

**REPORT OF THE  
EDUCATION COMMISSION  
1964-66**

**SUMMARY OF  
RECOMMENDATIONS**

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**NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING**

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## **PUBLISHER'S NOTE**

This is a summary of the recommendations of the Education Commission appointed by the Government of India in July 1964 to advise the Government on the national pattern of education and on the general principles and policies for the development of education at all stages and in all aspects. The Report of the Commission was submitted on June 29, 1966.

It is hoped that this brief, handy and low-priced summary of the Report of the Education Commission which runs into nearly 700 pages will be found useful by those who do not have easy access to the original and serve to disseminate widely the basic formulations and recommendations of the Commission.

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## EDUCATION AND NATIONAL OBJECTIVES

- I *Some Problems of National Development.* (5) Self-sufficiency in food; (6) Economic growth and full employment; (7) Social and national integration; (8) Political development.
- II *Education: The Main Instrument of Change.* (12) Development of our human resources; (4) Education as instrument of change.
- III *The Educational Revolution.* (16-17).
- IV *Relating Education to Life, Needs and Aspirations of the People.* (18-20).
- V *Education and Productivity.* (23) Science as a basic component of education and culture; (25) Work-experience; (32) Vocationalization; (33) Improvement of scientific and technological education and research at the university stage with special emphasis on agriculture and allied sciences.
- VI *Education and Social and National Integration.* (36) The Common School; (39) Social and national service; (45) Community living in school and college; (46) Participation in programmes of community development; (49) Evolution of a language policy; (50) Development of modern Indian languages; (51) Medium of education at school and college; (57) Channels of international communication; (60) Channels of internal communication; (63) Promoting national consciousness; (67) Education for international understanding; (68) Democratic values.
- VII *Education and Modernization.* (70) Explosion of knowledge; (71) Rapid social change; (72) Need for rapid advance; (73) Modernization and educational progress.
- VIII *Social, Moral and Spiritual Values.* (74-77); (78) Secularism and religion.
- IX *A Challenge and a Faith.* (81-87).

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1.01. The destiny of India is now being shaped in her classrooms. This, we believe, is no mere rhetoric. In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of the people. On the quality and number of persons coming out of our schools and colleges will depend our

success in the great enterprise of national reconstruction whose principal objective is to raise the standard of living of our people. In this context, it has become urgent

- to re-evaluate the role of education in the total programme of national development;
- to identify the changes needed in the existing system of education if it is to play its proper role, and to prepare a programme of educational development based on them; and
- to implement this programme with determination and vigour.

1.02. The task is neither unique nor is it quite new. But its magnitude, gravity and urgency have increased immensely and it has acquired a new meaning and importance since the attainment of independence and the adoption of the policy and techniques of planned development of the national economy. If the pace of national development is to be accelerated, there is need for a well defined, bold and imaginative educational policy and for determined and vigorous action to vitalize, improve and expand education.

1.03. The population of India is now about 500 million, and half of it is below the age of 18 years—India today is essentially a land of youth. Over the next 20 years, the population is likely to increase by another 250 million. The total number of educational institutions in the country is over 500,000. The number of teachers exceeds 2 million. The total student population which is now about 70 million will be more than doubled in the next twenty years; and by 1985, it will become about 170 million or about equal to the total population of Europe. The size and complexity of these problems argue the need for rapid action in evolving an appropriate educational policy; given this, the numbers involved constitute a rich promise for education's contribution to national development.

1.04. This Report is concerned with a synoptic appraisal of the existing educational situation in the country and presentation of an overall programme of educational development. But education cannot be considered in isolation or planned in a vacuum. It has to be used as a powerful instrument of social, economic and political change and will, therefore, have to be related to the long-term national aspirations, the programmes of national development in which the country is engaged and the difficult short-term problems it is called upon to face.

#### SOME PROBLEMS OF NATIONAL DEVELOPMENT

1.05. **Self-sufficiency in Food.** The first and the most important of these is food. Mahatma Gandhi said: 'If God were to appear in India, He will have to take the form of a loaf of bread'. Even at the present level of its population, the country is in short supply of food. Every five years, the increase in our population is greater than the

entire population of the U.K. During the next two decades, there will be an addition of about 230 million persons (or 46 per cent of the population in 1966), even on the assumption that the existing birth-rate of 40 per thousand persons is reduced to half by 1986. If it is not, this increase may be 320 million or 65 per cent of the present population. On the basis of present trends, in another 10-15 years, no country is likely to have a surplus of food to export. Even if such surpluses existed, we would have no resources to import the huge quantities of food required, nor even to import the fertilizers needed. Self-sufficiency in food thus becomes, not merely a desirable goal, but a condition for survival.

**1.06. Economic Growth and Full Employment.** Allied to this is the colossal poverty of the masses and the large incidence of under-employment or unemployment among the people, particularly among the educated. India is one of the poorest countries of the world. The national income *per capita*, which was practically stationary for some decades, rose from Rs. 256.5 in 1950-51 to Rs. 348.6 in 1964-65—an increase of 2.2 per cent per year (at 1960-61 prices). Both the rate of growth as well as the level of national income are unsatisfactory. What is worse, even this income is very unevenly distributed. It has been suggested that our immediate objective should be to assure a minimum consumption of Rs. 35 per month to every citizen, sufficient to cover the balanced diet recommended by the Nutrition Advisory Committee and leave a modest allowance for other essential items (at 1960-61 prices). This, by itself, is no high standard. But at present, only the top 20 per cent of the population can afford it. The lowest 30 per cent have a monthly income of less than Rs. 15 and the lowest 10 per cent, of less than Rs. 10. If this minimum standard of Rs. 35 per month is to be reached by 1986, great efforts will have to be made on three fronts. The first is to secure a rapid rate of economic growth, at not less than 6 per cent per year and, if possible, at about 7 per cent per year. The second is to distribute income more equitably so that the more deprived sections of the population could have a comparatively larger share in the total national income. The third is to control the growth of the population so that the birth-rate is reduced at least by one-third and preferably by one-half. The least to be attempted would be to double the national income *per capita* (at constant prices) in the next twenty years. Similarly, steps will have to be taken to provide full employment to the people and especially to the educated.

**1.07. Social and National Integration.** Even more important is the role of education in achieving social and national integration. Indian society is hierarchical, stratified and deficient in vertical mobility. The social distance between the different classes, and particularly between the rich and the poor, the educated and the uneducated, is large and is tending to widen. Our people profess a number of different religions; and the picture becomes even more complicated because of caste, an undemocratic institution which is still powerful and which, strangely enough, seems to have extended its sphere of influence under the very democratic processes of the Constitution itself. The



situation, complex as it was, has been made critical by recent developments which threaten both national unity and social progress. As education is not rooted in the traditions of the people, the educated persons tend to be alienated from their own culture. The growth of local, regional, linguistic and state loyalties tend to make the people forget 'India'. The old values, which held society together, have been disappearing, and as there is no effective programme to replace them by a new sense of social responsibility, innumerable signs of social disorganization are evident everywhere and are continually on the increase. These include strikes, increasing lawlessness and a disregard for public property, corruption in public life, and communal tensions and troubles. Student unrest, of which so much is written, is only one, and probably a minor one, of these symptoms. Against this background, the task to be attempted—the creation of an integrated and egalitarian society—is indeed extremely difficult and challenging.

**1.08. Political Development.** The political challenge has many aspects, but three stand out. The first is the need to strengthen democracy. In spite of all odds, Indian democracy has given a fairly good account of itself so far. But it will not be permanently viable unless its foundations are deepened by the creation of an educated electorate, a dedicated and competent leadership and the cultivation of essential values like self-control, tolerance, mutual goodwill and consideration for others all of which make democracy, not only a form of government, but a way of life. The second is related to the defence of the country's freedom. The over-riding priority of this challenge is recognized, for one must live before one can grow. But it cannot be met only by maintaining a large and efficient army or training all able-bodied youth for military service. The defence of freedom is a national concern, to which every citizen contributes his best in order to achieve self-sufficiency in food and other essentials, to strengthen the country's economy, and to create a secular, united and strong democratic State. The third is the growing awakening among the masses who, suppressed for centuries, have now awakened to a sense of their rights and are demanding education, equality, higher standards of living and better civic amenities. This 'explosion of expectations' has also to be met through a planned programme of national development.

**1.09.** Internationally, the country is facing another equally significant and urgent challenge. The gap between the standards of living in India and those of industrialized nations is very large. The first scientific industrial revolution which developed in the West over the last 200 years almost passed us by. The agro-industrial revolution which is even more crucial for us has yet to begin in our country. The world is now at the beginning of the second scientific industrial revolution of automation and cybernetics which is likely to be in full swing before the close of the century. It is difficult to visualize the changes it will make in man's life. One thing, however, is certain: unless proper steps are taken right from now, the gap between us and the industrialized countries following this second revolution may become too wide to be bridged.

1.10. There is still another aspect to the challenge. It is true that knowledge is international and that there can be no barriers, except those of our own creation, to its free import. But India cannot for ever remain at the receiving end of the pipeline. She must make her own contribution as an intellectual and cultural equal to the eternal human endeavour to extend the frontiers of knowledge. This demands a large-scale programme for the discovery and development of talent and the creation of a few centres of excellence in higher education which can compare favourably with the best of their kind in the world.

1.11. The difficulty of these problems is only equalled by the complexity of the situation, the gravity and urgency of the challenge and the magnitude of the stakes involved. The Indian situation with its federal constitution (wherein several constituent States are larger than many European nations), its multi-party system of democratic government, its multi-religious mixed society consisting of highly sophisticated groups who live side by side with primitive ones, its mixed economy which includes modern factories as well as traditional agriculture, and its multiplicity of languages, presents such a complex picture that it almost resembles 'a miniature world'. In her attempts at national development the welfare of one man out of every seven in the world is at stake and the future of democracy and free societies is in balance. She is heir to an ancient and great civilization which can make a contribution to human progress by striving to create, what Acharya Vinobaji has described as the 'age of science and spirituality'. She has to raise herself from her present standards of living which are amongst the lowest in the world and take her rightful place in the comity of nations as soon as possible—a task to be accomplished within the life-time of a generation at the most. Obviously, the solution of these problems makes large demands on the Indian people of this generation—we need a clear focus, deeper understanding, collective discipline, hard and sustained work and dedicated leadership. It also needs the cooperation and assistance of richer and industrialized nations which share India's faith in democratic socialism and sympathise with her struggle to create a new social order.

#### EDUCATION: THE MAIN INSTRUMENT OF CHANGE

1.12. **Development of our Human Resources.** These difficult, complex, significant and urgent problems are all interdependent and the shortest and the most effective way to their solution is obviously to make a simultaneous attack on all fronts. This will have to be attempted through two main programmes.

(1) *The development of physical resources* through the modernization of agriculture and rapid industrialization. This requires the adoption of a science-based technology, heavy capital formation and investment, and the provision of the essential infra-structure of transport, credit, marketing and other institutions; and

(2) *The development of human resources* through a properly organized programme of education.

It is the latter programme, namely, the development of human resources through education, which is the more crucial of the two. While the development of physical resources is a means to an end, that of human resources is an end in itself; and without it, even the adequate development of physical resources is not possible.

1.13. The reason for this is clear. The realization of the country's aspirations involves changes in the knowledge, skills, interests and values of the people as a whole. This is basic to every programme of social and economic betterment of which India stands in need. For instance, there can be no hope of making the country self-sufficient in food unless the farmer himself is moved out of his age-long conservatism through a science-based education, becomes interested in experimentation, and is ready to adopt techniques that increase yields. The same is true of industry. The skilled manpower needed for the relevant research and its systematic application to agriculture, industry and other sectors of life can only come from a development of scientific and technological education. Similarly, economic growth is not merely a matter of physical resources or of training skilled workers; it needs the education of the whole population in new ways of life, thought and work. Robert Heilbroner describes the journey to economic development undertaken by a traditional society as the 'great ascent' and points out that the essential condition for its success is human 'change on a grand scale'. He observes: 'The mere lay-in of a core of capital equipment, indispensable as that is for further economic expansion, does not yet catalyse a tradition-bound society into a modern one. For that catalysis to take place, nothing short of a pervasive social transformation will suffice; a wholesale metamorphosis of habits, a wrenching reorientation of values concerning time, status, money, work; and an unweaving and reweaving of the fabric of daily existence itself.'<sup>1</sup> These observations are applicable to advances on the social, political and cultural fronts as well.

1.14. **Education as Instrument of Change.** If this 'change on a grand scale' is to be achieved without violent revolution (and even then it would still be necessary) there is one instrument, and one instrument only, that can be used: EDUCATION. Other agencies may help, and can indeed sometimes have a more apparent impact. But the national system of education is the only instrument that can reach all the people. It is not, however, a magic wand to wave wishes into existence. It is a difficult instrument, whose effective use requires strength of will, dedicated work and sacrifice. But it is a sure and tried instrument, which has served other countries well in their struggle for development. It can, given the will and the skill, do so for India.

