The committee should exercise care in limiting opportunities of free choice by the individuals, because they will be happiest and do their best work if they have an opportunity to select their own positions. The Committee can be of very constructive assistance by providing clearing house services to the agencies and institutions concerned and to scientifically trained personnel.

189. At the same time, however, it is necessary to take emergency steps to increase the number of qualified college and university teachers. At least for the period of the Plan, it will be desirable for a large number of junior teachers to take honours and advanced degrees at foreign universities. The Plan provides for sending 220 young teachers abroad, 100 from universities and their constituent and affiliated colleges in East Pakistan and 120 from the universities and colleges of West Pakistan, for an average of two years each. The persons selected should have demonstrated as students, teachers and research workers, their capability of benefiting from such advanced studies. Each of the recipients of these awards should bind himself to teach for at least five years upon his return, and he should be chosen because of the prospect that higher education will be his life work. In no circumstances should he be released from his undertaking to serve in a teaching institution for a period of five years, but he must be guaranteed reasonable conditions of service.

190. This programme of training abroad should not be continued any longer than is absolutely necessary. It is clearly more economical and more efficient to bring a small number of foreign professors to Pakistan for short periods of from 2 to 5 years than it is to send a large number of our men and women abroad. The professors brought from abroad would be able to guide the education of a comparatively large number of colleges and university teachers. The current inter-university arrangements among certain American and Pakistani institutions have great merit for this reason.

191. The several overseas training programmes now being conducted are of both direct and indirect benefit to colleges and universities. The Central Government, through its overseas training schemes administered by the

Ministry of Education, has been awarding about 25 scholarships a year since 1950. Foreign governments and philanthropic organisations have provided scholarships and fellowships under a variety of cultural exchange and technical assistance programmes. The Ministry of Economic Affairs has participated actively in the selection of the recipients of these latter awards.

192. These several programmes have undoubtedly been of great value, both individually and collectively. It is believed that their value could be greatly enhanced, however, if the following safeguards were provided :

- (a) Each person selected for an award should be sponsored by an agency, governmental, educational or private, which will guarantee the use of his talents for a minimum period of five years after his return ;
- (b) Each person selected should give assurance of remaining with his sponsoring agency for the prescribed period upon his return ;
- (c) Persons should be selected in fields which are in the greatest need of strengthening ;
- (d) Persons should be selected only on the basis of merit and their academic and research records, rejections being made only where a person, on interview, is found unsuitable from any other point of view ;
- (e) The awards should be adequate to pay living and travel and tuition expenses ; and
- (f) All plans should be coordinated by an overseas scholarship committee composed of educational, governmental and business leaders of known integrity.

193. These special measures for increasing the supply and stability of teaching personnel, however, are only supplementary to the basic method of attracting and retaining outstanding staffs in colleges and universities. That method is to increase the attractiveness of teaching. Although salary levels must be sufficient to permit the maintenance of a decent and secure standard of living, the real attractions of teaching are the satisfactions which come from seeing students making progress in higher studies and succeeding in the world of scholarship, government and business. There are other satisfactions which come from study, research, and contribution to knowledge. Colleges and universities are not fully successful in providing these incentives at present because of the rigidity of prescribed syllabi, texts, and student measurement methods which are too often artificial and inhibit the initiative and expression of the teacher. Laboratories and libraries do not provide adequate opportunities for research and study. By making the procedural changes suggested in other sections of this report, and by raising the standards of instruction and research, the institutions of higher education can increase the attractions of teaching substantially. Emphasis on the need of sacrifice by the teachers in the course of their noble calling will yield results only if other conditions are made favourable for them.

#### **Talent scheme for students**

194. The selection of students for higher education is a neglected topic. Student selection has two aspects : guidance to those students who, although financially able to carry on, clearly do not satisfy the standards of higher studies which have been discussed in the section on examinations ; and the selection of those students who are outstanding but would not be able to reach their highest level and make their fullest contribution without full or some financial assistance. Suggestions for the encouragement of talent have been made by the Inter-University Board and by the Council of Scientific and Industrial Research.

195. We would emphasise that, since talent exists at every level of society, facilities for education should be provided in such a manner that the poorer sections of the population, as far as possible, are afforded equal opportunities. Because the country needs promising young people and because a beginning should be made in democratising higher education the Plan provides means of further education to those whose career in secondary schools has been outstanding but whose financial means do not permit them to continue their education. The provision will cover an average cost of Rs. 1,200 per year (excluding tuition fees, which will be waived) for 600 boys and girls each year for 4 years. Provision is made for the continued education of about 25 per cent, for some of them in professional colleges such as medicine and engineering. The selection of boys and girls

under this scheme should be made annually. Provision has also been made with a similar purpose for awarding overseas scholarships to 25 outstanding boys and girls to continue their studies in foreign universities. This would enable brilliant boys and girls with insufficient means to carry their education and training to the fullest limits of their promise and talent. If this scheme succeeds and when the resources permit it should be expanded, first to include pupils in matriculation classes and subsequently to increase the numbers. Among other things it should have a profound effect on the standard of work and discipline in the colleges and universities, and relatively to the benefits the cost would be small.

196. We recognise that this proposal is very modest and will fail to meet the needs fully. The costs of higher education have increased to such an extent that it is now scarcely within the reach of the less well-to-do sections of the community, especially where large families are concerned. Limited resources do not permit us at present to make any extensive proposals for reducing the costs, though we are clear that this must be our ultimate goal. A continuation of the present situation would not only result in the loss of potential talent to the nation but involve a negation of the principle of equal opportunity to all in the pursuit of knowledge. In recognition of the ultimate objective we are including this scheme as a token, to make a modest beginning towards what we visualise as a normal system in which every promising boy or girl, whatever the financial means of his parent, will be provided with opportunities to the fullest extent of his talent and aptitude. The selection of students for talent awards must be made with great care so that no question can be raised with respect to either financial need or talent. Candidates should submit evidence of financial needs, but in regard to talent the recognition of the marks obtained in the examinations as the standard of measurement is likely to involve the least risk of injustice.

197. By giving special attention to the selection of students and teaching personnel the colleges and universities can quickly raise the levels of higher education throughout the country. The result will be reflected in the course of time in better educated citizens and leaders and in better trained scientists and professional men. The obligation of higher education to stress quality rather than quantity can in this way be fulfilled more readily.

## IX. PROFESSIONAL EDUCATION

198. The country's social and economic progress depends heavily upon its professional groups. The development Plan requires the skilled direction and leadership of professionally competent persons in such fields as engineering, medicine, agriculture, education, social work and industrial and government management.

199. In countries which have made spectacular progress in recent history, scientists and technical men are rated very high. Despite their importance, the professions are not given adequate recognition in the country and the environment is not as favourable to their full growth. A large number of graduates of the professional colleges are employed in government posts, but because of their status their technical and professional judgements are frequently given too little attention. In most cases, sufficient authority is not delegated to professional personnel in government to prepare and execute programmes. These conditions are a legacy from the times when policy formulation and programme implementation had few scientific and professional implications. They must be improved if we are to rise above a very low level of professional accomplishment.

200. This system for the employment and utilisation of professional personnel is colonial in its origin and purpose. Professional work hardly ever rose higher than the technical level, since the colonial system required only technicians, that is, persons who could perform assigned tasks of a mechanical nature under foreign professional supervision: Vestiges of this system persist today in the economic and social status of the professional. The first step in correcting this situation is to ameliorate the professional's status so as to widen his opportunity of contributing to his own growth and the growth of the community.

201. The second step is to make the professional colleges truly professional institutions rather than high grade technical schools, which too many of them now tend to be. As stated in an earlier section the professional colleges should be separated from government departments and made constituent of the universities as a part of one integrated educational organisation.

202. The third step is to develop syllabi and courses of study for the colleges designed to give the best possible professional education and not merely to prepare for particular government jobs. The colleges should take full advantage of their association with universities to broaden and deepen professional education with contributions from the basic physical sciences and the social sciences. They should develop programmes of fundamental research. Their teachers should be scholars in their professions and not merely persons on assigned duty from departmental posts. An independent point of view about professional development and the contribution of the professions to national life and well-being will then be free to emerge. Graduates of professional colleges like these will be able to serve their country well.

203. In addition to being established as genuine professional colleges, these institutions should be encouraged to raise their standards of instruction. During the Plan period we should seek to improve the existing facilities and courses rather than to expand the number of these colleges or the length of their courses except where the latter is absolutely necessary. Almost uniformly these institutions are deficient in up-to-date laboratory equipment and libraries. For this reason, professional instruction is too frequently theoretical, whereas the essence of professional education is in its practical application. A larger number of teachers is needed to reduce the size of the classes, and such teachers should have advanced degrees. Very prompt attention should be given to these deficiencies in professional education.

204. The changes outlined above will very quickly put the professional colleges in a position to develop into first class institutions. They already have the potentiality of doing so, owing largely to the competence of the teachers; a substantial majority of whom have had post-graduate instruction in the best professional institutions in other countries. The practice of sending promising young teachers to foreign universities for further education should be continued and extended. In one respect, however, teaching careers in professional colleges are hampered: in many cases members of the staff are subject to transfer to other government posts and are, in fact, often dependent for higher salaries and promotions upon such transfers. Executive and administrative posts, unlike teaching posts fall in the normal line of promotions and offer temptations in the form of social position, power of patronage and pecuniary rewards. The disadvantages of such interchange of personnel seriously outweigh its advantages. Larger numbers of professional personnel should be encouraged to make teaching and research a life work by the provision of adequate salaries, status and opportunities for promotion in their own fields.

### **The professions**

205. The term profession is applied in common parlance, to agriculture, business and public administration, education, engineering, architecture, law, and medicine. A recent addition is social welfare. Some of these professions have their own educational institutions with specialised literature, equipment, skills and codes. Professional education in agriculture, medicine and social welfare is discussed in the relevant chapters of this Report; however, the proposals are summarised here in order to give a picture of professional education as a whole. Engineering and business and public administration are discussed in this section because of their importance to development in several fields, including government service, industry, agriculture, power, irrigation, transport, and communications.

### **Agriculture**

206. There are now four colleges of agriculture and two colleges of animal husbandry; the Agriculture College and Research Institute at Dacca, the Agriculture College at Lyallpur, the Agriculture College and Research Institute at Tando Jam, the Animal Husbandry College at Dacca, and the Animal Husbandry College at Lahore. In addition, Islamia College, Peshawar, offers a course in agriculture of the same length and approximately the same content as the other agricultural colleges in West Pakistan. In East Pakistan, the duration of the degree course in agriculture is three years after Intermediate Science, whereas in West Pakistan students are admitted after matriculation to a four year course for a B.Sc. degree in agriculture.

207. In West Pakistan, the animal husbandry training course is of four years after matriculation. Successful students are awarded the degree of B.V.Sc. In East Pakistan, there are two courses in animal husbandry : (a) a diploma course of three years after matriculation and (b) a degree course of five years after matriculation. The Pakistan Animal Husbandry and Research Institute at Peshawar and its sub-section at Comilla are expected to provide post-graduate teaching and training in animal husbandry. There is a Forest College and Research Institute at Abbottabad (now being shifted to Peshawar). This College provides training to superior officers and rangers of the Forest Department. The officers' training course is of two years' duration, with the basic qualification for admission of B.A. or B.Sc. The Rangers' course is of one year's duration open to students who have passed the Intermediate Examination.

208. The 1950 report of the Agricultural and Veterinary Education Committee of the Council of Technical Education which reviewed the country's situation and needs and made a series of recommendations emphasising the necessity of improving the standards of under-graduate teaching and developing training and research, made the following significant statement : " No teaching institute worthy of the name should exist where research cannot be conducted and it is always of great advantage that every research institute undertakes the training of post-graduate students."

209. The implementation of plans for agricultural re-adjustment and development will require a very substantial improvement in agricultural education at the professional level. The Village AID programme, through which knowledge and leadership in agriculture will reach the villages, will require specialists in farm management, co-operatives and marketing, plant protection, animal husbandry, horticulture and other fields, in each of the development areas and at the tehsil and provincial levels. The quality of the service these specialists can render will depend upon the excellence of their education and the validity and scope of the research done on our agricultural problems and opportunities. It is proposed that two strong centres providing courses for bachelor's degree and post-graduate education and research be developed—at Lyallpur in West Pakistan and at Dacca in East Pakistan. Each should be responsible for research and instruction leading to a doctorate and each should be staffed with scientists of the highest calibre.

210. Although the development of the two post-graduate centres should receive emphasis during the Plan period, the two other agricultural colleges must also have additional support. A new agricultural college in Peshawar University is being built to succeed the course at Islamia College. Ultimately it is expected to combine agriculture and animal husbandry, and also to combine teaching, research and rural extension services. In addition, during the Plan period, substantial advances are expected in research and instruction in forestry and fisheries.

### Medicine

211. Doctors are now trained in six medical colleges and eight medical schools. The medical colleges give a five-year course after the intermediate examination leading to the degree of Bachelor in Medicine and Bachelor in Surgery. The medical schools give a four-year course after matriculation leading to the Licentiate Medical Practitioner or Licentiate of the Medical or Licentiate of State Medical Faculty. These colleges and schools, between them, are now producing 500 doctors a year and the number will increase to 600 per year during the Plan period. At this rate, and taking into account the needs of replacement and population increase, there will be a ratio of doctors to population of 1 : 10,000 in 1960.

212. It was the conclusion of the All-Pakistan Health Conference of 1951 that no new medical colleges or schools should be started at this time, but that the existing colleges should be improved and that the schools should be strengthened preparatory to being up-graded over a period of years, to full-grade medical colleges. This position is reflected in the development Plan. Provision is made for improving and strengthening each college and school and upgrading one medical school to a medical college. The Plan provides, in addition, for the establishment of a department of tropical medicine in East Pakistan, for an institute of basic medical sciences in West Pakistan and for advanced training for doctors, both in the country and abroad. To aid the colleges in keeping abreast of advances in medicine and surgery and improve standards of instruction, arrangements are being made to import additional modern teaching equipment and supplies and to enlarge the medical libraries.

## **Social welfare**

213. Social Welfare has for its purpose the relief of those tensions in the population which result in social diseases and maladjustments, such as crime, pauperism and physical and mental ill-health. The problem is particularly acute when a country is undergoing an economic and social revolution as is Pakistan at present. Relative to the size of the tasks there are very few adequately trained workers and before the country can develop and administer the kind of programme it needs, sufficient provision for training must be made.

214. Social work training was initiated in the country, in the form of courses lasting between 3 and 9 months, by the Government with assistance from the United Nations. In 1954 the University of the Punjab followed this start by establishing a Department of Social Work offering a two-year course of training leading first to a diploma and, since 1956, to the M.A. degree. A similar programme of training is to be undertaken in an institute affiliated to the University of Dacca. Other types of training, mainly short courses for voluntary workers, are being arranged by the Central and Provincial authorities responsible for social welfare. All these measures should combine to establish a corps of qualified workers upon which can be based a constructive programme of social welfare.

## **Business and public administration**

215. The country's declared goals require the development of two professions to which little attention has been paid in the past—business and public administration. The expansion of business and industry, and the change in the principal emphasis of government from law enforcement and revenue administration to development and welfare, are likely to suffer less from want of money or material resources, than from want of men and organisation. The Commercial Education Committee, appointed by the Ministry of Commerce and Education which reported in 1952, called attention to this gap and found that the present training was too theoretical and of a low standard. Since that time there have been some encouraging developments, but much remains to be done.

216. Commercial colleges have confined their attention to the teaching of commerce subjects only. Public Administration has come to be as a subject of study very recently. Two institutions of Public and Business Administration have started functioning in the Universities of Dacca and Karachi, which are taking the lead in developing research and teaching in Business and also Public Administration. These are post-graduate institutions and will award a Master's degree in Commerce as well as in Public Administration. It is proposed that the Hailey College of Commerce, Lahore, and the College of Commerce at Chittagong be given additional support to enable them to become first-rate colleges where degree courses in Commerce and Public Administration will be offered. The College at Chittagong needs a new building, new equipment and a new location. Additional attention should be given to the quality of instruction and to inter-relationship with business and Government.

217. Experience of these educational innovations during the development period will provide a basis for the extension of education and research to administration. Education and research should not remain confined to colleges and universities. They should also be reflected in changes in public service examination and in programmes of in-service training in public and private agencies. The techniques and procedures of administration will play a major role in the success of all development programmes and the introduction of teaching and research in this subject is, therefore, of special significance and needs to be expanded rapidly. A comparative study of administrative techniques and their evaluation should prove useful and we would strongly advise the organisation of special short term courses for public servants to broaden their outlook and to give them a knowledge of principles underlying the methods they are following.

## **Engineering**

218. Engineers will play a key role in construction, industry and water and power development which form the major portion of the Plan. The Plan period should be used to up-grade, improve and strengthen the existing engineering colleges.



219. There are four engineering colleges—at Karachi, Lahore, Dacca and Peshawar. Among them they produce about 300 graduate engineers a year. Every college offers a basic course in civil, mechanical and electrical engineering. In addition, the college at Lahore offers courses in mining and chemical engineering and the college at Dacca offers courses in chemical and metallurgical engineering. The courses are of varying lengths—from three to four years of academic work and from one to two years of approved engineering practice. The development Plan requires about twice as many engineers as are now being trained. It also demands a more highly professional engineer than is generally available from the colleges at present. In addition to increasing the number of colleges and the number of seats in existing colleges, the Plan period should be used to increase the quality of the training offered.

220. The greatest weakness of the engineering college is a curriculum which is based upon the specific job needs of the government departments. This practice neither encourages the development of high professional, as distinct from technical standards, nor takes into account the rapidly increasing requirements of industry. Another result is that each college also offers courses for students at the diploma or licentiate level, and even for apprentices and overseers. Desirable as this practice may have been at one time it is now an antiquated practice and detracts from the accomplishment of the engineering colleges' primary purpose—to train engineers. As soon as the system of polytechnic and monotecnical institutions is developed, the colleges should be relieved of these burdens, freeing their space and their faculty for full-time education at the professional level.

221. The Technical Education Committee made three recommendations which should be put into effect as promptly as possible :

- (a) The length and content of the basic courses—in civil, mechanical and electrical engineering—should be standardized so as to put graduates on the same footing and facilitate transfer. The Committee suggested a three year course plus one year of approved practical training. Three years is the minimum, however, and the colleges might be well advised to evolve a standard four year course. The year of "approved engineering practice satisfactory to the principal" is of doubtful value unless it is carefully and systematically supervised and arranged at periods interspersed during the students' academic work.
- (b) The colleges should add other specialised engineering courses only if there are major employment needs and other colleges do not offer such courses. Such specialisation among the colleges will obviate unnecessary duplication. It will also encourage the colleges to adhere to the basic fields of engineering and avoid narrow specialisation. It will be many years before the Country needs any significant numbers of specialists. Even then it may be found that industry prefers soundly grounded all-round engineers to narrowly trained specialists.
- (c) Post-graduate courses of two years leading to the master's degree should be inaugurated at the universities. This recommendation is particularly pertinent because it is at this level that worthwhile specialization may be undertaken. A good illustration is the field of hydraulic engineering which is of great importance in the wise development of the great river valleys. In addition, it will be largely through post-graduate instruction and research that the colleges will enrich and up-grade their undergraduate curricula.