1.15. This emphasis on the social purposes of education, on the need to use it as a tool for the realization of national aspirations or for meeting national challenges,

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<sup>1</sup> Robert Heilbroner, *The Great Ascent*, Harper and Row, Inc., New York, 1963, p. 66.

does not imply any under-estimation of values for the individual. In a democracy, the individual is an end in himself and the primary purpose of education is to provide him with the widest opportunity to develop his potentialities to the full. But the path to this goal lies through social reorganization and emphasis on social perspectives. In fact, one of the important principles to be emphasized in the socialistic pattern of society which the nation desires to create, is that individual fulfilment will come, not through selfish and narrow loyalties to personal or group interests, but through the dedication of all to the wider loyalties of national development in all its parameters.

### THE EDUCATIONAL REVOLUTION

1.16. This direct link between education, national development and prosperity which we have emphasized and in which we deeply believe, exists only when the national system of education is properly organized, from both qualitative and quantitative points of view. The naive belief that *all* education is necessarily good, both for the individual and society, and that it will necessarily lead to progress, can be as harmful as it is misplaced. Quantitatively, education can be organized to promote social justice or to retard it. History shows numerous instances where small social groups and elites have used education as a prerogative of their rule and as a tool for maintaining their hegemony and perpetuating the value upon which it has rested. On the other hand, a social and cultural revolution has been brought about in a system where equality of educational opportunity is provided and education is deliberately used to develop more and more potential talent and to harness it to the solution of national problems. The same is even more true of the quality of education. A system of university education which produces a high proportion of competent professional manpower is of great assistance in increasing productivity and promoting economic growth. Another system of higher education with the same total output but producing a large proportion of indifferently educated graduates of arts, many of whom remain unemployed or are even unemployable, could create social tensions and retard economic growth. It is only the right type of education, provided on an adequate scale, that can lead to national development; when these conditions are not satisfied, the opposite effect may result.

1.17. Judged from this point of view, it becomes evident that the present system of education, designed to meet the needs of an imperial administration within the limitations set by a feudal and traditional society, will need radical changes if it is to meet the purposes of a modernizing democratic and socialistic society—changes in objectives, in content, in teaching methods, in programmes, in the size and composition of the student body, in the selection and professional preparation of teachers, and in organization. In fact, what is needed is a revolution in education which in turn will set in motion the much desired social, economic and cultural revolution. The main concern of our Report is to identify the major programmes that can bring about

this educational revolution which has three main aspects:

- internal transformation so as to relate it to the life, needs and aspirations of the nation;
- qualitative improvement so that the standards achieved are adequate, keep continually rising and, at least in a few sectors, become internationally comparable; and
- expansion of educational facilities broadly on the basis of manpower needs and with an accent on equalization of educational opportunities.

It is with the first group of the above programmes, namely, the transformation of the system to reflect the needs and aspirations of our people, that this chapter is mainly concerned.

#### RELATING EDUCATION TO LIFE, NEEDS AND ASPIRATIONS OF THE PEOPLE

1.18. As is well-known, the existing system of education is largely unrelated to life and there is a wide gulf between its content and purposes and the concerns of national development. For instance,

- the educational system does not reflect the supreme importance of agriculture which is neglected at all stages and does not attract an adequate share of the top talent in the country; enrolment in the agricultural faculties of universities is extremely low; and agricultural colleges are comparatively weak and under-developed;
- the main task before the nation is to secure rapid economic development. If this is to be successfully accomplished, education must be related to productivity. The present system is too academic to be of material help in increasing national wealth;
- the schools and colleges are largely unconcerned with the great national effort at reconstruction and their teachers and students generally remain uncommitted to it. They are often even unaware of its principles and very rarely have opportunities to participate in its programme;
- instead of promoting social and national integration and making an active effort to promote national consciousness, several features of the educational system promote divisive tendencies: caste loyalties are encouraged in a number of private educational institutions; the rich and the poor are segregated in schools, the former attending the better type of private schools which charge fees while the latter are forced, by circumstances, to attend free government or local authority schools of poor quality; and
- at a time when the need to cultivate a sense of moral and social responsibilities in the rising generation is paramount, education does not emphasize

character-formation and makes little or no effort to cultivate moral and spiritual values, particularly the interests, attitudes and values needed for a democratic and socialistic society.

1.19. There is hardly any need to multiply such instances—the nature of the transformation needed in our educational system is generally recognized. What we wish to emphasize is its urgency. Traditional societies which desire to modernize themselves have to transform their educational system before trying to expand it, because the greater the expansion of the traditional system of education, the more difficult and costly it becomes to change its character. This truth has been lost sight of and during recent years, we have greatly expanded a system which continues to have essentially the same features it had at its creation about a century ago.

1.20. In our opinion, therefore, no reform is more important or more urgent than to transform education, to endeavour to relate it to the life, needs and aspirations of the people and thereby make it a powerful instrument of social, economic and cultural transformation necessary for the realization of our national goals. This can be done if education

- is related to productivity;
- strengthens social and national integration; consolidates democracy as a form of government and helps the country to adopt it as a way of life;
- hastens the process of modernization; and
- strives to build character by cultivating social, moral and spiritual values.

All these aspects are inter-related and in the complex process of social change, we cannot achieve even one without striving for all.

#### EDUCATION AND PRODUCTIVITY

1.21. India is in transition from a society in which education is a privilege of a small minority to one in which it could be made available to the masses of the people. The immense resources needed for this programme can be generated only if education is related to productivity so that an expansion of education leads to an increase in national income which, in its turn, may provide the means for a larger investment in education. Education and productivity can thus constitute a 'rising spiral' whose different parts sustain and support one another.

1.22. The link between education and productivity can be forged through the development of the following programmes which should receive high priority in the plans of educational reconstruction:

- science as a basic component of education and culture;

- work-experience as an integral part of general education;
- vocationalization of education, especially at the secondary school level, to meet the needs of industry, agriculture and trade; and
- improvement of scientific and technological education and research at the university stage with special emphasis on agriculture and allied sciences.

1.23. **Science as a Basic Component of Education and Culture.** A basic distinction between traditional and modern societies is the development and use by the latter of science-based technology which helps modernization of agriculture and the development of industries. In a traditional society, production is based largely on empirical processes and experience, on trial and error, rather than on science; in a modern society, it is basically rooted in science. The electrical industry was probably the first to become science-based; next came the chemical industry; and now, in industrialized countries, agriculture is fast becoming a branch of applied science. This close interlocking and interdependence between science and technology is a characteristic of the contemporary world. In recent years, several countries have been able to raise their GNP very rapidly because of their investment in basic science, technology and education. We are at a crucial stage in the process of development and transformation; and in this context the role of science (using the word in its broadest sense) is of the utmost importance. Science education must become an integral part of school education; and ultimately some study of science should become a part of all courses in the humanities and social sciences at the university stage, even as the teaching of science can be enriched by the inclusion of some elements of humanities and social sciences. The quality of science teaching has also to be raised considerably so as to achieve its proper objectives and purposes, namely, to promote an ever deepening understanding of basic principles, to develop problem-solving analytical skills and the ability to apply them to the problems of the material environment and social living and to promote the spirit of enquiry and experimentation. Only then can a scientific outlook become part of our way of life and culture.

1.24. It is necessary to highlight this last point which is sometimes underestimated. Science strengthens the commitment of man to free enquiry and to the quest for truth as his highest duty and obligation. It loosens the bonds of dogmatism and acts as a powerful dispeller of fear and superstition, fatalism and passive resignation. By its emphasis on reason and free enquiry, it even helps to lessen ideological tensions which often arise because of adherence to dogma and fanaticism. Although it is largely occupied with the understanding of Nature at present, its development is tending more and more to help man to understand himself and his place in the universe. In the developments that we envisage in the future, we hope that the pursuit of mere material affluence and power would be subordinated to that of higher values and the fulfilment of the individual. This concept of the mingling of 'science and spirituality' is of special significance for Indian education.

1.25. **Work-experience.** As another programme to relate education to life and productivity, we recommend that work-experience should be introduced as an integral part of all education—general or vocational. We define work-experience as participation in productive work in school, in the home, in a workshop, on a farm, in a factory or in any other productive situation. In our opinion, all good and purposeful education should consist of at least four basic elements:

- ‘literacy’ or a study of languages, humanities and social sciences;
- ‘numeracy’ or a study of mathematics and natural sciences;
- work-experience; and
- social service.

In the present educational system, most of the time is taken up with the first, although even in this limited sphere, the attainments are not appreciable. The second, as indicated above, is still quite weak and needs a great deal of emphasis. But the third and fourth have been almost totally absent till recently and need to be highlighted—the former mainly for relating education to productivity, and the latter as a means of social and national integration.

1.26. The need to include work-experience as an integral part of education is to some extent inherent in the very nature and organization of formal education. Traditionally, an individual grew up in society through participation in its activities and work-experience formed the bulk of his education. While this method had several advantages, its weakness consisted in that it was not essentially dynamic and forward-looking and tended to perpetuate traditional patterns of behaviour. Formal education, on the other hand, tended to withdraw the child temporarily from participation in community activities and to train him, in an artificial environment, for his anticipated future role in society. This created a cleavage between the world of work and the world of study. This defect is particularly conspicuous in our system of education which tends to strengthen the tradition of denigrating work and alienates the students, particularly the first generation learners, from their homes and communities. The introduction of work-experience is intended to overcome, to some extent, these weaknesses and to combine the advantage of the formal and informal systems of education.

1.27. Work-experience is thus a method of integrating education with work. This is not only possible but essential in modern societies which adopt science-based, technology. In all traditional societies, an antithesis between education and work is usually postulated, partly because the techniques of production are primitive and do not necessarily require formal education, special skills or high intellectual ability, and partly because the work is generally manual, low-paid, akin to drudgery and confined mostly to the uneducated ‘lower’ classes. As against this, education is generally the privilege of the upper classes who are interested, not in working for



a living, but in the cultivation of interests which may help them in the enjoyment of life. The educated elite thus become largely parasitical in character and the real productive workers—at a low level of efficiency generally—are the unlettered peasants and artisans. The complex techniques of production (including those in agriculture) adopted in modern societies, on the other hand, require higher forms of general or technical education and a comparatively higher level of intellectual ability. High talent is required for research in technology, and even at the lower levels of work, brain becomes more important than physical strength. The traditional resistance of educated persons to engage themselves in productive work tends to disappear because, with the adoption of the new technology, work at industry or on the farm becomes more productive and remunerative and ceases to be looked down upon socially. The educated person thus becomes an important source of production and the uneducated person, an unproductive burden on society. This process which has already started in our country needs to be accelerated and therefore the inclusion of work-experience as an integral part of all education acquires an urgent significance.

1.28. The need to provide some such corrective to the over-academic nature of formal education has been widely recognized. In the curricula of most contemporary school systems, particularly in the socialist countries of Europe, a place is found for what is variously called 'manual work' or 'work-experience.' In our country a revolutionary experiment was launched by Mahatma Gandhi in the form of basic education. The concept of work-experience is essentially similar. It may be described as a redefinition of his educational thinking in terms of a society launched on the road to industrialization.

1.29. In addition to being an effective educational tool, work-experience can, in our view, serve some other important purposes. It can help to make the distinction between intellectual and manual work less marked as also the social stratification based on it. It could make the entry of youth into the world of work and employment easier by enabling them to adjust themselves to it. It could contribute to the increasing of national productivity both by helping students to develop insights into productive processes and the use of science, and by generating in them the habit of hard and responsible work. And it might help social and national integration by strengthening the links between the individual and the community and by creating bonds of understanding between the educated persons and the masses.

1.30. In providing work-experience, every attempt should be made to link programmes realistically to technology, industrialization and the application of science to productive processes, including agriculture. This 'forward look' in work-experience is important for a country which has embarked on a programme of industrialization. These problems will be discussed in detail elsewhere.<sup>1</sup>

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<sup>1</sup> Chapter VIII.

1.31. In a well-organized programme, work-experience, at least from the higher primary stage, should also result in some earning for the student—either in cash or in kind. This would meet, to some extent, the expenditure which the students have to incur on their education or on their maintenance while at study. The amount of this earning will naturally increase as the students go up the educational ladder and it becomes possible to organize work-experience in a manner that would enable them to 'earn and learn'. The ultimate objective should be to move towards a situation in which the education of a student is not held to be complete unless he participates in some type of work-experience in real-life conditions and earns some amount, however small, towards his own maintenance. This will also help to develop in him values which promote economic growth, such as appreciating the importance of productive work and manual labour, willingness and capacity for hard work and thrift. We realize that this is no easy task. But it will pay adequate dividends in the long run.