222. The engineering colleges are in great need of up-to-date laboratory equipment and text books. Many modern engineering tools and machines—such as electronic equipment are not now provided and many of the text books are out-dated. A large expenditure is contemplated in the development Plan for the modernization of equipment and books. Such modernization must be accompanied, however, by teaching which stresses the applied as well as the theoretical side of engineering—a side not sufficiently emphasised at present. It is important that our engineers become practising engineers with a pride in professional performance, and not merely "arm-chair engineers". This task of changing the attitudes of the engineer rests with the teachers. Although most teachers for some years will need to be trained in foreign countries, they should be selected as far as possible from among young men who have demonstrated their promise as practising engineers. Their teaching sections should be small in size so as to permit individual instruction and guidance.

223. Four specific additions need to be made to the programme of engineering colleges to meet the new needs of the development Plan :

- (a) Courses in mechanical engineering should provide more instruction and practice in tool design, machine design and manufacturing processes.
- (b) A basic course in chemical engineering should be introduced in each college which does not already have one since together with mechanical engineering, it constitutes the best engineering education for industrial development. Further specialisation should be avoided.
- (c) As professional institutions, the engineering colleges should incorporate instruction in social sciences in their curricula. The professional engineer must not only know the application of physical sciences in the solution of physical problems, he must also be able to see those solutions in terms of national and social well-being. And he must understand human motivation and relations as a basis for industrial management. To put it in another way, engineers must not only conceive, but also execute engineering solutions in a social environment involving the co-operation and participation of many other people. The fully professional engineer, therefore, should be educated in the social as well as the physical sciences.
- (d) Finally, although they will not add to the number of engineers during the Plan period, two engineering colleges have been proposed for construction. In addition, the N.E.D. College at Karachi is in urgent need of new buildings at a new location and new equipment, provision of which will be undertaken by the University of Karachi in the later years of the Plan period. The six engineering colleges will be capable of training 650 engineers a year by 1960, a number which at present appears to be sufficient for meeting the present shortage of engineers needed for industrial and resource development. The experience of advanced countries like the U.K. shows that requirements are likely to be always ahead of supplies. We must therefore implement the immediate programme with vigour and keep the situation constantly under review to seize any opportunity that may present itself to increase the programme. East Pakistan seems to us to be in special need of increasing her engineering educational facilities and if sound and feasible schemes are prepared it would be possible to find resources to finance them.

## X

### SPECIAL ASPECTS OF EDUCATION

#### Emphasis on basic educational structure

224. We have attempted to outline the base of the educational system envisaged at the primary, secondary and higher levels, and to indicate the steps needed to erect this structure within the limits of available resources in money, personnel, and equipment. The programme presented is large but no more than a minimum in relation to our needs. It provides for very substantial growth and if implemented it will be a solid foundation on which to build greater advances, in future. It is necessary in the immediate years ahead to give priority to the essentials of the educational system and to defer until future years the refinements which are beyond reach for the present.

225. There are many special and worthwhile objectives which can be reached only through education, for instance, the liquidation of illiteracy and poor health practices, and the enrichment of the cultural life of the nation through the provision of libraries, art galleries, museums and music centres. To attempt to achieve these objectives on any large scale without improving the basic educational structure would be to put the cart before the horse. For this reason, the development Plan puts emphasis upon the basic elements of the educational system and upon those parts which will contribute to the increasing economic strength of the country. As this strength grows, and as the educational system matures, new objectives and activities will be added and developed. Many of the special problems which exist and which call for the formulation of special programmes are a result of the absence of a sound educational system. As that system is progressively established, these problems will become less severe.

226. An important policy question arises in connection with the relationship of special programmes with the central educational programmes, namely, how many purposes the educational system should be expected to serve. Because of the existence of widespread administrative and supervisory personnel, buildings and teachers in the educational organisation there is a constant temptation to use these facilities to accomplish non-educational purposes, which, no matter how worthy, impose added burdens on already over-worked teachers, detract from the central purpose of the system, and add greatly to the cost in terms of benefits derived. Illustrations may be found in suggestions to use the schools to train children for specific occupations, to add special courses to the curriculum and to administer public health programmes. As we face the tremendous problems of providing free primary education to all children and of progressively increasing the number of secondary schools and colleges, it is necessary to reserve our resources for the effective accomplishment of the central purposes of education.

227. In the long run, school programmes may be enriched at all levels by making arrangements for such services as medical examinations, mid-day meals, gymnasiums, recreation facilities, youth clubs, etc. Each of these services would undoubtedly produce worthwhile national results. Special provision eventually need also to be made for those children who are physically or mentally handicapped. However desirable these services or activities may be, none of them is immediately essential to the basic programme of education. To attempt them nationally at the present time would require great expenditure, and diversion of trained personnel which would inevitably slow down and weaken the more urgent process of establishing the basic school system.

228. This does not mean that no services of this kind should be permitted. On the contrary, headmasters and teachers should be encouraged to arrange extra-curricular programmes for their pupils including clubs and recreation. Pupils and their parents should be urged to use the facilities of community hospitals, clinics and dispensaries, not only for the treatment of existing ailments but also for periodic examinations. These activities should be undertaken by the schools as a matter of course as indicated in earlier sections of this report. More elaborate programmes requiring special buildings, equipment and staff should, however, be deferred during the Plan period except as undertaken by private philanthropy or local bodies. In the meantime, a few schemes providing for medical examination, mid-day meals, youth hostels and recreation programmes have been approved on an experimental and demonstration basis.

#### Adult illiteracy

229. Consciousness of the high percentage of illiteracy and tremendous barriers it places in the way of economic, cultural and political progress, has prompted many efforts towards adult literacy programmes. Almost every Province has, in the past, attempted to establish and maintain adult schools or literacy centres. For the most part these efforts have not proved successful. Reliance upon school teachers and voluntary workers, without special training, was unrealistic. Inadequate provision was made for making literature available, which was rather unimaginative, since without use, people are apt to forget their quickly learned skills. Merely teaching people to read and write in a short course, naturally proved an abortive effort. The—popularity of the courses has, however, demonstrated the readiness of large numbers of adults to learn how to read and write.

230. The 1952 report of the UNESCO Fundamental Education Mission to Pakistan defined the problem correctly when it pointed out that adult education must be related to the problems people face in their own communities, and particularly to their economic problems. It stated the purpose of fundamental education to be the minimum knowledge necessary for the people :

- (a) to acquire the skills of thinking and communicating, through the knowledge of speaking, reading, writing and calculation ;
- (b) to improve health conditions through personal and community hygiene ;
- (c) to organise economic life, chiefly on co-operative lines, for a more efficient use of natural resources, and the development of more productive and useful cottage crafts ; and
- (d) to lead better and fuller integrated lives, in an ordered and disciplined way, as responsible citizens of their country.

231. The Village AID programme is the vehicle by which these goals of fundamental education can be reached in our rural areas. This programme, described elsewhere, is designed to encourage villagers to undertake projects in agriculture, health, education, etc., with assistance from the Provinces and the Centre through a co-ordinated administration. One of the items of this programme will be literacy education directly related to the projects the villagers decide to undertake. Trained adult teachers will be employed, and specially prepared materials will be made available. Plans are being made to provide circulating libraries of primers and bulletins relating to the development of village life. The schools are proposed to be the nuclei for community centres for the conduct of village-wide activities. In this way, literacy education will not remain an isolated activity but will be woven into the fabric of village life.

232. A similar programme is proposed to be taken up under social welfare through urban community development projects and therefore no national scheme for fundamental education in urban areas has been prepared. It is proposed that, as programmes of social welfare evolve in the several cities, they may be broadened to include literacy education. Industrial employers can contribute to this movement and concurrently improve the efficiency and stability of their own labour force by supporting literacy classes for their employees. The concentration of schools and the more literate population in urban areas make the problem somewhat less severe than it is in rural areas, where emphasis on fundamental education is being placed during the Plan period.

### **Cultural activities**

233. We look forward to the time when the country's culture will be reflected in and advanced by numerous museums, art galleries, national monuments, libraries and music centres. Recognising that government funds must for the time being be reserved for the more basic and essential requirements, of the economy and society, other sources of supports to these expressions of the national culture must be encouraged. The colleges and universities are growing centres of cultural influence. It is proposed that they should widen their influence by opening their libraries and exhibits to the general public and by organising cultural activities for the benefit of the surrounding community. Interest displayed in cultural activities by colleges and universities will enhance their prestige and standing among the general public and help them achieve the new level of leadership which is expected of them.

234. In addition to making fuller use of existing resources, private interests should be systematically encouraged to promote and help cultural projects of all kinds. Endowments to support concerts, museums, galleries and libraries should be established. Particularly, in the urban areas organisations supported by private subscription could undertake a wide range of projects in art and music and literature. These are traditional methods of cultural promotion all over the world and might well be emulated in this country. It is proposed that the Ministry of Education establish a committee on cultural affairs to foster intelligent interest in and patronage for this growing side of our national life. Concurrently, however, a small fund is provided to give continued support to libraries and other cultural centres, which may serve as a beginning to a much broader programme along the lines indicated above.

### **Executing the Plan for education**

235. One of the means by which a nation can be judged is its system of education. The nature of that system reveals the character of the people and the level of their economic, political and cultural ideals and aspirations. The way in which the system evolves shows the degree of vitality with which the people and the nation approach their destiny. The plans here presented for education, based upon the thinking of our educational leadership through the years and upon schemes presented by the provinces, provide guidelines for the achievement of a system of education consonant with the goals before the country.

236. Whether or not these plans are carried out, however, will depend upon the execution of administrative phases of the plans, such as the training of teachers and other key personnel and the modernisation of college and school organisation, and upon the educational leadership. It is believed that the proposals for education presented in this chapter can be carried out financially. Also the plans for education are correlated so that, for example, the increase in the number of primary schools is related to the capacity of teacher training institutions.

237. The results contemplated for education in this Plan can be achieved, in other words, if adequate provision is made for the exercise of responsible initiative by the educational leadership. The recommendations made in earlier sections of this chapter indicate ways of strengthening the provincial directorates of education and universities. It remains to define and clarify the role of the Centre. Inasmuch as education is the responsibility of the Provinces, the primary functions of the Centre are :

- (a) To collect, analyse, publish and disseminate statistical informations about the state, progress and education in the country as a whole ;
- (b) To initiate the appointment of and provide administrative services to such Central Committees as the Advisory Committee on Education, the Inter-University Board, the University Grants Commission and the National Training Board ;
- (c) To promote the planning of education and to extend support towards the fulfilment of agreed plans ;
- (d) To assist in relating the educational plans to the growing needs of social and economic development throughout the country ;
- (e) To provide leadership and co-ordination on a national basis and in particular to arrange for conference of educational and lay leaders to consider the solutions to major educational problems with the purpose of reaching consensus and giving support to the application of agreed solutions ; and
- (f) To maintain relationships with educational agencies in the United Nations and other countries and administer co-operative and exchange programmes involving these agencies.

238. To sum up, the Centre should exercise informational, advisory, co-ordinating and supportive role of leadership in education. The present Ministry of Education is understaffed for this work and over-burdened with the direct management of educational affairs in Karachi. As a consequence, very little statistical information is collected and published, and advisory functions are hardly attempted for lack of time and staff. Moreover, there is often unfortunate delay in judging schemes proposed by the Provinces and in assembling data for the Ministry of Finance as a basis for determining the size and nature of grants-in-aid. It is recommended that the functions of the Ministry be clarified, as here proposed, and that its staff and facilities be strengthened so that it may exercise its appropriate role of educational planning and leadership.

### Recapitulation

239. After making a careful survey of the existing conditions of education at all levels, studying the various reports of the Central Advisory Board for Education, the Inter-University Board, other authorities and various committees and examining the schemes which have been received from the Provinces, we have come to the conclusion, that, first and foremost, the country should consolidate, that is, fill the gaps and make up the deficiencies that exist in the educational structure in respect of personnel, equipment, and buildings, and that, secondly, must expand the educational system as far as the limited resources permit. In the programme for expansion we have kept in view the needs of the plans of economic and social development and the prime necessity of meeting those requirements which will make the system dynamic and progressive.

240. In the first category—filling the gaps—we have made provision for the correction of such weaknesses as inadequate instruction in science and technical subjects, insufficient arrangements for girls' education, and unequal distribution of schools in rural areas. Recognising the need for better staffing and leadership in education at all levels, we have emphasised the training of teachers and educational research. Being painfully aware of artificial barriers to educational progress as reflected in faulty school, college, and university organisation and an out-moded examination system, we have proposed ways of overcoming them.

241. In the second category—the expansion of the education system—we have been concerned more with improving the quality and geographical distribution of schools and institutions than with their multiplication, except where necessary to meet basic needs, as for example, in the case of teacher training institutions and

polytechnics. This concern is based upon the conclusion that the Plan period should be a time for re-organising and re-orienting the system of education, after which expansion can come with more confidence that the system will meet our needs. Hence we have urged the improvement of university research and the renovation of the curricula of secondary and primary schools. We have advocated improvement and consolidation at this stage rather than expansion so that in later periods we may be able to expand rapidly without any misgivings about the results to be gained. In the long run, the effectiveness and vigour of education will depend mostly on its quality; hence our insistence upon high standards in schools, colleges and universities.

TABLE 2

*Proposed allocations for education, public sector, 1955—60, by executing authorities*

(Million rupees)

					East Pakistan Government	West Pakistan Government	Central Government	Total
Primary education	...	...	...	...	51·66	49·96	2·90	104·52
Secondary education	...	...	...	...	84·97	66·68	3·27	154·92
Teacher education ...	...	...	...	...	14·85	23·34	...	38·20
Technical education (including engineering)	...	...	...	...	14·23	27·85	8·47	50·55
Colleges (including talent scheme)	...	...	...	...	41·46	34·76	7·26	83·47
Universities	...	...	...	...	28·86	38·69	19·88	87·43
Overseas scholarships	...	...	...	...	2·41	2·28	·51	5·20
Scholarships for Special Areas	...	...	...	...	...	·30	...	·30
Social and cultural activities	...	...	...	...	2·90	5·21	·23	8·34
Council of Scientific and Industrial Research	...	...	...	...	...	...	28·30	28·30
Labour training centres	...	...	...	...	...	...	17·86	17·86
Central Archives and Records Office	...	...	...	...	...	...	1·09	1·09
Council of Social Science Research	...	...	...	...	...	...	·52	·52
Total					241·34	249·07	90·29	580·70

NOTE.—All allocations shown for Central Government are for expenditure in Karachi, except the last four items (Council of Scientific and Industrial Research, Labour Training Centres, Central Archives and Records Office, and the Council of Social Science Research) which are for the country as a whole.

## LABOUR AND EMPLOYMENT

## INTRODUCTORY

1. The problems of labour have increased in importance with the progress of industrialisation and the almost revolutionary changes in the last quarter of a century in the meaning and scope of social responsibility towards the working classes. An industrial economy needs a complex and delicately balanced technical and social structure, and labour constitutes one of the key elements on which its productivity and stability depend. Industrial peace, which is essential for the efficient functioning of the economy, needs an enlightened outlook on the part of the employers as well as the employees with a full recognition of their respective rights and obligations. To enable labour to develop a responsible attitude, it must be assured of reasonable treatment with a stake and status in the social order. It must have a share in the increased national income, and its living conditions should improve as industrial productivity improves and prosperity grows.

2. The same is true generally of agricultural labour, but with some notable differences. The general experience is that wages and living conditions in agriculture take a longer time to respond to the growth in productivity and prosperity. Agricultural workers are dispersed about the country and less able to organise themselves in trade unions than urban industrial workers, and welfare programmes for rural workers are not easily administered. Disparity in circumstances creates differences which frustrate social justice.

3. In order to execute the development programme, the country requires hard and unstinted work from people in every type of employment and a larger number of skilled persons. To achieve these objectives, the workers must have incentives and opportunities for training and bettering themselves, fair returns for their labour and a voice in decisions about their wages and working conditions.

4. The main purpose of the development programme is to lay the basis for a rising standard of living for people in every walk of life. This means that workers must receive an equitable share in the fruits of increasing production and economic development. We have no place for development based on exploiting the labour of the many for the benefit of the few. In the words of the first Prime Minister at a convocation of the Punjab University, in December 1948, "Pakistan came into existence because we wanted to create a society which is based on justice, equality and brotherhood of man : in other words, a society which has no inner conflict and where a man gets just reward for his toil and where there are no parasites existing on the labour of others, unacceptable both in the eyes of God and man". (Summary of the proceedings of the First Pakistan Labour Conference, Labour Division, Government of Pakistan). But the clear and objective reports made in 1953 and 1955 by the Survey Missions of the International Labour Organisation show how the workers' enjoyment of the fruits of freedom is checked by the prevalence of poverty, malnutrition, and insanitary and over-crowded working and living conditions. Industrial and agricultural development does not mean only the erection of new factories and the introduction of new farming methods : it means also the projection of the struggle for independence into another sphere. Political independence, unless accompanied by a substantial measure of economic advancement, cannot overcome the problems of under-employment and raise the standard of living of our people.

5. Industrialisation in Pakistan need not be accompanied by the social upheavals, misery and frustration which accompanied the Industrial Revolution in the West. The industrialists are aware of the immense care and detailed planning which must precede the establishment of new industries. They take great pains to avoid the mistakes of others and to ensure that the latest and the best machines and equipment are installed. Similar care and forethought are necessary and must be devoted to understanding the problems of the workers who will use those machines. Additional incentives for co-operation in the solution of mutually important problems of adjustment have to be provided. Just as the importers of capital goods ensure that the latest products of technology are brought into the country, it is important to ensure that the minds of the various parties to production are attuned to the best of progressive ideas concerning human relationships in industry. The old 'master and servant' concept has to be discarded, and management must rid its mind of any inherited prejudices. Labour



has to be accorded a position of equality which is in keeping with the present concept of the dignity of the individual. In this country, where workers are mostly illiterate and the trade union movement still in its infancy, the primary responsibility for establishing a good relationship with labour lies with the employers and the educated leaders of the workers. Their attitude and actions now will determine the attitude and actions of organised labour in the years ahead.

6. The State must foster conditions in which these principles can be applied : it must help to equalise the bargaining powers of workers and employers so that there can be effective voluntary negotiation and collective bargaining. The needs of the workers must be met in greater opportunities of employment, adequate wages and safer work places, better houses with water supply, light and drainage, and increased educational, cultural and recreational facilities. The workers' pay should be adequate to meet essential needs of the family with a margin for the enjoyment of leisure and protection against misfortune, sickness and old age. The efficiency and productivity of the worker are intimately linked with better standards of living. The workers and their leaders must realise their responsibility and their roles in the national effort : they must contribute to improve productivity if higher wages are to be paid, and for this the importance of training at all levels cannot be over-emphasised.