1.32. **Vocationalization.** Another programme which can bring education into closer relationship with productivity is to give a strong vocational bias to secondary education and to increase the emphasis on agricultural and technological education at the university stage. This is of special significance in the Indian situation where, as we have pointed out, the educational system has been training young persons so far mostly for government services and the so called white-collared professions. The introduction of practical subjects in secondary schools so as to divert them into different walks of life was first recommended, as far back as in 1882, by the Indian Education Commission. But little or no effective action was taken to implement the recommendations and even today, the enrolment in the vocational courses at the secondary stage is only 9 per cent of the total enrolment, which is among the lowest in the world. Even at the university stage, vocational education (other than for law, medicine, or teaching) was mostly ignored throughout the last century. Even as late as in 1917, the Calcutta University Commission pointed out that the great majority of university students—about 22,000 out of 26,000—'pursue purely literary courses which do not fit them for any but administrative, clerical, teaching and (indirectly) legal careers'.<sup>1</sup> About fifty years later, we find that the overall picture has improved only slightly and the proportion of students at the university stage enrolled in all courses of professional education is only 23 per cent of the total enrolment. Our proposals on this subject are discussed elsewhere.<sup>2</sup> But it may be briefly stated here that we visualize the future trend of school education to be towards a fruitful mingling of general and vocational education—general education containing some elements of pre-vocational and technical education, and vocational education, in its turn, having an element of general education. In the kind of society in which we will be living increasingly in the coming years, a complete separation between the two will be not only undesirable but impossible.

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<sup>1</sup> Report of the Calcutta University Commission, Vol. I, p. 21.

<sup>2</sup> Chapters VII, XII, XIV and XV.

We also expect a considerable expansion of professional education at the university stage, especially in agricultural and technological fields.

**1.33. Improvement of Scientific and Technological Education and Research at University Stage with Special Emphasis on Agriculture and Allied Sciences.** For the planned development of the national economy we need a large-scale expansion of enrolment in engineering and agriculture, and at the postgraduate level, in pure science subjects. The increase has to be several times the present enrolments. The quality of education and research needs a radical improvement. We propose to discuss these matters at some length in the subsequent chapters.<sup>1</sup>

#### EDUCATION AND SOCIAL AND NATIONAL INTEGRATION

1.34. Social and national integration is crucial to the creation of a strong, united country, which is an essential pre-condition for all progress. It has a varied content—economic, social, cultural and political—and its different facets are closely interconnected. It needs

- confidence in the nation's future;
- a continuous rise in the standard of living for the masses and the reduction in unemployment and in the disparities in development between different parts of the country, all of which are essential to promote a sense of equality of opportunity in political, economic and social terms;
- a deep sense of the values and obligations of citizenship and a growing identification of the people, *not* with sectional loyalties, but with the 'nation' as a whole;
- assurance of good and impartial administration, equal treatment for every citizen, in fact and not merely in law, based on the integrity of the public services; and
- mutual understanding and respect for the culture, traditions and ways of life of different sections of the nation.

To make this social and psychological revolution possible, it is necessary to deal with the short-term problems facing the country in this field, particularly in regard to the growing and dangerous symptoms of social disorganization. These express themselves as the widening gulf between the rich and the poor, the privileged and the unprivileged, the urban and the rural, the educated and the uneducated. They are reflected in the general weakening of the feeling of national solidarity under increasing impact of local, regional, linguistic, religious and other sectional or parochial loyalties. Effective steps must be taken to bridge these dangerous gulfs and strengthen national consciousness and unity.

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<sup>1</sup> Chapters XIV, XV and XVI.

1.35. Social and national integration is a major problem which will have to be tackled on several fronts including education. In our view, education can and should play a very significant role in it by

- introducing a common school system of public education;
- making social and national service an integral part of education at all stages;
- developing all modern Indian languages, and taking necessary steps to enrich Hindi as quickly as possible so that it is able to function effectively as the official language of the Union; and
- promoting national consciousness.

We propose to discuss these briefly in the paragraphs that follow.

1.36. **The Common School.** In a situation of the type we have in India, it is the responsibility of the educational system to bring the different social classes and groups together and thus promote the emergence of an egalitarian and integrated society. But at present instead of doing so, education itself is tending to increase social segregation and to perpetuate and widen class distinctions. At the primary stage, the free schools to which the masses send their children are maintained by government and local authorities and are generally of poor quality. Some of the private schools are, on the whole, definitely better; but since many of them charge high fees, they are availed of only by the middle and the higher classes. At the secondary stage, a large proportion of the good schools are private but many of them also charge high fees which are normally beyond the means of any but the top ten per cent of the people, though some of the middle class parents make great sacrifices to send their children to them. There is thus segregation in education, itself—the minority of private, fee-charging, better schools meeting the needs of the upper classes and the vast bulk of free, publicly maintained, but poor schools being utilized by the rest. What is worse, this segregation is increasing and tending to widen the gulf between the classes and the masses.

1.37. This is one of the major weaknesses of the existing educational system. Instead of trying to provide good education to all children, or at least to all the able children from every stratum of society, it is available to a small minority which is usually selected not on the basis of talent, but on the basis of its capacity to pay fees. The identification and development of the total national pool of ability is greatly hampered. The position is thus undemocratic and inconsistent with the ideal of an egalitarian society. The children of the masses are compelled to receive sub-standard education and, as the programme of scholarships is not very large, sometimes even the ablest among them are unable to find access to such good schools as exist, while the economically privileged parents are able to 'buy' good education for their children.

This is bad not only for the children of the poor but also for the children from the rich and privileged groups. It gives them a short-term advantage in so far as it enables them to perpetuate and consolidate their position. But it must be realized that, in the long run, their self-interest lies in identifying themselves with the masses. By segregating their children, they prevent them from sharing the life and experiences of the children of the poor and coming into contact with the realities of life. In addition to weakening social cohesion, they also render the education of their own children anaemic and incomplete.

1.38. If these evils are to be eliminated and the educational system is to become a powerful instrument of national development in general, and social and national integration in particular, we must move towards the goal of a common school system of public education

- which will be open, to all children irrespective of caste, creed, community, religion, economic conditions or social status;
- where access to good education will depend, not on wealth or class, but on talent;
- which will maintain adequate standards in all schools and provide at least a reasonable proportion of quality institutions;
- in which no tuition fee will be charged; and
- which would meet the needs of the average parent so that we would not ordinarily feel the need to send his children to expensive schools outside the system.

Such an educational system has for instance been built up in the USSR and is one of the major factors which has contributed to its progress. It has also been developed, in different forms and to varying extents, in other nations like the USA, France and the Scandinavian countries. The traditional English system has been different and has allowed good education, under private management, to be largely reserved for those who have the capacity to pay the necessary fees. But recently, the so-called Public Schools have come in for strong criticism in England itself and it is not unlikely that a radical change may be initiated to make them more democratic. A somewhat similar system was transplanted in India by British administrators and we have clung to it so long because it happened to be in tune with the traditional hierarchical structure of our society. Whatever its past history may be, such a system has no valid place in the new democratic and socialistic society we desire to create. We examine more fully elsewhere how this programme can be implemented.

1.39. **Social and National Service.** The present educational system, as we have mentioned earlier, is also responsible for increasing the deplorable gulf between the

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educated and the uneducated classes, between the intelligentsia and the masses. The intelligentsia should try to become a real service group striving to uplift the masses and resist the temptation to become a parasitical group living for itself and perpetuating its own privileged position. Our traditional 'elite' as a whole—with some noble exceptions—had no close ties with the masses and the new 'elite' created by modern education also remained largely aloof from the people, except during the struggle for freedom under Mahatma Gandhi when he was able to inspire large numbers of educated and even well-to-do persons to identify themselves with the interests of the masses and the country as a whole. But when the struggle for freedom came to an end with the attainment of independence, they have again tended to move away from the people. This is a great danger and with a view to meeting it, suitable programmes to help in the evolution of a well-knit and united nation have to be devised.

1.40. For this purpose, we recommend that some form of social and national service should be made obligatory for all students and should form an integral part of education at all stages. This can become an instrument to build character, improve discipline, inculcate a faith in the dignity of manual labour and develop a sense of social responsibility.

1.41. Programmes of social and national service can be organized in one of two ways: they can either be carried out occasionally on a part-time basis during the period of education, or organized as a period of fulltime service in addition to the present period of education. The second approach was recommended by the National Service Committee appointed under the chairmanship of Dr. C. D. Deshmukh. It was suggested that national service should be a full-time programme of nine to twelve months for all young persons (except for those allowed deferment on valid academic or other grounds) passing out of higher secondary schools or the pre-university course, and before entering employment or the university. The programme was to include some military training, social service, manual labour and general education. These proposals have not been adopted so far; nor have the public reactions to them been very favourable. Instead, at the time of the national emergency (1962), the scheme of compulsory National Cadet Corps (NCC) was introduced at the university stage.

1.42. About the same time, the Ministry of Education sponsored a study of national service in several countries including Yugoslavia, Czechoslovakia, Germany, Norway, Sweden, England, the USA, Japan and the Philippines. The report of this study has been published under the title *National Service for Youth*. Apart from discussing the salient features of such service in different countries, it made a number of recommendations about what could be done in India to develop a practicable scheme. It did not favour the introduction of compulsion, which has not been tried or favoured in any of these countries, but recommended that national or social service should be introduced, at least to begin with, on a voluntary basis and extended as

widely as possible and that it should provide a rich and varied programme of activities which will make an imaginative approach to youth. We believe that it would be more realistic and practicable to introduce the idea of social or national service broadly on the lines recommended in this study.

1.43. Instead of adding one year to the total span of education for the purpose, a more feasible plan may be to develop, as an integral part of education, a programme which would run concurrently with academic studies in school and college. The programme should begin from the upper primary stage and continue up to the university so that the right attitudes are developed from an early age and every young person is ultimately brought within its ambit.

1.44. There are two main forms in which such service can be organized:

- encouraging and enabling students to participate in community living on the school or college campus; and
- providing opportunities of participation in programmes of community development and national service.

1.45. **Community Living in School and College.** Every educational institution should try to develop a rich community life of its own and provide adequate and satisfying opportunities for students to participate in it and help in organizing it. Various opportunities for such work exist in the classroom, on the campus of the schools and the colleges, in the hostel and on the playgrounds. For instance, instead of utilizing servants and hired labour for educational institutions and their hostels, it is possible to have much of the work done by students, not primarily to save money, but to provide valuable experience. Japan has followed this practice in her national system and many schools in India (including some schools for well-to-do children) are also doing so to some extent. This type of work-experience would cultivate in students habits of work and a sense of the dignity of labour. If this is done on a nationwide scale, it will incidentally effect some saving in expenditure which could be utilized for providing certain basic amenities for students. The training institutions for basic teachers have tried to develop such traditions of community living by eliminating the use of servants to a large extent. We recommend that this pattern of hostel life should be introduced in all schools and colleges so far as possible. The practice of making self-help and manual work a part of the daily life and training in all types of educational institutions—as was the case in many of the old *Ashrams* and Academies—would yield good educational results. We cannot totally recreate the conditions of the past in our educational institutions; but we can certainly profit from the useful elements in past experience.

1.46. **Participation in Programmes of Community Development.** In addition to these institutional programmes, it is essential to make participation in meaningful

programmes of community service an integral part of all education from the primary to the undergraduate stage. Such participation can help to create positive attitudes towards social service and develop closer ties between the educated persons and the rest of the people. It can also help in building up a sense of social purpose and self-confidence and give students a sense of participation in community life and activities.

1.47. The organization of the programmes will naturally vary from stage to stage:

- (1) At the primary stage, it will take the form of bringing the school closer to the community with an accent on serving the community in suitable ways.
- (2) At the secondary stage, such programmes can be more ambitiously designed and have a greater impact on young minds. Every secondary school should develop carefully planned programmes for promoting good school-community relations and suitable forms of service to the community. We recommend that about ten days a year (or a total of 30 days at the lower secondary stage and 20 days at the higher secondary stage) may be fully devoted to such programmes. Where this is not possible, it should be obligatory on the students to participate in the Labour Service Camps for secondary school students to be organized by the State Education Departments on a district basis. The programme is discussed more fully elsewhere.<sup>1</sup>
- (3) Similarly, it should be obligatory on every college student, before he is awarded his first degree, to put in at least 60 days of national service in one to three stretches. Each college should develop its own appropriate programme suited to its objectives, its resources and the age and competence of its students. Participation in Labour and Social Welfare Camps or the NCC should also be regarded as alternative forms of such service.