7. The problems of labour have been growing in scope and complexity all over the world. Many demands have been made in the past to organise world labour movements, and some of the organisations that have come into being have increasing influence on labour policies and programmes. On the inter-governmental level the International Labour Organisation has been the most effective and active body in this field. Many provisions of international conventions and recommendations adopted by the I.L.O. have been incorporated in the labour code of our country. Tripartite delegations representing the government, employers and workers are sent abroad to participate in conferences held under I.L.O. auspices, discussing matters of common interest with their opposite numbers from other countries and keeping abreast of international developments in this field. The I.L.O. has also been giving a considerable amount of technical assistance in the forms of expert advice and training fellowships. Through such international collaboration the country has obtained a series of reports, which provide an excellent basis for future action. The I.L.O. has also helped to start similar tripartite organisations on the national and provincial level. The Pakistan Tripartite Labour Conference, the Standing Labour Committee and similar organisations in East Pakistan and the former Punjab have been helping to develop the habit of sitting round the table and discussing differences in a spirit of co-operation and goodwill. Tripartite collaboration has a national importance : if the principle is established in some industries it will spread to others. The growth of co-operation between labour and management, and of both with public authorities, will strengthen the fabric of society as a whole. The growth of active, vital industrial democracy can provide the foundation for strong political democracy. We strongly endorse this national and international collaboration on a tripartite basis.

8. We have prepared our recommendations in the field of labour and employment in the light of these general considerations. The Government issued in August 1955, a statement of comprehensive labour policy in considerable detail ; but we have not attempted to discuss all the problems it covered : this chapter discusses the main problems of labour and employment considered from the standpoint of the country's economic and social development.

## EMPLOYMENT AND UNEMPLOYMENT

9. The extent and character of employment, the occupational structure of the country and the changes it is undergoing, and the social and economic factors underlying unemployment are important subjects for study which is hampered by the lack of statistics. The two principal sources of information at present are the 1951 census and the 1955 Manpower Survey conducted by the Ministry of Labour with the help of expert advisers from the International Labour Organisation.

### Changes in the labour force

10. At least three major changes are taking place in the labour force. First, it is growing rapidly in size as the population increases. The 1955 Manpower Survey indicated that about 31·8 per cent of the country's

population was in the civilian labour force, either working or looking for work. Applied to the population estimates of the Planning Board, this meant a labour force of 26.2 million persons in 1955. If the percentage of persons in the labour force remains the same, and the population grows as projected by the Board, the labour force, in 1960 would be 28.1 million, indicating that between 350,000 and 400,000 persons would be added each year to the labour force. If they find jobs they will add to national production and income; if they do not, they will be a net liability, because they will have to be given food and clothing although they produce nothing. It is a major purpose of development planning to ensure that everyone who is able and willing to work has the opportunity of useful employment.

11. Second, the quality of the labour force is improving as the level of education and training in the country rises. This is one of the most important aspects of development. As the average employed person becomes better trained and more highly skilled, his output and income will rise. This can and should happen in all occupations: cultivators, artisans in village and city workshops, factory hands, office workers, managers, people in the professions—all of them need better education and training, which will help them to produce more; because they produce more they can enjoy higher incomes. This rise in skills, outputs, and incomes is an essential part of the process of economic development; the national income can grow only as rapidly as people in all occupations produce more. It must be a central purpose of any development planning to raise the level of skills and training of the labour force.

12. The third major change taking place in the labour force is a shift from employment in agriculture to employment in industry and the services. In the 1951 census, about 75 per cent of the labour force was engaged in agriculture; the remaining 25 per cent included all those in industry, trade and commerce, transport, Government, and other non-agricultural employment. The 1955 Manpower Survey showed a substantial change, with 35 per cent in non-agricultural employment. It should be noted that this was a shift in proportions; the numerical total of the agricultural labour force remained in 1955 approximately at its 1951 level, while the non-agricultural labour force increased in numbers very rapidly.

13. The decline in the proportion of the labour force engaged in agriculture between 1951 and 1955 was marked in both East and West Pakistan. The percentage distribution of the labour force in the two wings, however was somewhat different, as shown in Table 1 below.

TABLE 1

Distribution of the labour force by economic group (percentages)

Economic Group					East Pakistan		West Pakistan	
					1951 census	1955 survey	1951 census	1955 survey
Agriculture	...	...	...	...	84.7	73.0	66.0	54.5
Mining	...	...	...	...	...	...	.1	.2
Manufacturing	...	...	...	...	3.9	7.1	9.5	15.1
Construction	...	...	...	...	1.1	.5	.7	4.3
Public Utilities	...	...	...	...	...	.1	.1	.2
Trade and Commerce	...	...	...	...	3.9	5.7	6.7	8.3
Transport	...	...	...	...	1.6	1.8	1.2	2.3
Services	...	...	...	...	3.8	9.7	8.4	13.9
Unclassified	...	...	...	...	1.0	2.1	7.3	1.2
Total					100.0	100.0	100.0	100.0

SOURCES.—1951 Census of Population; 1955 Manpower Survey

14. The shift away from agriculture will inevitably be accompanied by substantial increases in urban populations, giving rise to economic and social problems. Even if a policy of dispersing industrial plants is followed, which has much to commend it from both the economic and social standpoints, there will still inevitably be steadily larger concentrations of people. The shift towards industrial employment and urban living has occurred in every developing country in the past, and the process is likely to continue in this country. These major changes affecting labour and employment—the increased size of the labour force; the rise in the average level of skill, production, and income in all occupations; and the increasing proportion of people in industrial and urban employment will have their full effects only slowly. But they are going on continuously, and all our policies must be framed to take account of them.

#### **The need for employment statistics**

15. At present the changes taking place in the labour force cannot be measured regularly for lack of current statistics on the number of persons at work in different occupations and industries. The Manpower Survey has given us very useful information about manpower in 1955; some of the results of this survey have been of substantial help in preparing this Plan. But unless there is a programme for obtaining such information regularly, it will be impossible to measure the changes taking place in the labour force, in employment and unemployment and in the distribution of workers among occupations and industries. We strongly recommend that the manpower survey work should be expanded and placed on a permanent footing as a part of the work of the proposed National Sample Survey Unit of the Central Statistical Office recommended in the chapter on Statistics.

#### **Employment opportunities**

16. In the present state of knowledge about employment and unemployment in the country it is not possible to forecast with precision how the development Plan will change the level and distribution of employment by the end of the Plan period. We have been able to make only a few rough estimates, summarised in the following paragraphs.

17. Early in 1955 the Ministry of Labour asked 5,000 large employers in the country what they expected the increase in their employment would be six months later. Their replies indicated an expected increase of employment of 11·5 per cent. Late in 1955 the Ministry again asked the same question. They found that actual employment had only increased 4·4 per cent, and the employers then expected a further increase of 4·3 per cent during the following six months. These inquiries yielded much additional useful information about specific industries and other matters. It was expected that these inquiries would be repeated periodically; there has been a lapse but it is strongly recommended that they be resumed and continued on a permanent basis.

18. One of the important findings from the 1955 Surveys is the much higher rate of increase that was expected in the employment of semi-skilled and skilled workmen. Employers expected the rate of increase in the employment of skilled and semi-skilled men to be 3 or 4 times as high as the rate of increase in the employment of unskilled men. A high demand for skilled labour is characteristic of the process of rapid industrialisation. A shortage of well-trained workmen must be expected for years to come, the growth in our national production and income will be slowed down unless programmes of technical education and training are promptly devised and executed.

19. The Ministry's survey of 5,000 employers provided forward estimates for only six months. What will be the rise in employment by 1960? We have been able to make rough estimates for large-scale industrial establishments—defined as those using power and employing 20 or more workers. The number of employees in such establishments was of the order of 200,000 in 1947. In 1954-55, this figure had risen to nearly 400,000, and by 1959-60 employment in large-scale industrial establishments is expected to reach over 600,000 under the industrial expansion programme we propose. Such a rise in industrial employment will, of course, result in large numbers of additional jobs in service occupations and other types of secondary employment, but we do not have data on which to base estimates.

20. For other fields of employment we are not in a position to make firm projections. Existing figures on employment in small scale and cottage enterprises are not reliable. In the census of 1951, only 1,400,000 workers reported themselves employed in industry, large and small scale alike. This was probably a substantial under-estimate. Even if it were correct, and if allowance were made for those employed in large-scale industry, it would indicate that about 1,100,000 were employed in cottage and small-scale industry. The figure commonly stated for employment in cottage and small-scale industry is three to four million, and figures as high as seven million have been mentioned. Until we have a firmer base for estimation, we cannot make estimates of the present level of employment in this field or its likely course during the Plan period.

21. Similar uncertainties exist in several other fields. Almost nothing is known, for example, about employment in small commercial enterprises—bazar shops, hawkers, tea stalls, etc.—or in construction. We have made some very rough calculations of the extra employment resulting from our programme : perhaps 200,000 additional workers will be employed in the public sector, and a greater number in the private sector ; but we do not claim much reliability for these figures.

22. In agriculture also, it is very difficult to visualise the present situation and the changes that are likely to take place. There seems to be no doubt that for several decades at least, as the population has been increasing, the number of those seeking to make a living from agriculture has also been increasing. There is no doubt also that in recent years considerable numbers have moved into the cities and towns to find other employment. On balance, the agricultural labour force is probably growing, but we have no reliable figures.