1.48. The NCC programme, which has been made compulsory at the university stage during the last three years has shown some good results. It has possibilities of promoting national development by building up closer ties between the people and the defence services. It also helps to lessen the difference between the so-called 'martial' and other classes and inculcates the idea of the defence of freedom amongst all classes of people. As it has been started comparatively recently, we think—and the NCC authorities have also pressed this point—that it should be continued on its present basis for some time longer, say, till the end of the fourth five year plan. We would, however, recommend to the authorities concerned to explore the possibility of organizing this training, *not* throughout the period of three years as at present, but in a concentrated and whole-time programme spread over about 60 days which, as

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stated earlier, could be completed by students in one to three stretches according to their convenience. As alternative forms of social service come into being, NCC should be made voluntary, leaving the students free to opt for it or any other form of social service provided.

**1.49. Evolution of a Language Policy.** The development of a proper language policy can also assist materially in social and national integration. Of the many problems which the country has faced since independence, the language question has been one of the most complex and intractable and it still continues to be so. Its early and satisfactory solution is imperative for a variety of reasons, educational, cultural and political.

**1.50. Development of Modern Indian Languages.** It is hardly necessary to emphasize that the development of the Indian languages is both urgent and essential for the development of the Indian people and as a way of bringing together the elite and the masses. It can make scientific and technical knowledge more easily accessible to people in their own languages and thus help not only in the progress of industrialization but also in the wider dissemination of science and the scientific outlook. Energetic action is needed to produce books and literature, particularly scientific and technical, in the regional languages. This should be regarded as a specific and imperative responsibility of the universities; and the UGC should provide general guidance and allot adequate funds for the programme.

**1.51. Medium of Education at School and College.** The development of the modern Indian languages is inextricably linked with the place given to them in the educational system, specially at the university stage. The medium selected should enable students to acquire knowledge with facility to express themselves with clarity and to think with precision and vigour. From this point of view, the claims of the mother-tongue are pre-eminent. About thirty years ago, delivering the convocation address of the Calcutta University, Rabindra Nath Tagore had expressed his views in this matter in no uncertain terms:

In no country in the world, except India, is to be seen this divorce of the language of education from the language of the pupil. Full hundred years have not elapsed since Japan took its initiation into Western culture. At the outset she had to take recourse to textbooks written in foreign languages, but from the very first, her objective had been to arrive at the stage of ranging freely over the subjects of study in the language of the country. It was because Japan had recognized the need of such studies, not as an ornament for a select section of her citizens, but for giving power and culture to all of them, that she deemed it to be of prime importance to make them universally available to her people. And in this effort of Japan to gain proficiency in the Western

arts and sciences, which were to give her the means of self-defence against the predatory cupidity of foreign powers, to qualify her to take an honoured place in the comity of nations, no trouble or expense was spared. Least of all was there the miserly folly of keeping such learning out of easy reach, within the confines of a foreign language.

Learning through a foreign medium compels the students to concentrate on cramming instead of mastering the subject matter. Moreover, as a matter of sound educational policy, the medium of education in school and higher education should generally be the same. Prior to 1937, the position was at least consistent. English was the medium both in the upper stages of school and in college education. As we have rightly adopted the regional languages as the media of education at the school stage, it follows that we should adopt them increasingly at the higher stage also.

1.52. This proposal has also been supported strongly as a measure to promote social and national integration. The Emotional Integration Committee was of the view that the use of regional languages as media of education from the lowest to the highest stage of education was a matter of 'profound importance for national integration'. This was supported by the National Integration Council (June 1962) which said: 'The change in the medium of instruction is justified not so much by cultural or political sentiments as on the very important academic consideration of facilitating grasp and understanding of the subject-matter. Further, India's university men will be unable to make their maximum possible contribution to the advancement of learning generally, and science and technology in particular, unless there is a continuous means of communication in the shape of the regional languages between its masses, its artisans and technicians and its university men. The development of the talent in the country will also, in the view of the Council, be retarded unless regional languages are employed as media of instruction at the university stage'. We generally agree with these observations.

1.53. It has been sometimes argued that there should be a single medium of education at the university stage—English for the time being, to be ultimately substituted by Hindi—on the ground that it would promote mobility of teachers and students from one part of the country to another, provide for easy communication between academic and professional men and administrators, further intellectual cooperation amongst the universities and help in other ways in developing a corporate intellectual life in the country. We are inclined to think, on a balance of considerations, that this solution is not feasible. In practice, it will probably mean the indefinite continuance of English as the only medium of education in higher education, a development that we cannot support in the larger interests of the country. The adoption of Hindi as a common medium of education in all parts of India is not possible for some years to come and, in non-Hindi areas, it will still have some of the disadvantages associated

with the use of a foreign medium and is likely to be resisted. It would, therefore, be unwise to strive to reverse the present trend for the adoption of the regional languages as media of education at the university stage and to insist on the use of a common medium in higher education throughout the country.

1.54. To sum up:

- (1) We are convinced of the advantages of education through the regional languages. We regard the development of regional languages as vital to the general progress of the country, and as an important step towards the improvement of quality in education. To avoid any misunderstanding we would emphasize that this does not mean the shutting out of English, or other world languages. In fact we will profit from these languages all the more when our education becomes more effective and useful.
- (2) In view of the importance of the problem, we suggest that the UGC and the universities carefully work out a feasible programme suitable for each university or group of universities. The change-over should take place as early as possible and, in any case, within about ten years, since the problem will only become more complex and difficult with the passage of time. A large programme of producing the needed literature in the Indian languages will have to be undertaken; and adequate arrangements will have to be made for the training and retraining of teachers.
- (3) What is required is to formulate a clear policy, to express it in unambiguous terms, and to follow it up with firm, bold and imaginative action. We should avoid a policy of drift which will only be harmful. Nor should we get involved in the vicious circle of 'no production because no demand' and 'no demand because no production'.
- (4) We recognize that suitable safeguards would have to be devised, in the transitional stage, to prevent any lowering of standards during the process of change-over because of inadequate preparation. In fact the desirability and success of the change should be judged in terms of the contribution it makes to raising the quality of education. But caution should not be equated to delay or procrastination. It is meaningful only if it is part of a policy of determined, deliberate and vigorous action.

1.55. There will, however, be one important exception to this general rule, namely, all-India institutions which admit, in considerable numbers, students from different parts of the country. These now use English as the medium of education, which should continue undisturbed for the time being. A change-over to Hindi may be considered in due course provided two conditions are fulfilled. The first is the effective development of Hindi as a medium of education at this level. This is a matter which can be left to the UGC and the institutions concerned to decide. The second

is the equally important political consideration that, in such a change-over, the chances of students from non-Hindi area should not be adversely affected and that the proposal should have the support of the non-Hindi States. The latter principle has been already conceded by the Government of India even in the larger sphere of the use of Hindi in official communications between the States and the Centre.

1.56. Simultaneously, it is necessary to make the regional languages the official languages of the regions concerned as early as possible so that higher services are not *de facto* barred to those who study in the regional medium. The acceptance of the regional languages as media at the university is much more likely when good employment which now depends largely on a knowledge of English and is more easily open to students who have studied through English, becomes available to those who have studied through the regional medium. We might also add here that, though Urdu is not a regional language in the ordinary sense of the word, it has an all-India significance since it is spoken by certain sections of the people in different parts of the country. Due encouragement must be given to it at all stages not only because of this peculiar character but also because of its close links with the official language, Hindi.

1.57. **Channels of International Communication.** The introduction of the regional languages as media of education should not be interpreted to mean under-rating the importance of English in the university. For a successful completion of the first degree course, a student should possess an adequate command over English, be able to express himself in it with reasonable ease and felicity, understand lectures in it and avail himself of its literature. Therefore, adequate emphasis will have to be laid on its study as a language right from the school stage. English should be the most useful 'library language' in higher education and our most significant window on the world. It is also important to encourage the study of other foreign languages on a more extensive scale for a variety of academic and practical purposes. Russian has a special significance for the study of science and technology in the present day world.<sup>1</sup> In addition, French, German, Japanese, Spanish and Chinese are important world languages of communication and for acquiring knowledge and culture. We recommend that all universities, some selected colleges, and also a small proportion of carefully selected schools should provide for the teaching of these languages. The knowledge of another foreign language (especially Russian) besides English should be a requirement for a doctorate degree, and in certain subjects, even for the Master's degree.

1.58. The country will need, in increasing numbers, a small but extremely proficient group of persons in important foreign languages and their literature. From this point of view, it would be necessary to establish a few schools which will begin teaching,

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<sup>1</sup> It is interesting to note that the number of students studying Russian in the UK is larger than that of the students studying Russian in India.

right from an early age, important foreign languages referred to above and use them also as media of education. The admission to these schools should be on a selective basis and there should be an adequate provision of scholarships.

1.59. It would be an important step towards the general development of higher education, and also towards international cooperation and understanding, if a small number of institutions were established at the university level, with some of the important 'world languages' as media of education. A beginning has already been made with the Institute of Russian Studies at New Delhi. It would be desirable to set up, during the fourth plan, institutions on somewhat similar lines in German, French, Spanish and Japanese languages. We could also establish one or two more institutions in Russian. The institutions will have to be largely residential. It will be an advantage to have them as constituent units of universities in their neighbourhood.

1.60. **Channels of Internal Communication.** Hindi (or any other Indian language for that matter) has to be sufficiently developed and enriched before it can attain the status of a library language, that is, a language which can serve as a vehicle for acquiring a substantial part of the current and rapidly expanding stock of world knowledge. This has to be taken into account fully in determining our language policy. This implies, as stated earlier, that every graduate will need to acquire a reasonable proficiency in a library language, which will be English for most students. It will thus serve as a link-language in higher education for academic work and intellectual inter-communication.

1.61. It is, however, equally obvious that English cannot serve as the link-language for the majority of our people. It is only Hindi which can and should take this place in due course. As it is the official language of the Union and the link-language of the people, all measures should be adopted to spread it in the non-Hindi areas. The success of this programme will largely depend on the extent to which it is voluntarily accepted by the people of these areas. It is encouraging to know that in the Kerala University, where students can take Hindi in place of Malayalam at the undergraduate stage, a larger proportion of students choose to study Hindi. We have also seen increasing evidence on the part of non-Hindi areas to take to the study of Hindi. All their efforts in this matter, particularly in the non-official sector, should receive encouragement.

1.62. In addition to Hindi, it is essential to provide multiple channels of inter-State Communication in all modern Indian languages. In every linguistic region, there should be a number of persons who know all the other modern Indian languages and some who are familiar with their literatures and are able to contribute to them. For this purpose, we recommend that there should be adequate arrangements, both in schools and colleges, for teaching the various modern Indian languages. In addition, steps should be taken to establish strong departments in some of the modern Indian languages in

every university. It may also be advisable to create a small number of special institutes (or advanced centres) for the comparative study of the different languages and their linguistic problems. At the B. A. and M. A. levels, it should be possible to combine two modern Indian languages. This will incidentally supply the bilingual persons needed for language teaching in schools and colleges.

1.63. **Promoting National Consciousness.** India is a land of diversities—of different castes, peoples, communities, languages, religions and cultures. What role can the schools and universities play in enabling their students to discover the ‘unity in diversity’ that India essentially is, and in fostering a sense of national solidarity transcending the narrower loyalties?

1.64. Unfortunately, our school system as a whole has had no strong tradition of striving to develop a sense of national unity and national consciousness. Under the British administration, the schools were expected to teach loyalty to the British rule rather than instil love for the motherland. Consequently, the effort to develop national consciousness was made largely outside the educational system, particularly during the struggle for freedom which developed between 1900 and 1947. Its foundation was a renewed belief in the value of national culture and traditions and a pride in India’s past achievements. It recognized that, in the cultural exchange between India and the West, India too had something worthwhile to give in return for the gift of modern science and technology; and that Indians should strive to retain the valuable elements in their own traditional culture while accepting all that is good in the West. This was not meant as an attempt at revivalism, though it was certainly so interpreted by some sections. It was an attempt, as Gandhiji put it, to refuse to be blown off one’s feet even when all the windows of one’s house were thrown open to fresh winds from every corner of the world.

1.65. With the attainment of independence, the situation has changed greatly. The one rallying point which had kept many diverse elements together ceased to exist, and as the schools were unable to inculcate and strengthen national consciousness, the sentiment itself seems to be wearing thin, particularly in the new generation now coming of age. We saw something similar to the old spirit reviving in recent years—in the wake of the Chinese invasion of 1962 and during the recent conflict with Pakistan. Obviously, such unfortunate international conflicts cannot be considered the normal ways to awaken and strengthen the national spirit. The only enduring solution to the problem is to place this responsibility on the educational system and to make it an effective instrument for the purpose. There is much evidence in the world to show that schools and universities can play a major and helpful part in the regeneration and advancement of a people and in generating the psychological energy needed for the purpose. If rightly oriented, this approach is not, and should not be incompatible with the wider loyalties to mankind as a whole which we have also emphasized.

1.66. The deepening of national consciousness can be fostered specially by two programmes: (1) the understanding and re-evaluation of our cultural heritage, and (2) the creation of a strong driving faith in the future we want to build. The first would be promoted by well-organized teaching of the languages and literatures, philosophy, religions and history of the country and also by introducing the students to Indian architecture, sculpture, painting, music, dance and drama. In addition, it would be desirable to promote greater knowledge, understanding and appreciation of the different parts of India by including their study in the curricula, by the exchange of teachers wherever possible, by the development of fraternal relations between educational institutions in different parts of the country, and the organization of holiday camps and summer schools on an inter-State basis designed to break down regional or linguistic barriers. It would further be necessary to establish and maintain all-India institutions which will admit students from different parts of the country. Faith in the future would involve an attempt, as a part of the course in citizenship, to bring home to the students the principles of the Constitution, the great human values referred to in its preamble, the nature of the democratic and socialistic society which we desire to create and the five year plans of national development. At the higher stages of education the students should learn to assess the value of modern movements and tendencies so that they may learn which of them could be usefully assimilated into our culture. We should, however, take care to avoid identifying all 'modern' with 'western' values.

1.67. **Education for International Understanding.** There is no essential contradiction, as we have pointed out earlier, between this objective and the development of International understanding for the 'one-world' towards which we are moving. On the whole, textbooks used in national school systems perhaps contain fewer untrue or hostile remarks about other countries than they did in the past, thanks partly to the work of UNESCO, under whose auspices multi-national and bi-national efforts have been made for their revision. The sins are more often now of omission than of active commission. We should, however, guard ourselves even against this, for ignorance is often not less dangerous than hostility. Our studies in the humanities and social sciences should be so oriented that, while helping students to become good and active citizens of their own country, they will also enable them to acquire a knowledge and understanding of the essential features of the outside world, particularly of our neighbouring and Afro-Asian countries. Indian culture has had a strong and honourable tradition of international understanding, of valuing, on the whole with an open mind, the contributions of different countries and races to human civilization. For this purpose, the fact that she is a country with many communities having one common citizenship should actually prove to be an advantage. The constitution of UNESCO speaks of 'the fruitful diversity of the cultures of mankind'. If through the schools and universities, a person learns to appreciate the basic rightness of that phrase in his own federal and multi-community country, he is less likely to forget it on the inter-

national plane where he deals with persons belonging to different nations but enjoying equal membership in the community of mankind. The programme of social and national integration which will minimize the internal barriers and suspicions existing today will not only be a national gain, but may even make an impact on international relations and the international situation as a whole. This was one of the great inspirations of Jawaharlal Nehru's policy.

1.68. **Democratic Values.** In this context, special emphasis has to be laid on the development of values such as a scientific temper of mind, tolerance, respect for the culture of other national groups, etc., which will enable us to adopt democracy, not only as a form of government, but also as a way of life. As stated earlier, the population of India consists of persons who profess different religions, speak different languages, belong to different races, castes, classes and communities. It is precisely in such a situation that democracy can make its most significant contribution. A healthy development of democratic trends will help to soften the impact of this division into social, economic and cultural groups. The task is admittedly difficult; but it can convert the differences of language, cultural pattern, religion, etc., into the warp and woof of a very rich and rewarding social and cultural life. The problem of national integration is essentially one of harmonizing such differences, of enabling different elements of the population to live peacefully and cooperatively and to utilize their varied gifts for the enrichment of the national life as a whole. We have to cultivate a spirit of large-hearted tolerance, of mutual give and take, of the appreciation of ways in which people differ from one another. This is a very exacting 'experiment in living' that we have launched and no education will be worthwhile if the educated mind is unable to respond to this situation with intelligence and imagination.

#### EDUCATION AND MODERNIZATION

1.69. We have already stated that the most distinctive feature of a modern society, in contrast with a traditional one, is in its adoption of a science-based technology. It is this which has helped such societies to increase their production so spectacularly. It may be pointed out, however, that science-based technology has other important implications for social and cultural life and it involves fundamental social and cultural changes which are broadly described as 'modernization'. We shall briefly discuss the impact of this modernization on programmes of educational reconstruction.

1.70. **The Explosion of Knowledge.** There has been a tremendous increase in the quantum of knowledge during the last few decades. In a traditional society, the stock of knowledge is limited and grows slowly so that the main aim of education is interpreted to be its preservation. In a modern society, on the other hand, the stock of knowledge is far greater and the pace of its growth is infinitely quicker. One of the main tasks of education in a modern society, is to keep pace with this advance in knowledge. In such a society, knowledge inevitably ceases to be something to be received passively;



it is something to be actively discovered. If this is rightly understood, it would involve a revolution in traditional education where 'to know' has come to mean 'to know by heart', where respect for all inherited knowledge is assiduously cultivated and where the assimilative faculties tend to be emphasized to the neglect of the critical and creative ones. In India, as in other countries where similar conditions prevail, this would require, among other things, a new approach to the objectives and methods of education and changes in the training of teachers. Unless they are trained in new ways of teaching and learning, the students in schools and colleges will not be able to receive the type of education needed for the new society.

**1.71. Rapid Social Change.** Another feature of a modern society is the quick, almost breath-taking rate at which social change takes place. In a traditional society, change is so slow that the conservatism of the educational system does comparatively little harm. In a modern society, on the other hand, change is so rapid that the school must always be alert if it is to keep abreast of significant changes. There is, therefore, an imperative need for adopting a dynamic policy in such a situation. An educational system which does not continually renovate itself, becomes out of date and hampers progress because it tends to create a lag between its operative purposes and standards and the new imperatives of development, both in quality and quantity. The very aim of education has to be viewed differently—it is no longer taken as concerned primarily with the imparting of knowledge or the preparation of a finished product, but with the awakening of curiosity, the development of proper interests, attitudes and values and the building up of such essential skills as independent study and the capacity to think and judge for oneself without which it is not possible to become a responsible member of a democratic society.

**1.72. Need for Rapid Advance.** Two other aspects of modernization need emphasis. The first is that once a society launches itself upon a programme of modernization, there is no turning back, no half-way house where we can arrest the process. In the initial stages, such a change must disturb the traditional equilibrium reached and maintained over centuries which, though it had its obvious disadvantages, had some built-in redeeming factors as well. The attempt to create a new social order naturally creates a host of unexpected social, economic, cultural and political problems. But if one tinkers with the problems involved or tries to march with faltering steps, if one's commitments and convictions are half-hearted and faith is lacking, the new situation may turn out to be worse than the old one. The only solution to these transitional problems is to move rapidly forward and create a new equilibrium, based on the full implications of the process of modernization.

**1.73. Modernization and Educational Progress.** The progress of modernization will, therefore, be directly related to the pace of educational advance and the one sure way to modernize quickly is to spread education, to produce educated and skilled

citizens and train an adequate and competent intelligentsia. The Indian society today is heir to a great culture. Unfortunately, however, it is not an adequately educated society, and unless it becomes one, it will not be able to modernize itself and respond appropriately to the new challenges of national reconstruction or take its rightful place in the comity of nations. The proportion of persons who have so far been able to receive secondary and higher education is very small at present—less than two per cent of the entire population. This will have to be increased to at least ten per cent to make any significant impact. The composition of the intelligentsia must also be changed; it should consist of able persons, both men and women, drawn from *all* strata of society. There must also be changes in the skills and fields of specialization to be cultivated. At present, it consists predominantly of the white-collared professions and students of humanities, while the proportion of scientists and technical workers in its ranks is quite small. To achieve this, greater emphasis must be placed, as we have argued earlier, on vocational subjects, science education and research. Its average level of competence is not at all satisfactory, due mainly to inadequate standards maintained in the universities. This is damaging to Indian academic life and its reputation. In order to change this situation radically, it will be necessary to establish a few 'major' universities in the country which attain standards comparable to the best in any part of the world, and which will gradually spread their influence to others. This is one of the basic reforms needed in our system of higher education<sup>1</sup>.

#### SOCIAL, MORAL, AND SPIRITUAL VALUES

1.74. Modernization does not mean—least of all in our national situation—a refusal to recognize the importance of or to inculcate necessary moral and spiritual values and self-discipline. Modernization, if it is to be a living force, must derive its strength from the strength of the spirit. Modernization aims, amongst other things, at creating an economy of plenty which will offer to every individual a larger way of life and a wider variety of choices. While this freedom to choose has its own advantages, it also means that the future of the society will depend increasingly upon the type of choice each individual makes. This would naturally depend upon his motivation and sense of values, for he might make the choice either with reference entirely to his own personal satisfaction or in a spirit of service to the community to further the common good. The expanding knowledge and the growing power which it places at the disposal of modern society must, therefore, be combined with the strengthening and deepening of the sense of social responsibility and a keener appreciation of moral and spiritual values. While a combination of ignorance with goodness may be futile, that of knowledge with a lack of essential values may be dangerous. The weakening of social and moral values in the younger generation is creating many serious social and ethical conflicts in western societies and there is already a desire among some of the western thinkers to balance the knowledge and skills which science and technology

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<sup>1</sup> See Chapter XI for details.

bring with the values and insights associated with ethics and religion at its best, *viz.*, a search for the knowledge of the self, of the meaning of life, of the relationship of man to other human beings and to the ultimate reality. In the situation that is developing it is equally important for us to give a proper value-orientation to our educational system.

1.75. It is not our purpose to enumerate a list of values to be inculcated. What we would like to emphasize is the need to pay attention to the inculcation of right values in the students at all stages of education. We are happy to note that an awareness of this responsibility has been growing since independence. The University Education Commission (1948) considered both its philosophical and practical aspects and made certain valuable proposals for reform. However, except in a small number of institutions, they were not implemented. In 1959 the Central Advisory Board of Education appointed a special committee on Religious and Moral Instruction (the Sri Prakasa Committee). The Report of this Committee has been before the country for five years, but response from educational institutions has been neither active nor enthusiastic. This is having a very undesirable effect on the character of the rising generation. It has, therefore, become necessary and urgent to adopt active measures to give a value-orientation to education. From this point of view, we make the following recommendations:

- (1) The Central and State Governments should adopt measures to introduce education in moral, social and spiritual values in all institutions under their direct control on the lines recommended by the University Education Commission on religious and moral instruction.
- (2) The privately managed institutions should also be expected to follow suit.
- (3) Apart from education in such values being made an integral part of school programmes generally, some periods should be set apart in the time-table for this purpose. They should be taken, not by specially recruited teachers but by general teachers, preferably from different communities, considered suitable for the purpose. It should be one of the important objectives of training institutions to prepare them for it.
- (4) We also suggest that the University Departments in Comparative Religion should be specially concerned with the ways in which these values can be taught wisely and effectively and should undertake preparation of special literature for use by students and teachers.

1.76. Our proposals for such instruction at the school stage are discussed elsewhere<sup>1</sup>. For higher education, we agree with the suggestions made by the University Education Commission and the Sri Prakasa Committee. A general study of the

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<sup>1</sup> Chapter VIII.

different religions of the world should be a part of the first degree courses and a graded syllabus should be prepared for the purpose. For instance, in the first year, it can deal with the lives of great religious leaders; in the second, selections from the scriptures of the world with a universal appeal could be studied; and in the third year, the central problems of the philosophy of religions could be considered. We would also like to lay stress on the importance of encouraging students to meet in groups for silent meditation.

1.77. In the attempt to inculcate values through education, we should draw freely upon our own traditions as well as the traditions of other countries and cultures of the world. There are strands within Indian thought itself which can lead to the new outlook appropriate for a modern society and which can prepare the people for a willing acceptance of life with all its joys and sorrows, its challenges and triumphs. In them, too, we can find inspiration for social service and faith in the future. Mahatma Gandhi, for instance—and some other great leaders of thought—discovered the inspiration for their idealism and their passionate striving for social justice and social reconstruction largely from these sources. It is such re-interpretations and re-evaluations of the past that are now most needed. It is, however, specially important in the world of today that this effort should not be restricted to the national sources only. It would be necessary to draw upon liberalising forces that have arisen in the western nations and which have emphasized, among other things, the dignity of the individual, equality and social justice, *e.g.*, the French Revolution, the concept of the welfare state, the philosophy of Marx and the rise of socialism. A major weakness of the Indian, and particularly of the Hindu society, in the past, has been a lack of equality and social justice. These balancing influences have, therefore, a great significance. Similar assimilations of whatever is significant should also be discriminatingly made from other important nations and cultures such as Chinese, Japanese and Islamic.

1.78. **Secularism and Religion.** In a multi-religious society like ours, it is necessary to define the attitude of the State to religion, religious education and the concept of secularism. The adoption of a secularist policy means that in political, economic and social matters, all citizens, irrespective of their religious faith, will enjoy equality of rights, that no religious community will be favoured or discriminated against, and the instruction in religious dogmas will not be provided in State schools. But it is *not* an irreligious or anti-religious policy; it does *not* belittle the importance of religion as such. It gives to every citizen the fullest freedom of religious belief and worship. It is anxious to ensure good relations amongst different religious groups and to promote not only religious tolerance but also an active reverence for all religions.