23. We have some rough basis for estimating increases in farming opportunities. During the Plan period the area under crops is expected to increase by about 1·6 million acres. In addition, better irrigation facilities will be available to about 5·4 million acres of land which are already under cultivation. Of the 1·6 million acres of additional cropped land, about one million acres will be in fairly compact blocks served by major irrigation projects and would provide employment to about 72,000 families at an average rate of about 15 acres of cropped land to a family. The remaining 6 lakh acres will be served either by tubewell projects or by minor irrigation and reclamation Schemes, mostly lying within the areas already under cultivation. Of this, about 200,000 acres will be in isolated blocks, and, at the rate of 12 acres to a family, about 17,000 families will find employment on such land. The remaining 4,00,000 acres will be in small scattered patches of land which is expected to go towards relieving, to some extent, the prevailing under-employment among 133,000 families, by the provision of additional land to work on, which may be of the order of 3 acres per family. On a rough basis this might be equivalent to providing holdings to 33,000 families. The provision of assured water supply and better drainage facilities to some 5·4 million acres will permit of more intensive cultivation than at present and provide more work to about 12,00,000 cultivating families which are now under-employed. Again on a rough basis, this might be equivalent to providing holdings to 3,00,000 farm families. To sum up, in all about 89,000 farm families may find employment on the new farms in addition to relieving under-employment among 13,33,000 existing farm families which may be taken as the equivalent of creating employment opportunities for 3,33,000 farm families.

24. We are proposing, as a very important part of the Plan, that use should be made of people now unemployed or under-employed in rural areas. Many parts of the Village AID programme, and of the programme of rural development outside Village AID areas, are intended to use this idle manpower. The building of schools and other community buildings ; construction of drains, bunds, wells, and compost pits ; planting trees and cleaning fish ponds ; building village roads and streets,—all these and many other tasks can be accomplished ; by men and women who are now in the villages and ready to do the work with some technical assistance and supplies of materials not found locally. We cannot estimate how many people can thus be employed until more information is available about the actual work of the Village AID development areas, but the numbers may be large.

25. The Manpower Survey has, however, furnished useful information on unemployment and underemployment at the beginning of the Plan period. According to the Survey 300,000 to 340,000 persons (or about 2·7 per cent of the labour force) in West Pakistan and 470,000 to 540,000 persons (or about 3·9 per cent of the labour force) in East Pakistan were looking for work. Of these probably about one third in West Pakistan and about 23 per cent in East Pakistan were concentrated in urban areas. This indicated that there is a fairly serious problem of unemployment in the towns. In the rural areas however the true extent of unemployment is disguised by the prevailing family system.

The extent of underemployment may be roughly measured in agriculture by a reference to the area of cultivable land per head and to labour productivity in both agriculture and industry. The Manpower Survey Organisation took all persons having worked less than half of the average working week of 50 hours to be underemployed. On this basis about 4·7 per cent of the labour force in West Pakistan and 17 per cent of the labour force in East Pakistan were underemployed. This was in addition to a substantial amount of seasonal underemployment which was also very widespread.

26. The problem of employment opportunities is thus three-fold : to provide jobs for the new entrants to the labour force, to absorb the unemployed into jobs, and to find ways of making use of underemployed rural labour. Our forecasts are not reliable enough to permit a clear-cut assessment of the results of the Plan in terms of these objectives.

### Employment training

27. In spite of our inability to prepare estimates of the distribution of the labour force as a whole, we have been able, through information provided by the Ministry of Labour (including that summarised in Table 2) and through estimates prepared by the Board itself, to make some rough estimates of the needs for different categories of skilled and trained people. These rough estimates have been used in drawing up our programme for education and training particularly for technical education, which is discussed in the chapter on Education and Training. We wish to emphasise here, however, one or two major policies which underlie that programme. In brief, we believe that the educational system—including technical and vocational training institutions of all types—should give people a foundation of knowledge and skills, and that the employers should build on that foundation and turn out finished craftsmen and technicians through apprenticeships, on-the-job training, and other methods. The schools should turn out men and women capable of learning job skills quickly and easily, but “the place for the basic training of the worker or artisan is at the machine or at the bench in the factory ..... Industry can no more expect to be supplied with workers already trained than can the army expect trained soldiers in the their raw recruits”. (Report of the I.L.O. Labour Surley Mission, 1953, p. 19).

28. We strongly urge that businessmen should take the initiative in organising ambitious training programmes in their establishments. The needs for supervisors and for skilled and semi-skilled workers are very great. To meet them, firms should instal programmes for apprenticeship, for on-the-job training, for rapid up-grading and promotion, and for diluting skills by organising the work so that the few skilled people spend their time doing tasks that require full skills and tasks that can be accomplished by people with less skill are delegated. Systematic methods for doing these things have been developed in many countries in recent years, and are beginning to be applied in this country. The training-within-industry programme begun under the auspices of the Pakistan Industrial Development Corporation, the programme of the Institute of Business and Public Administration at the University of Karachi, the work of the Institute of Personnel Administration, all these are steps in the right direction, which will help to build effective training systems in private businesses and public agencies. Government agencies, associations of businessmen, individual industrialists, all should give strong support to these endeavours, which can have a very sizeable effect on the rate at which our production is expanded.

### Employment exchanges

29. The Government's employment exchanges can be of considerable assistance in meeting the need for workers, by matching job requirements and available skills, by assisting the movement of surplus workers from one geographical area to another, by advising workers and students on trends in job opportunities, and by appraising the government and businessmen of needs for training and the location of new industrial units. The employment exchanges will not be able to perform these functions satisfactorily without a substantial improvement in the efficiency and quality of their work. This is well recognised by those responsible for the employment exchanges, as well as by those who use their services. An expert made available by the International Labour Organisation surveyed the exchanges and submitted a comprehensive series of recommendations in 1953. Among his recommendations were :—

- (a) To provide a more adequate staff both in quantity and quality ;
- (b) To instal a systematic programme, both for training new employees and for re-training those now employed ;
- (c) To improve management methods and procedures by instituting a straight line of responsibility and authority from top to bottom of the exchange organisation, specifying clearly the duties of all officers, installing a regular system of inspection, forming advisory committees at regional and local levels, and by other means ;
- (d) To develop employment counselling within the existing frame-work of the employment exchanges in order to guide schools and college students and their parents in the wise choice of careers ; and
- (e) To improve labour clearing, employer relations, statistical reporting, agricultural and seasonal employment services and other special functions of the exchanges.

In addition, the expert recommended that several additional employment exchanges should be opened to serve areas not now served adequately.

30. We believe these recommendations make a sound programme for improving and expanding our employment exchanges. The exchanges have now been placed on a permanent organisational footing and the Ministry of Labour plan, with expert assistance, to put the recommendations into effect. We have included in the Plan funds for this purpose, providing for six new employment exchanges to add to the twenty already working. The location of these new offices should be determined by the Central Ministry or Provincial departments of Labour in relation to present and prospective levels of employment in the different geographical areas. Although we have included funds for new exchanges, we should emphasise that it would not be advisable to spend money on new exchanges until the present ones are running efficiently.

### WAGES AND EARNINGS

31. The level of wages and incomes in different trades, the different rates of pay for different levels of skill and in different geographical areas, the trends in earnings compared with prices are all important matters on which the available data are very scanty. The data we have on wages are fragmentary and do not permit us to draw firm general conclusions. We know, for example, that wages of hired labour in agriculture are rarely as much as Rs. 1-8-0 per day, and are frequently less than one rupee. We know that wages of coal mine workers in various fields in 1949 ranged from Rs. 1-3-0 per day for unskilled labour to Rs. 5-8-0 per day for sirdars. We know that average annual earnings of factory workers as reported under the Payment of Wages Act, rose from 710 rupees in 1948 to 872 rupees in 1952, though the meaning of these figures is not clear, because they might have been affected substantially by changes in the composition of the work-force in individual factories or by the establishment of new factories paying higher average rates of wages. A good deal of information about wages available for a group of factories in East Pakistan in 1953 and 1954 showing an average wage of Rs. 61 per month, and about earnings of rickshaw drivers in Dacca during the same period, averaging Rs. 83 per month. (Professor A. F. A. Hussain's Human and Social Impact of Technological Changes in Pakistan, University of Dacca, 1954).

32. These various sources of information confirm that wages in this country are low relative to those in many other countries ; they indicate also that average wages may have been rising somewhat. This is consistent with the rising trend in the *per capita* incomes which is shown by the national income estimates. The available information on wages, however, falls far short of what we need. We have no reliable series of wage data over a period of years. We do not have information on the scales of earnings for different occupations and different degrees of skill. We know very little about methods of wage payment—time work, piece work, etc. All these and many more questions need persistent inquiry if individual workers, businessmen, trade unions, and the government are to make informed decisions.

33. It is necessary also to know the relation between wages and prices. There are no reliable wage series, but the Central Statistical Office does publish a series of indices of the cost of living for industrial workers in five places in the country. The figures for Karachi, Narayanganj, and Lahore are shown in Table 2.

TABLE 2  
*Cost of living index for industrial workers, 1949—55*  
(1948-49—100)

				1949-50	1950-51	1951-52	1952-53	1953-54	1954-55
Karachi	...	...	...	98	95	100	104	112	109
Narayanganj	...	...	...	103	98	104	109	106	90
Lahore	...	...	...	93	81	91	98	100	97

Source : Central Statistical Office.

At present this series is not considered thoroughly reliable ; the Central Statistical Office is in process of improving it. Nevertheless, although small changes in these index numbers are not significant, and they may have a downward bias, it appears likely that for consumers who buy mostly items produced within the country, prices have not risen substantially during the past six years.

### Wages and productivity

34. It is clear, even from the scanty data available, that wages and earnings in this country are low compared with those in more advanced countries. It is a major objective of development planning to bring about a rise in real wages—in the amount of goods and services that can be bought. To what extent can this be done during the Plan period ? There are some serious cases of particular types of workers whose wages are held down by exploitation or some special disadvantage. These cases should be rectified,—we discuss them later (paras. 47 and 48). Generally, however, the inescapable fact is that wages in this country are low not because of exploitation alone but because production per worker is low. Real wages can increase substantially only when productivity is increased. The very high wages paid, for example in the United States, are possible because the output per worker in that country is very high.

35. Production per worker depends in part upon the training and skill of the worker. It depends also on the tools and equipment which he is given to work with, the efficiency with which the work is organised and managed, and the effort which he puts into his work. The importance of better training, both in schools and on the job, has already been noted (paras. 24 and 25). The provision of better tools and equipment is essentially a matter of capital investment ; the limits are discussed in the chapter on Financial Resources. We should like to stress here the other two determinants of high productivity ; the efficiency of organisation and management, and effort and zeal of employees.



36. There is no denying the fact that most establishments in this country, large and small, government and private, are run with far less efficiency than is possible. The result is less production than could be obtained with the labour and capital employed. It must be a major objective of managers in public and private enterprises to improve efficiency steadily and rapidly. One example of what can be done is provided by the experience of a textile mill in Karachi, which recently has been able, with the advice of experts on productivity from the International Labour Organisation, to increase the output in its weaving shed by 40 per cent. Under such circumstances, output can be increased, prices lowered, and wages raised, to the benefit of everyone concerned. The work of these productivity experts should be expanded into a National Productivity Centre, as is recommended in the chapter on Industries, and should be spread far and wide through the country's factories and shops.

37. The level and type of wages, too, have an important bearing on the willingness of employees to work hard on the job, and also to get particular jobs. Managements which pay relatively good wages can and do obtain better performance from their workers. It is often possible to secure more output and enable workers to earn more by using sound incentive wage systems—e.g., a "suitable system of payment by results." (Report of the I.L.O. Labour Survey Mission, 1953, p. 21). Good wages are also necessary if young men and women of ability are to be induced to undergo occupational training. The Government can usefully apply these principles in the salary scales of some of its own departments : its scales of pay for agricultural specialists and teachers, for example, are clearly too low in many cases to attract the quality of people needed, and to enable them to devote their full energies to the job.

38. Over the Plan period, the rise in productivity and real wages will necessarily be limited by the time required for managers and workers to learn efficient methods of running the many new establishments. Nevertheless, as new investment takes place, as better education and training programmes come into effect, and as managers and workers learn efficient operating methods, productivity should rise steadily, permitting a corresponding rise in real wages and other incomes.

#### **Minimum wage legislation**

39. Another aspect of the problem of wages is the question whether minimum wages should be established by statute. The major argument in favour of this is that trade unions and collective bargaining will not for some time be strong enough to protect all workers, particularly those in great need of protection. There is at present no law fixing minimum wage rates or setting up machinery to determine them. Government can either establish a lower limit for wages—making it illegal to pay anyone less than a certain amount per hour or per day in order to stop exploitation of labour or fix scales of wages for all occupations in all industries, perhaps with the advice of a special Board. We consider that setting minimum wages in all industries and for all occupations is not feasible. However, it is the duty of Government to take action to eliminate the worst forms of exploitation, and we recommend that a Statutory Board should be established to look into the position of certain classes of exploited workers, and to advise the Government in fixing minimum wages for them. Such a law would be difficult to administer, requiring inspection of many work-places, including the small shops and establishments, which include the worst offenders, but a beginning should be made. The minimum wage law can be so drafted that it could also be applied directly to contract labour and to piece workers. To benefit from the experience of other countries, we recommend that a special study be undertaken by the Ministry of Labour to find out what policies and methods of enforcement have proved effective in those Asian countries with minimum wage legislation. In the meantime, the measures we recommend for commencing minimum wage regulation in this country will begin to provide some experience as a guide for further advances.

#### **Fair wage clauses in public contracts**

40. All contracts of the Public Works Department of the Central Government contain a "fair wages" clause, which provides that the wages paid by government contractors should not be less than the prevailing rates in the locality concerned. We recommend that similar clauses should be included in contracts of all departments of the Central and Provincial Governments and other public bodies like municipal corporations. The inclusion of such clauses and their vigorous enforcement will prevent many abuses and help to set good standards of wage rates.

## WORKING CONDITIONS

41. "Working conditions" in a narrow sense mean the conditions under which a job is actually carried out in a factory, shop, vehicle, or elsewhere. In a broader sense the term is nearly synonymous with living conditions, and includes housing, educational and recreational facilities, medical care for families, and so on. In general, working conditions on the job are regulated by occupational safety, health and other laws, and the living conditions of workers form the main object of "labour welfare" work.

42. The working and living conditions of employees are very different in different employments; changes in some instances have come rapidly, in other instances slowly, if at all. The most spectacular changes are those which have come with the establishment of large new factories, such as jute, cotton, paper, soap and sugar. Hundreds, sometimes thousands, of workers have been assembled, organised, and subjected to the new discipline of the factory. Frequently these workers are drawn from the villages, and often they leave their families behind. In other cases, as in Karachi, most of the factory workers are already town dwellers. In either case, the problems of health and sanitation, of transportation, housing and food are difficult and serious. In addition, the problems of social adjustment to new and strange environments may cause considerable strain.

43. Although major stresses and strains accompany work in new and large factories, workers there, in general, receive better wages and better treatment than those in older and smaller urban establishments or in mining and port employment. Considerable evidence was collected by the I.L.O. Labour Survey Mission in 1952 and 1953, and published in their Report on Labour Problems in Pakistan (Ministry of Labour, 1953).

#### Enforcement of protective legislation

44. Working conditions in this country are regulated by a series of laws prescribing minimum standards which employees are required to observe for hours of work, rest periods, holidays, safety and health conditions and the protection of women and young workers. The I.L.O. Labour Survey Mission expressed the opinion that these laws, with certain relative minor exceptions, are "by and large adequate for the needs of the country at present and probably for some time to come" (p. 158). The major need is for better inspection and enforcement of the existing laws. The Mission's Report cited instance after instance in which it found that men and women were employed under dangerous or insanitary conditions and required to work long hours without rest, children under twelve were employed, and other conditions existed which violated public policies declared by law. We recommend immediate and vigorous improvement in the enforcement of protective labour legislation.

45. Some of these laws are enforced by the Central Government—for example laws applicable to mine labour and dock workers. Most of them, however, are enforced by the Provincial Governments. In either case, the requirements for improved enforcement are clear. They are : better administrative control and supervision by senior officers ; clear assignments of responsibility and reporting ; better selection and training of inspecting officers, and in some cases improvements in their pay and status ; and some addition to the number of inspectors. These matters were discussed in considerable detail by the I.L.O. Labour Survey Mission. We agree in general with their detailed recommendations.

#### Central factory advisory service

46. One important step recommended by the I.L.O. Mission to improve factory inspection throughout the country was the establishment in the Central Ministry of Labour of a small Factory Advisory Service, to include experts on occupational health and safety and on special problems of women workers. We endorse this recommendation. Such a service under the new Constitution will be left to the Provinces to set up. Such a service could perform several very useful functions including :

- (a) Examining plans for new factories, particularly those with any degree of hazard for employees, and advising on how they may be improved in the cause of occupational safety and health ;

- (b) Drafting standard rules and regulations under the provisions of the various protective Acts, for the guidance of the Central and Provincial enforcement agencies ;
- (c) Preparing instructions for the information and guidance of factory inspectors, and leaflets and posters for both management and workers ; and
- (d) Holding conferences and participating in training courses for inspectors and others associated with the enforcement of protective legislation.

In short, the Factory Advisory Service would act as a centre of initiative, stimulation and support for the strong programme of improved enforcement that is required. We have included in the Plan funds to establish and operate this service during 1955—60.

#### **Provincial inspection of work places**

47. We were glad to find, in discussions with Provincial Governments, general agreement on the necessity for a rapid improvement in the enforcement of protective legislation. We have included in the Plan funds to support such improvements. Provincial officials agree that, as enforcement of the law is improved in the larger work-places, enforcement should be extended to the smaller ones, where some of the worst conditions are to be found. In most cases, existing laws can be extended to cover additional workplaces by decision of the Provincial Governments, without further legislation, and we urge that this should be done as rapidly as improvements in the inspection staff permit enforcement. We believe that the major pieces of legislation—regulating safety, health, and child labour, for example—which now apply generally to places employing 20 or more workers, could be extended by the end of the Plan period to places employing 10 or more and possibly to those employing 5 or more. Administrative vigour and determination are the crucial requirements.

#### **Industrial Employment (Standing Orders) Act, 1946**

48. The Standing Orders Act requires that employers should post prominently in the workplace, the terms and conditions under which workers are employed, and that these statements must be certified by the Government to be consistent with the law. This is a valuable protection for workers, but hitherto it has not been widely enforced, partly because of limitations in the enforcement arrangements under the Act. Some minor amendments in the law would seem desirable to simplify and improve enforcement, and the authorities should extend the enforcement of the Act widely and rapidly.

#### **Employment (Record of Services) Act, 1951**

49. The Record of Services Act is the only fresh piece of legislation in the field of labour which has been enacted in the country since independence. It requires the maintenance of a service book for each employee to show the length of his employment and the work performed by him in each job held. The law was enacted in 1951, but it has not been brought into force so far by either the Central or the Provincial Governments, nor have the rules for enforcement been drawn up. The Governments should take the necessary steps to put the Act into force quickly.

#### **Contract labour**

50. There is no doubt that the system of contract labour—that is, labour recruited or employed not directly by the employer but indirectly through an intermediary, the contractor—opens the way to many abuses. It enables the principal employer to escape many of the provisions of the present labour laws, and can be used by him to evade his normal responsibilities for the safety, health and reasonable pay of the people who work for him. Employees under the contract labour system are often ruthlessly exploited by the contractor. It is a system which has nothing to commend it in modern circumstances, and has gradually died out in most advanced countries.