1.79. In such a society, however, one has to make a distinction between 'religious education' and 'education about religions'. The former is largely concerned with the teaching of the tenets and practices of a particular religion, generally in the form in

which the religious group envisages them, whereas the latter is a study of religions and religious thought from a broad point of view—the eternal quest of the spirit. It would not be practicable for a secular State with many religions to provide education in any one religion. It is, however, necessary for a multi-religious democratic State to promote a tolerant study of all religions so that its citizens can understand each other better and live amicably together. It must be remembered that, owing to the ban placed on religious instruction in schools and the weakening of the home influences which, in the past, often provided such instruction, children are now growing up without any clear ideas of their own religion and no chance of learning about others. In fact, the general ignorance and misunderstanding in these matters are so widespread in the younger generation as to be fraught with great danger for the development of a democracy in which tolerance is rated as a high value. We suggest that a syllabus giving well-chosen information about each of the major religions should be included as a part of the course in citizenship or as part of general education to be introduced in schools and colleges up to the first degree. It should highlight the fundamental similarities in the great religions of the world and the emphasis they place on the cultivation of certain broadly comparable moral and spiritual values. It would be a great advantage to have a common course on this subject in all parts of the country and common textbooks which should be prepared at the national level by competent and suitable experts available on each religion. When these courses have been prepared, it would be worthwhile to have them scrutinized by a small committee of eminent persons belonging to different religions to ensure that nothing is included in them to which any religious group could take legitimate objection.

1.80. A vitalized study of science with its emphasis on open-mindedness, tolerance and objectivity would inevitably lead to the development of a more secular outlook, in the sense in which we use the word, amongst those who profess different religions. This process needs to be carefully and wisely encouraged. Simultaneously, there is a sense in which the walls between the secular and the spiritual are tending to break down and what is secular is seen to have spiritual roots. In the words of Dr. Iqbal, 'the spirit finds its opportunity in the material, the natural and the secular. All that is secular is, therefore, sacred in the roots of its being'. This is what we envisage as the direction of our future development. We believe that India should strive to bring science and the values of the spirit together and in harmony, and thereby pave the way for the eventual emergence of a society which would cater to the needs of the whole man and not only to a particular fragment of his personality.

#### A CHALLENGE AND A FAITH

1.81. India is on the move again—with the promise of a new renaissance in the making. After a long period of foreign rule she has emerged free. That her means for the winning of freedom, adopted under Gandhi and Nehru, were as noble as the ends, is a signpost of profound historical significance.

1.82. Politically the land is free, but economically she has a long way to go. The elimination of ignorance and of grinding poverty accumulated over centuries of inertia and exploitation is not an easy task. India today has half of the total illiterate population of the world. About fifty million of her people, a tenth of the total population, live on an yearly income of no more than Rs. 120. The problems are grave and immense. But, this is only one side of the picture. During recent years, great strides have been taken towards industrialization, towards modernization of agriculture, and to provide better health and life to the people.

1.83. The most powerful tool in the process of modernization is education based on science and technology. The one great lesson of the present age of science is that, with determination and willingness to put in hard work, prosperity is within the reach of any nation which has a stable and progressive government. There is no doubt that in the years to come India's trade and commerce will grow: there will be more food for all; more education, better health and a reasonable standard of living will be available. But, India's contribution can, and should be far more than these material gains. She should learn to harness science but she must also learn not to be dominated by science. In this respect India has a unique advantage with her great tradition of duty without self-involvement (अनासक्ति), unacquisitive temperament (अपरिग्रह), tolerance and innate love of peace and reverence for all living things. Too often are these precious assets forgotten and we tend to relapse into moods of pessimism, fears and forebodings, discord and destructive criticism. A new pride and a deeper faith expressed in living for the noble ideals of peace and freedom, truth and compassion are now needed.

1.84. In our efforts to go in a big way for science-based industrialization, we have the advantage of drawing upon a great stock of knowledge accumulated by the western world over the last two hundred years. We also have another lesson to learn. The industrialization of the West was in some ways brought about at no small cost to the human spirit. The two world wars resulting in human killing on an unprecedented scale are a grim reminder of that suffering of the spirit. If we learn the lesson right, we can harness science to support rather than weaken our basic commitment to cultural and spiritual values. It should be our goal and obligation to re-interpret, and raise to a new level of understanding, the insight gained by the ancient seers as regards the fundamental problems of life, which in some ways is unique and 'represents the quintessence of deepest insight into the happenings of the world'<sup>1</sup>.

1.85. The opening stanza of the Kena Upanishad is as challenging today to the scientific and seeking mind as it was thousands of years ago:<sup>1</sup>

केनेषितं पतति प्रेषितं मनः । केन प्राणः प्रथमः प्रैति युक्तः ।  
केनेषितां वाचमिमां वदन्ति । चक्षुः श्रोत्रं क उ देवो युनक्ति ।

<sup>1</sup> E. Schroedinger, *What is Life*, Cambridge University, 1944.

'By whom missioned falls the mind shot to its mark? By whom yoked does the first life-breath move forward on its paths? By whom impelled is this word that men speak? What god set eye and ear to their workings?'<sup>1</sup>

1.86. Atom and *Ahimsa*,<sup>2</sup> or, to put it differently, man's knowledge and mastery of outer space and the space within his skull, are out of balance. It is this unbalance which mankind must seek to redress. Man now faces himself. He faces the choice of rolling down a nuclear abyss to ruin and annihilation or of raising himself to new heights of glory and fulfilment yet unimagined. India has made many glorious contributions to world culture, and perhaps the most valuable of them all is the concept and ideal of non-violence and compassion sought, expounded and lived by Buddha and Mahavira; Nanak and Kabir; Vivekananda, Ramana Maharisi and Gandhi in our own times, and which millions have striven to follow after them.

1.87. The greatest contribution of Europe doubtlessly is the scientific revolution. If science and *ahimsa* join together in creative synthesis of belief and action, mankind will attain a new level of purposefulness, prosperity and spiritual insight. Can India do something in adding a new dimension to the scientific achievement of the West? This poses a great challenge and also offers a unique opportunity to the men and women of India, and especially to the young people who are the makers of the future. In this context we cannot do better than to quote Pandit Jawaharlal Nehru:

Can we combine the progress of science and technology with this progress of the mind and spirit also? We cannot be untrue to science because that represents the basic fact of life today. Still less can we be untrue to those essential principles for which India has stood in the past throughout the ages. Let us then pursue our path to industrial progress with all our strength and vigour and, at the same time, remember that material riches without toleration and compassion and wisdom may well turn to dust and ashes.<sup>3</sup>

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<sup>1</sup> *Kena Upanishad* translated by Sri Aurobindo, Sri Aurobindo Ashram, Pondicherry, 1952.

<sup>2</sup> *Ahimsa*—Non-violence.

<sup>3</sup> *India and the World*, Azad Memorial Lectures, 1959, Indian Council for Cultural Relations, New Delhi, 1962.

## SUMMARY OF RECOMMENDATIONS

### CHAPTER I. EDUCATION AND NATIONAL OBJECTIVES

1. The most important and urgent reform needed in education is to transform it, to endeavour to relate it to the life, needs and aspirations of the people and thereby make it a powerful instrument of social, economic and cultural transformation necessary for the realization of the national goals. For this purpose, education should be developed so as to increase productivity, achieve social and national integration, accelerate the process of modernization and cultivate social, moral and spiritual values. 1.20\*

2. **Education and Productivity.** The following programmes are needed to relate education to productivity:

(1) *Science Education.* Science education should become an integral part of school education and ultimately become a part of all courses at university stage also.

1.23-24

(2) *Work-Experience.* Work-experience should be introduced as an integral part of all education.

(3) Every attempt should be made to orient work-experience to technology and industrialization and to the application of science to productive processes, including agriculture. 1.25-33

(4) *Vocationalization.* Secondary education should be increasingly and largely vocationalized and in higher education, a greater emphasis should be placed on agricultural and technical education. 1.32

3. **Social and National Integration.** The achievement of social and national integration is an important objective of the educational system and the following steps should be taken to strengthen national consciousness and unity.

(1) *The Common School.* The common school system of public education should be adopted as a national goal and effectively implemented in a phased programme spread over 20 year. 1.36-38

(2) *Social and National Service.* Social and national service should be made obligatory for all students at all stages. These programmes should be organized concurrently with academic studies in schools and colleges.

(a) At the primary stage, programmes of social service should be developed in all schools on the lines of those developed in basic education.

(b) At the secondary stage, social service for a total of 30 days at the lower secondary stage and 20 days at the higher secondary stage (10 days a year) should be obligatory for all students. It may be done in one or more stretches.

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\* The figures at the end of each recommendation indicate, respectively—

1. the number of the chapter in the Report; and  
2. the number of the paragraph (in international numerals).



(c) At the undergraduate stage, social service for 60 days in total (to be done in one or more stretches) should be obligatory for all students.

(d) Every educational institution should try to develop a programme of social and community service of its own in which all its students would be suitably involved for periods indicated above.

(e) Labour and social service camps should be organized by creating a special machinery for them in each district. Participation in such camps should be obligatory for all students for whom no programmes have been organized by the educational institutions they attend.

(f) NCC should be continued on its present basis till the end of the fourth five year plan. The concerned authorities should explore the possibility of providing this training, on a whole-time basis, in a continuous programme of about 60 days at the undergraduate stage. In the meanwhile, alternate forms of social service should be developed and as they come into operation, the NCC should be made voluntary. 1.39-48

(3) *Language Policy.* The development of an appropriate language policy for the education system can materially assist in social and national integration.

(4) Mother-tongue has a pre-eminent claim as the medium of education at the school and college stages. Moreover, the medium of education at the school and higher education should generally be the same. The regional languages should, therefore, be adopted as the media of education in higher education.

(5) The UGC and the universities should work out a programme for the adoption of these recommendations suitably for each university or a group of universities. The change-over should be completed within ten years.

(6) Energetic action is needed to produce books and literature, particularly scientific and technical, in regional languages. This should be made a responsibility of universities assisted by the UGC.

(7) All-India institutions should continue to use English as the medium of education for the time being. The eventual adoption of Hindi should, however, be considered in due course, subject to certain safeguards.

(8) The regional languages should also be made the languages of administration for the regions concerned as early as possible so that higher services are not barred to those who study in the regional medium.

(9) The teaching and study of English should continue to be promoted right from the school stage. Encouragement should be given also to the study of other languages of international communication. The study of Russian needs special attention.

(10) It would be desirable to set up a few institutions, both at the school and at the university levels, with some of the important world languages as media of education.

(11) English will serve as a link-language in higher education for academic

work and intellectual inter-communication. It is, however, equally obvious that English cannot serve as the link-language for the majority of the people. It is only Hindi which can and should take this place in due course. As it is the official language of the Union and the link language of the people, all measures should be adopted to spread it in the non-Hindi areas.

(12) In addition to Hindi, it is essential to provide multiple channels of inter-State communication in all modern Indian languages. In every linguistic region, there should be a number of persons who know the other modern Indian languages and some who are familiar with their literature and able to contribute to them. For this purpose, there should be adequate arrangements, both in schools and colleges, for teaching different modern Indian languages. In addition, steps should be taken to establish strong departments in some of the modern Indian languages in every university. At the B. A. and M. A. levels, it should be possible to combine two modern Indian languages.

1.49-62

(13) *Promotion of National Consciousness.* Promoting national consciousness should be an important objective of the school system. This should be attempted through the promotion of understanding and re-evaluation of our cultural heritage and the creation of a strong driving faith in the future towards which we aspire.

(a) The first would be promoted by well-organized teaching of the languages and literatures, philosophy, religions and history of India, and by introducing the students to Indian architecture, sculpture, painting, music, dance and drama. In addition, it would be desirable to promote greater knowledge, understanding and appreciation of the different parts of India by including their study in the curricula, by the exchange of teachers wherever possible, by the development of fraternal relations between educational institutions in different parts of the country, and the organization of holiday camps and summer schools on an inter-State basis designed to breakdown regional or linguistic barriers.

(b) Creation of a faith in the future would involve an attempt, as a part of the course in citizenship, to bring home to the students the principles of the Constitution, the great human values referred to in its Preamble, the nature of the democratic and socialistic society which we desire to create and the five year plans of national development.

(14) There is no contradiction between the promotion of national consciousness and the development of international understanding which education should simultaneously strive to promote.