51. The contract labour system is widespread in this country. The first report of the Ministry of Labour's manpower survey showed that of a total of 98 categories of employers covered, there were 58 in which the employment of contract labour was reported. It is not easy to eliminate the abuses of the system and move towards direct recruitment, control, and payment of workers by employers. Several steps can, however, be taken which will help. The full development of an adequate system of employment exchanges will contribute a good deal, because that will make it easy for employers to obtain the workers they need without using labour contractors. The various protective laws, such as the Shops and Establishments Acts and the Standing Orders Act, should be made applicable to contract labour, wherever possible, in order to prevent employers and contractors from exploiting contract workers. Labour welfare organisations in the Central and Provincial Governments should appoint special officers concerned solely with the welfare of contract labour : the Central Public Works Department has already appointed one or two officers for this purpose. We expect employers and workers also to realise the unhealthy and inefficient characteristics of an employment relationship built round an intermediary whose stocks-in-trade is the labour of other men. We believe that an energetic attack on this system is warranted and can bring good results.

### Tea plantation workers

52. The 90,000 workers on the tea estates in East Pakistan present many special problems requiring different treatment from that applied to most other workers. The I. L. O. Survey Mission recommended a number of special measures, such as the provision of creches for women workers, and of paddy land for tea garden labourers to grow their own food. During the discussions on this matter with the Government of East Pakistan, it was suggested that a special enquiry should be made into the conditions of tea garden workers in order to draft specific recommendations. We suggest that the proposed Labour Research Bureau of the Ministry of Labour should undertake this enquiry in consultation with the Government of East Pakistan.

## LABOUR WELFARE

53. In addition to the regulation of conditions in the work-place, it is generally accepted now-a-days that government should take responsibility for encouraging and promoting the welfare of working people. The welfare of workers cannot be separated from the welfare of the general public, and every thing in the Plan that is designed to improve the standard of living in the country will contribute to labour welfare. Nevertheless, the welfare of workers in their living places and outside working hours has been generally neglected in this country with a few conspicuous exceptions. We believe that it is desirable, as the I. L. O. Mission recommended, to appoint government officers whose full-time duty would be to investigate the welfare conditions of workers and to plan and carry out measures to improve them.

54. The Mission recommended that the Central Government should create a post of Chief Welfare Commissioner, equal in status to the Chief Labour Commissioner, to study and introduce modern welfare practices and to advise Government organisations and private industry on labour welfare matters. In the Provinces a similar need exists, though whether there should be Welfare Commissioners independent of the Labour Commissioners will have to be decided in the light of administrative considerations in each province. In any event, senior full-time officials should be assigned to this work and provided with adequate staff. Funds for this purpose have been included in the Plan. The duties of these officers will be largely to study and advise on matters, such as housing, community services like health and education, and recreation, which are of great importance to workers but are not covered by the usual employment contract. The labour welfare officers should in particular work closely with the social welfare agencies which we are recommending in this Report.

55. It has been suggested that labour welfare centres should be established in important industrial areas to provide health, education, and welfare services and to stimulate self-help activities among workers and their families. A few of these centres are now being established in West Pakistan. We believe that this is a promising idea, and recommend that the experience of the first centre should be carefully studied with a view to working out plans, in conjunction with the social welfare agencies, for establishing them in all industrial areas. In order

to finance operations of this type we recommend the levy of a special welfare cess somewhat on the lines of the Coal Mines Labour Welfare Fund Act, 1947 : it might be based on the number of persons employed in an establishment and the funds might be administered by a joint body of representatives of workers, employers, and government. The details of such a proposal will require careful study.

## TRADE UNIONS AND INDUSTRIAL RELATIONS

56. The trade union movement in the country is still relatively small. Unions exist in relatively few enterprises, and not all the unions that exist influence the terms of employment of their members. By far the greatest proportion of decisions about wages and working conditions are made by individual bargaining between employer and worker in which the worker is inevitably at a great disadvantage. The importance of the trade unions, however, is much greater than their numbers or membership would indicate, because in obtaining better terms from employers they set advanced standards, which tend, however, imperfectly and slowly, to spread throughout the economy. Furthermore, there is no doubt that the unions are growing steadily : the number and membership of trade unions registered under the Trade Unions Act, 1926, increased from 150 and 192,000 to nearly 400 and 420,000 respectively between 1948 and 1954. During this period also there occurred a substantial amalgamation of unions under the All Pakistan Confederation of Labour, with its two constituents, the East Pakistan Federation of Labour and the West Pakistan Federation of Labour. Together these organisations claim a total membership of nearly 300,000 workers, including some members of unregistered unions.

57. The growth of trade unions has been supported by government policy. The country has adopted the International Labour Organisation conventions on freedom of association, collective bargaining, conciliation, arbitration, and co-operation between workers and employers. The Government in August 1955 stated its policy as being " to encourage growth of genuine and healthy trade unions ". This is a sound policy for a country whose development programme is aimed at increasing the well-being of common-man. In its modern stage, the trade union movement is rightly looked on as a means for introducing democratic processes into industrial life. Joined together in their unions, workmen can obtain a voice in the settlement of the terms and conditions under which they spend their working lives. Employers also have much to gain from the existence of responsible, democratically-controlled organisations which can speak with authority for their workers. From the standpoint of the country, the efficiency of production and the distribution of income will both be improved if wages and working conditions are, in general, determined through collective bargaining by the free decisions of responsible representatives of workers and business concerns, and democratic organisations exist in workplaces through which the legitimate desires and grievances of employees can be adjusted.

58. These are thoroughly desirable objectives, but it is necessary to recognise how far the country is from reaching them. At present, both managers and union leaders are for the most part inexperienced and often inclined to approach their mutual problems on an emotional rather than a rational basis. The leaders of unions frequently are not men from the workbench but instead educated outsiders. This has been necessary in the past because of the absence of men in the ranks who could exercise effective leadership, but it has led to some abuses and should be reduced as internal leadership is developed. There is a multiplicity of unions representing the same workers, frequently several in one plant or factory, which makes for confused industrial relations. The workers have not in all cases identified the leaders and organisations whom they can trust to represent their interests properly, and to turn away from those who have political or ulterior motives. Employers, too, have much to learn and many archaic attitudes to outgrow. Too many of them think of unions as simply outside interference with the management of the business, to be opposed or at best tolerated. Few managers in this country have yet come to understand or apply modern personnel practices, and to encourage joint consultation and co-operation with unions. To put the matter bluntly, there are too few businesses where a worker is made to feel that he is respected as a human being and welcomed as a partner in production.

59. These matters are of very great importance and require the most serious attention of all concerned. In a time of rapid industrialisation and major economic change, labour relations can be expected to be somewhat turbulent. On the whole, past experience has been fairly good. From 1948 to 1954, the Central Government referred 33 disputes to industrial tribunals under the Industrial Disputes Act, 1947. This is an average of only four a year. The Provinces have referred a number of additional cases to tribunals, but even so there have been remarkably few serious industrial disputes. It would be a mistake to read too much into this evidence : had the unions been stronger they would undoubtedly have pressed harder for gains for workers and more disputes would have resulted. There are, furthermore, very serious problems of relations between workers and management, and relations among workers, which may not find expression in the usual type of industrial dispute. The seriousness and importance of these problems are underscored by the riots which occurred in 1954 at two of the biggest industrial installations. The causes of these disasters went far beyond the ordinary scope of relations between workers and employers, but they indicate very clearly the powerful tensions that may develop in newly industrialising countries, and must be resolved if industrial development is to bring progress and satisfaction to the workers. Everyone concerned with the development of sound industrial relations should take this lesson to heart.

### **Training in industrial relations**

60. It is vitally important that both unions and managements learn rapidly the results of hard experience in other countries, to avoid as many as possible of the mistakes that others have made and the bitterness and strife that often accompanied the development of collective bargaining in the past. A beginning has been made with the training of union leaders in trade union training centres, sponsored by the labour organisations in the country in collaboration with the International Confederation of Free Trade Unions. A workers' Education Society has been started in West Pakistan, and a government sponsored training scheme prepared in East Pakistan. Some training courses have also been organised under the auspices of the Pakistan Institute of Personnel Administration. Such training should be continued and strengthened, and opportunities found to send some of the union leaders abroad to learn at first hand the attitudes and practices of other countries. Though such training, in general, will proceed better if carried out by private organisations, it would be appropriate for the government in certain cases to share the cost.

61. Training in business management is in its infancy in this country ; as it develops, more and more people entering the managerial profession will have had basic instruction in personnel management and labour relations, which are part of the curriculum of any modern management training institution. Special courses, such as those conducted by the Institute of Personnel Administration, can also help those already in management positions. Along with more training opportunities, there must come a change in the attitude of many business leaders, who need to realise that sound and constructive employee relations are one part of good business management ; many should employ officers specially trained in labour problems. The universities, particularly those in Karachi, Lahore and Dacca, should now add to their activities the study and teaching of industrial relations and labour economics. Careful, disinterested research and advanced scientific thinking are needed both for many of our practical problems and for producing men and women capable of advancing to posts of high responsibility in government, business and the labour movement.

### **Statutory recognition of unions**

62. The Government's role in stimulating the growth of healthy, responsible unions and constructive labour relations is difficult in a country where rapid industrialisation is taking place. With trade unions relatively young and weak, the government has a special responsibility to ensure minimum of social justice to workers. At the same time, the objective must always be to help unions (and managements) to handle their own affairs without interference from government. As the next major step in applying the government policy to encourage