(15) The educational programme in schools and colleges should be designed to inculcate democratic values. 1.63-68

**4. Education and Modernization.** (1) In a modern society, knowledge increases at a terrific space and social change is very rapid. This needs a radical transformation in

the educational system. Education is no longer taken as concerned primarily with the imparting of knowledge or the preparation of a finished product, but with the awakening of curiosity, the development of proper interests, attitudes and values and the building up of such essential skills such as independent study and capacity to think and judge for oneself. This also involves a radical alteration in the methods of teaching and in the training of teachers.

(2) To modernize itself, a society has to educate itself. Apart from raising the educational level of the average citizen, it must try to create an intelligentsia of adequate size and competence, which comes from all strata of society and whose loyalties and aspirations are rooted to the Indian soil. 1.69-73

**5. Social, Moral and Spiritual Values.** The education system should emphasize the development of fundamental social, moral and spiritual values. From this point of view—

(a) the Central and State Governments should adopt measures to introduce education in social, moral and spiritual values in all institutions under their (or local authority) control on the lines recommended by the University Education Commission and the Committee on Religious and Moral Instruction;

(b) the privately managed institutions should also be expected to follow suit;

(c) apart from education in such values being made an integral part of school programmes generally, some periods should be set apart in the time-table for this purpose. They should be taken, not by specially recruited teachers but by general teachers, preferably from different communities, considered suitable for the purpose. It should be one of the important objectives of training institutions to prepare them for it;

(d) the university departments in Comparative Religion should be specially concerned with the ways in which these values can be taught wisely and effectively and should undertake preparation of special literature for use by students and teachers.

**6. Education about Religions.** It is necessary for a multi-religious democratic State to promote a tolerant study of all religions so that its citizens can understand each other better and live amicably together. A syllabus giving well chosen information about each of the major religions should be included as a part of the course in citizenship or as part of general education to be introduced in schools and colleges up to the first degree. It should highlight the fundamental similarities in the great religions of the world and the emphasis they place on the cultivation of certain broadly comparable moral and spiritual values. It would be a great advantage to have a common course on this subject in all parts of the country and common textbooks which should be prepared at the national level by competent and suitable experts in each religion.

1.74-80

## CHAPTER II. THE EDUCATIONAL SYSTEM : STRUCTURE AND STANDARDS

**7. Structure and Duration.** (1) The standards in any given system of education at a given time depend upon four essential elements: (a) the structure or the division of the educational pyramid into different levels or stages and their inter-relationships; (b) the duration or total period covered by the different stages; (c) the quality of teachers, curricula, methods of teaching and evaluation, equipment and buildings; and (d) the utilization of available facilities. All these elements are inter-related, but they are not of equal significance. The structure, which may be regarded as the skeleton of the educational system, is of the least importance. The duration or total period of education plays a more significant role; but it becomes crucial only when the available facilities are utilized to the full and no further improvement can be expected without the addition of time. The quality of different inputs is even more important, and with an improvement in these, it is possible to raise the standards considerably without affecting the structure or increasing duration. But probably the most important is utilization of available facilities and obtaining the maximum return at the existing level of inputs.

(2) The immediate efforts on which attention should be concentrated at the school stage are two: increasing the intensity of utilization and improving the quality of inputs, other than time. With these, it is possible to add about a year of content to the school course. In addition, it is also necessary to increase the duration of the higher secondary stage to two years under a phased programme which will begin in the fifth plan and be completed by 1985.

(3) The new educational structure should consist of (a) one to three years of pre-school education; (b) a ten-year period of general education which may be subdivided into a primary stage of 7 to 8 years (a lower primary stage of 4 or 5 years and a higher primary stage of 3 or 2 years) and lower secondary stage of 3 or 2 years of general education or one to three years of vocational education (the enrolment in vocational courses being raised to 20 per cent of the total); (c) a higher secondary stage of two years of general education or one to three years of vocational education (the enrolments in vocational education being raised to 50 per cent of the total); (d) a higher education stage having a course of three years or more for the first degree and followed by courses of varying durations for the second or research degrees.

(4) The age of admission to Class I should ordinarily be not less than 6 +.

(5) The first public external examination should come at the end of the first ten years of schooling.

(6) The system of streaming in schools of general education from Class IX should be abandoned and no attempt at specialisation made until beyond Class X.

(7) Secondary schools should be of two types—high schools providing a ten-year course and higher secondary schools providing a course of 11 or 12 years.

(8) Attempts to upgrade every secondary school to the higher secondary stage should be abandoned. Only the bigger and more efficient schools—about one-fourth

of the total number—should be upgraded. The status of the existing higher secondary schools should be reviewed from this point of view and if necessary, those that do not deserve the higher secondary status should be downgraded.

(9) A new higher secondary course, beginning in Class XI, should be instituted. Class XI and XII (and during the transitional period Class XI only) should provide specialised studies in different subjects. Where however, existing higher secondary schools with integrated course in Classes IX, X and XI are running satisfactorily, the arrangement may continue until Class XII is added. 2.01-21

**8. Transfer of the Pre-University Course.** (1) The pre-university course should be transferred from the universities and affiliated colleges to secondary schools by 1975-76. and duration of the course should be lengthened to two years by 1985-86.

(2) The UGC should be responsible for effecting the transfer of all pre-university or intermediate work from university and affiliated colleges to schools.

(3) Simultaneously, higher secondary class or classes should be started in selected schools by State Education Departments, as self-contained units, and assisted with adequate recurring grants.

(4) Boards of Secondary Education should be reconstituted to accept the responsibility for the higher secondary stage also. 2.22-24

**9. Lengthening the Duration of the Higher Secondary Stage.** (1) In the fourth plan, efforts should be concentrated on securing a better utilization of existing facilities, on making the necessary preparation for implementing the programme and on lengthening the duration of the course in a few selected institutions as pilot projects. (2) The programme of lengthening the duration of the higher secondary stage should begin in the fifth plan and be completed by the end of the seventh plan. 2.22-24.

**10. Reorganization of the University Stage.** (1) The duration of the first degree should not be less than three years. The duration of the second degree may be 2 to 3 years.

(2) Some universities should start graduate schools with three-year Master's degree course in certain subjects.

(3) Three-year special courses for the first degree which begin at the end of the first year of the present three-year degree courses should be started in selected subjects and in selected institutions.

(4) Suitable bridges should be built between the existing courses and the new (longer) courses.

(5) Incentives in the form of scholarships etc, should be provided for those who take the longer courses.

(6) In Uttar Pradesh, the lengthening of the first degree course should begin with the establishment of three-year graduate schools in selected subjects and in selected

universities. The first degree courses in other colleges should be raised to 3 years in a period of 15-20 years. 2.30-32

**11. Utilization of Facilities.** (1) Emphasis should be laid, in plans of educational reconstruction, on programmes of intensive utilisation of existing facilities.

(2) The number of instructional days in the year should be increased to about 39 weeks for schools and 36 weeks for colleges and pre-primary schools.

(3) A standard calendar should be worked out by the Ministry of Education and the UGC in consultation with the State Governments and Universities respectively. The number of other holidays should be cut down to ten in the year. Loss of instructional days due to examinations and other reasons should not exceed 21 days in the case of schools and 27 days in the case of colleges.

(4) Vacations should be utilised fully through participation in studies, social service camps, production experience, literacy drives, etc.

(5) The duration of the working day should be increased at the school stage. At the university stage, adequate facilities for self-study should be provided.

(6) Steps should be taken to ensure full utilisation of institutional facilities such as libraries, laboratories, workshops, craftsheds, etc. all the year round. 2.33-42

**12. Dynamic and Evolving Standards.** (1) An intensive effort should be made to raise standards continually for all stages of education. The first ten years of school education should be qualitatively improved so that the wastage at this stage is reduced to the minimum. Within a period of ten years, the standard reached at the end of Class X should be that now attained at the end of the higher secondary course. Similar efforts should be made to raise the standard of the university degrees by adding one year of content.

(2) A continual improvement of standards and their comparability between different parts of the country should be secured at the school stage through the creation of an adequate and efficient machinery at the State and National levels which will define, revise and evaluate national standards at the end of the primary and the lower and higher secondary stages.

(3) In order to raise standards, it is necessary to secure better coordination between different stages of education and to break the isolation in which educational institutions generally function. From this point of view—

- (a) universities and colleges should assist secondary schools in improving their efficiency through a variety of measures; and
- (b) school complexes should be formed, each complex consisting of a secondary school and all the lower and higher primary schools within its neighbourhood. All the schools in such a complex should form a cooperative group working for improvement. 2.43-52

13. **Part-time Education.** Part-time and own-time education should be developed on a larger scale at every stage and in every sector of education and should be given the same status as full-time education. 2.53-54

14. **Nomenclature.** A uniform system of nomenclature for the different stages and sub-stages of education should be evolved by the Government of India in consultation with State Governments. 2.55

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### CHAPTER III. TEACHER STATUS

15. Intensive and continuous efforts are necessary to raise the economic, social and professional status of teachers and to feed back talented young persons into the profession. 3.01-02

16. **Remuneration:** The most urgent need is to upgrade the remuneration of teachers substantially, particularly at the school stage. 3.05

(1) The Government of India should lay down, for the school stage, minimum scales of pay for teachers and assist the States and Union Territories to adopt equivalent or higher scales to suit their conditions. 3.08

(2) Scales of pay of school teachers belonging to the same category but working under different managements such as government, local bodies or private managements should be the same. This principle of parity should be adopted forthwith. But its full implementation may, if necessary, be phased over a programme of five years. 3.09

(3) The Commission proposes the following scales of pay :

<i>Teachers</i>	<i>Remuneration</i>
(1) Teachers who have completed the secondary course and have received two years' of professional training.	Minimum for trained teachers . .Rs 150 Maximum salary (to be reached in a period of about 20 years) . .Rs 250 Selection grade (for about 15 p.c. of the cadre) . .Rs. 250-300

*N.B.* The minimum salary of a primary teacher who has completed the secondary course should be immediately raised to Rs 100; and in a period of five years, it should be raised to Rs 125. Similarly, the minimum pay of a teacher, who has received two years of training, should be raised immediately to Rs 125; and it should be raised to Rs 150 in a period of five years. Untrained persons with the requisite academic qualifications should work on the starting salary until they are trained and become eligible for the scale.

(2) Graduates who have received one year's professional training. Minimum for trained graduates . . Rs. 220  
 Maximum salary (to be reached in a period of 20 years) . . Rs. 400  
 Selection grade  
 (for about 15 p.c. of the cadre) Rs. 300-500

*N.B.* Untrained graduates should remain on their starting salary of Rs. 200 p.m. until they are trained and become eligible for the scale.

(3) Teachers working in secondary schools and having post-graduate qualifications. Rs. 300-600

*N.B.* On being trained, they should get one additional increment.

(4) Heads of secondary schools Depending upon the size and quality of the school and also on their qualifications, the headmasters should have one or other of the scales of pay for affiliated colleges recommended below.

(5) Teachers in affiliated colleges Lecturers—  
 Junior scale— Rs. 300-25-600  
 Senior scale— Rs. 400-30-640-40-800  
 Senior lecturer/reader—Rs. 700-40-1100  
 Principal I—Rs. 700-40-1100  
 II—Rs. 800-50-1500  
 III—Rs. 1000-50-1500

*N.B.* The proportion of lecturers in the senior scale to those in the junior scale should be progressively improved. By the end of the fifth plan, this proportion should be raised to about 75 per cent on an average.

(6) Teachers in university departments Lecturer— Rs. 400-40-800-50-950  
 Reader— Rs. 700-50-1250  
 Professor—Rs. 1000-50-1300-60-1600

*N.B.* (1) One-third of the professors to be in the senior scale of Rs. 1500-1800. Scales comparable to the supertime scales in IAS to be introduced for exceptionally meritorious persons and in selected Centres of Advanced Studies.

(2) The proportion of junior (lecturers) staff to senior (readers-professors) staff in the universities which is now about 3:1 should be gradually changed to 2:1.

*Notes*—(a) The above scales of pay for school teachers are at the current price level and include the existing dearness allowances. Suitable increases will, however, have to be made for rises in prices from time to time.

(b) Compensatory cost of living allowance given in cities, house-rent allowances or other allowance are *not* included. These will be in addition to the salary recommended above and should be given on a basis of parity.

(c) The scales of pay are to be integrally related to the programmes of qualitative improvement of teachers through improved methods of selection, and improvement in general and professional education.

(d) The scales are to be given to all teachers—government, local authority or private—on the basis of parity.



**17. Implementation of Scales at the University Stage.** (1) The scales proposed above for teachers in higher education have already been approved by Government. To facilitate their introduction, assistance from the Centre should be provided to meet additional expenditure on a sharing basis of 80 per cent from Central and 20 per cent from State funds. In the case of private colleges, Central assistance may even be provided on a 100 per cent basis.

(2) The introduction of these scales of pay should be linked with improvement in the qualifications of teachers and improvement in the selection procedures for their appointment. This should be done on the lines of recommendations of the Committee on Model Act for Universities. For the recruitment of professors, a slightly different procedure has been suggested.

(3) The qualifications of teachers in affiliated colleges should be the same as those for teachers in the universities. The method of recruitment for them should also be similar. A discriminating approach should be adopted, in regard to these, for privately managed colleges. Good institutions should be allowed greater freedom in the choice of their teachers and stricter control should be exercised where the management is not satisfactory. 3.12-13

**18. Implementation of Scales for School Teachers.** (1) Three main scales of pay should be recognised for school teachers: (a) for teachers who have completed the secondary school stage and are trained; (b) for trained graduates; (c) for teachers with post-graduate qualifications.

(2) There should be no teacher at the primary stage who has not completed the secondary school course and has not had two years of professional training.

(3) Headmasters of higher primary and lower primary schools with enrolments of more than 200 should be trained graduates. Their salaries should be the same as those of trained graduate teachers in secondary schools.

(4) The practice of creating posts in lower scales of pay and recruiting to these, either teachers with lower qualifications when qualified teachers are available or recruiting qualified teachers to these posts and paying them at lower scales, should be abandoned.

(5) Scales of pay of secondary school teachers should be related to scales of pay for teachers in affiliated colleges and universities on the one hand and to those of primary teachers on the other.

(6) Scales of pay for headmasters of lower and higher secondary schools should have a definite relationship with those of teachers in affiliated colleges or even universities. That is to say, the scale of pay for headmasters should be the same as that for lecturers, readers, or even professors, depending upon the size, function and quality of the school.

(7) The proportion of teachers with postgraduate qualifications in lower secondary schools should vary from 10-30 per cent, depending upon the size, function and quality of the school.

(8) Teachers with first and second class in B. A./B. Sc. or M. A./M. Sc. or with M. Ed. degree should be given advance increments in the scale.

(9) Professional training should be obligatory for all secondary school teachers.

(10) State Boards of School Education and the State Education Departments should prescribe qualifications of teachers and lay down proper procedures for selection, not only for Government schools, but also for those conducted by local authorities and private managements.

(11) Every private school recognised and aided by State Education Departments should be required to have a managing Committee with representatives from the Department; the Department should prescribe the qualifications for teachers similar to those in Government institutions; every post to be filled should be adequately advertised and interviews held by duly constituted selection committees; and no grant-in-aid should be paid for the salary of a teacher appointed outside the rules. 3.14-19

**19. Promotional Prospects.** It is necessary to improve promotional prospects in the teaching profession in order to attract and retain men of talent. From this point of view, the following suggestions are made:

(1) *School Stage.* Qualified and trained teachers in primary schools should be considered for promotion as headmasters or inspectors of schools.

(2) Trained graduate teachers in secondary schools who have done outstanding work should be eligible for promotion to posts carrying salaries of teachers with post-graduate qualifications.

(3) Secondary school teachers with the necessary aptitude and competence could be enabled to become university and college teachers. The UGC should give *ad hoc* grants to outstanding teachers to do research into problems to encourage them and incidentally to qualify themselves for work at the universities.

(4) Advance increments for teachers doing outstanding work should be made possible. Normally, a teacher reaches the maximum of his scale in a period of 20 years. It should be possible for about five per cent of the teachers to reach the top of the scale in about ten years and another five per cent to reach the same in about fifteen years.

(5) *University Stage.* *Ad hoc* posts in a higher grade should be created for a lecturer or reader who has done outstanding work and who cannot be given promotion for non-availability of a suitable post.

(6) In Departments doing postgraduate work, the number of posts at professorial level should be determined on the basis of requirements.

(7) It should be open to a university in consultation with UGC to offer remuneration, even beyond the special scale of Rs 1600-1800 to outstanding persons. 3.20

**20. Relating Salaries to Costs of Living.** All teacher's salaries should be reviewed every five years and the dearness allowance paid to teachers should be the same as that paid to government servants with the same salary. 3.21

**21. Welfare Services.** A general programme of welfare services for all school teachers should be organized in each State and Union Territory, the funds being contributed by teachers (at 1½ per cent of the salaries) and an equal amount being given by the State. The fund should be administered by joint committees of representatives of teachers and government. When such a fund is organized, the existing teachers' welfare fund set up by the Government of India may be advantageously merged in it. 3.22

**22. Need for Central Assistance.** The proposals for the improvement of salaries of school teachers should be given effect to immediately. Generous central assistance should be made available to State Governments for this purpose. 3.28

**23. Retirement Benefits.** (1) The system of retirement benefits to teachers should also be reorganized on the principles of uniformity and parity. That is to say, the retirement benefits given to employees of the Government of India should be extended automatically to teachers in the service of the State Governments in the first instance and then to teachers working under local authorities and private managements. 3.29

(2) As an interim measure, the triple-benefit scheme should be more widely adopted both for teachers in local authority and private schools as well as for university and college teachers.

(3) The normal retirement age for teachers in schools, colleges and universities should be made 60 years with provision for extension upto 65 years.

(4) A higher rate of interest should be given to teachers on their provident fund and, for this purpose, a better system of investing these funds should be devised.

3.30-32

**24. Conditions of Work and Service.** (1) The conditions of work in educational institutions should be such as to enable teachers to function at their highest level of efficiency.

(2) The minimum facilities required for efficient work should be provided in all educational institutions.

(3) Adequate facilities for professional advancement should be provided to all teachers.

(4) In fixing the hours of work, not only actual class-room teaching, but all other work a teacher has to do should be taken into consideration.

(5) A scheme should also be drawn up under which every teacher will get a concessional railway pass to any part of India once in five years on payment of a reasonable contribution related to this salary. 3.33

(6) New conduct and discipline rules suitable for the teaching profession should be framed for teachers in government service.

(7) The terms and conditions of service of teachers in private schools should be the same as for government schools. 3.34

(8) The provision of residential accommodation for teachers is extremely important. For this purpose, it is suggested that—

(a) Every effort should be made to increase residential accommodation for teachers in rural areas and State subsidies should be made available for the purpose.

(b) A programme of building construction and grant of adequate house rent allowance should be adopted in all big cities;

(c) Cooperative housing schemes for teachers should be encouraged and loans on favourable terms should be made available for construction of houses; and

(d) In universities and colleges, the target should be to provide residential accommodation to about 50 per cent of the teachers in the university and 20 per cent of them in affiliated colleges. 3.36

(9) Private tuitions should be discouraged and controlled. Special coaching for children who need it should be provided on an institutional basis.

(10) At the university stage, part-time consultancy or additional work, such as research, by teachers in higher education should be permitted; and no payment should be required to be made to the institution if the earnings do not exceed 50 per cent of the salary. 3.38

(11) Teachers should be free to exercise all civic rights and should be eligible for public office at the local, district, State or national levels. No legal restriction should be placed on their participation in elections, but when they do so they should be expected to proceed on leave. 3.39

**25. Women Teachers.** (1) The employment of women teachers should be encouraged at all stages and in all sectors of education. Opportunities for part-time employment should be provided for them on a large scale.

(2) Adequate provision should be made for residential accommodation particularly in rural areas.

(3) The condensed courses for adult women operated by the Central Social Welfare Board should be expanded.

(4) Increasing facilities should be provided for education through correspondence courses.

(5) Wherever necessary, special allowances should be given to women teachers working in rural areas. 3.40

26. **Teachers for Tribal Areas.** (1) Teachers for tribal areas should be given special allowances, assistance for the education of their children and residential accommodation. (2) Provision should be made for giving special training to teachers who are to work in tribal areas. 3.43

27. **Teachers' Organizations.** (1) Professional organizations of teachers which carry out work for the improvement of the profession and of education should be recognized by the Central and State Governments and consulted on matters relating to school education, general and professional education of teachers and their salaries and conditions of work.

(2) Joint Teachers' Councils should be constituted in each State and Union Territory to discuss all matters relating to teachers' salaries, conditions of work and service and welfare service. These should consist of representatives of teachers' organizations and officers of the State Education Department. Conventions should be developed to the effect that unanimous recommendations of the Council would be accepted by Government. In certain matters, there should be provision for arbitration if negotiations fail. 3.44

28. **National Awards.** The Ministry of Education should consider the following suggestions:

- the number of national awards should be increased;
- the selection committees should be strengthened; and
- travelling allowance given to the awardees should be similar to that sanctioned for Class I Officers of Government. 3.48

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#### CHAPTER IV. TEACHER EDUCATION

29. The professional preparation of teachers, being crucial for the qualitative improvement of education, should be treated as a key area in educational development and adequate financial provision should be made for it, both at the State and national levels.

4.01

30. **Removing the Isolation of Teacher Training.** In order to make the professional preparation of teachers effective, teacher education must be brought into the mainstream of the academic life of the universities on the one hand and of school life and educational developments on the other. 4.03

31. (1) To remove the existing isolation of teacher education from university life—  
(a) education, as distinguished from pedagogy, should be recognised as an independent academic discipline and introduced as an elective subject in courses for the first and second degrees; and

- (b) schools of education should be established in selected universities to develop programmes in teacher education and studies and research in education, in collaboration with other university disciplines. 4.04-05
- (2) To remove the existing isolation of teacher education from schools—
  - (a) extension work should be regarded as an essential function of a teacher training institution and an Extension Service Department should be established in each instituion—pre-primary, primary and secondary—as an integral part of it;
  - (b) effective allumni associations should be established to bring old students and faculty together to discuss and plan programmes and curricula;
  - (c) practice-teaching for teachers under training should be organized in active collaboration with selected schools which should receive recognition from the Education Department as cooperating schools and special grants for equipment and supervision; and
  - (d) periodic exchange of the staff of the cooperating schools and of the teacher training institutions should be arranged. 4.06-09

(3) An intensive effort should be made to remove the existing separation among the institutions preparing teachers for different stages of education or for special fields such as craft or art or physical education by—

- (a) implementing a phased programme of upgrading all training institutions to the collegiate standard with the ultimate objective of bringing all teacher education under the universities;
- (b) establishing comprehensive colleges of education in each State on a planned basis;
- (c) establishing a State Board of Teacher Education in each State to be responsible for all functions related to teacher education at all levels and in all fields. 4.10-12

**32. Improving Professional Education.** The essence of a programme of teacher education is 'quality' and in its absence, teacher education becomes, not only a financial waste but a source of over-all deterioration in educational standards. A programme of highest importance therefore is to improve the quality of teacher education. This can be done through—

- (1) organization of well-planned subject-orientation or content courses, in collaboration with university departments (or postgraduate colleges), leading to insight into basic concepts, objectives and implications of subjects to be taught; 4.14-17
- (2) introducing integrated courses of general and professional education in universities; 4.18-20

- (3) vitalising professional studies and basing them on Indian conditions through the development of educational research; 4.21-22
- (4) using improved methods of teaching which leave greater scope for self-study and discussion and improved methods of evaluation which include continuous internal assessment of practical and sessional work as well as practice-teaching; 4.23-24
- (5) improving practice-teaching and making it a comprehensive programme of internship; 4.25
- (6) developing special courses and programmes; and 4.26
- (7) revising the curricula and programmes at all levels of teacher education in the light of the fundamental objectives of preparing teachers for their varied responsibilities in an evolving system of education; 4.27-32

**33. Duration of Training Course.** The duration of the professional courses should be two years for primary teachers who have completed the secondary school course. It should be one year for the graduate students; but the number of working days in a year should be increased to 230. 4.15

34. The State Boards of Teacher Education should conduct a survey of teacher education programmes and curricula and initiate the necessary revision. 4.34

35. New professional courses must be developed to orientate headmasters, and teacher educators, to their special field of work. 4.26

36. The post graduate courses in education should be flexible and be planned to promote an academic and scientific study of education and to prepare personnel for specific fields requiring special knowledge and initiation. The duration of the courses should be increased to three terms. Quality is crucial at this stage and only institutions having properly qualified staff and facilities should be allowed to conduct them.

4.35-39

**37. Improving the Quality of Training Institutions.** Early steps should be taken to improve training institutions for teachers on the following lines.

(i) *Secondary Teachers.* (a) The staff of secondary training colleges should have a double Master's degree in an academic subject and in education. A fair proportion of them should hold Doctorate degrees. They should all have taken induction or orientation courses in teacher education.

(b) Qualified specialists in subjects like psychology, sociology, science or mathematics may be appointed on the staff even if they have not had professional training.

(c) Summer Institutes should be organized for the in-service training of staff.

(d) No student should be allowed to specialize in the teaching of a subject unless

he has studied it for his first degree or obtained an equivalent qualification prior to training.

(e) States and Union Territories should adopt a rule that teachers in secondary schools will ordinarily teach only those subjects which they had studied for a university degree. If they are required to teach subjects other than those they have studied, they should take a special course therein either by correspondence or in the Summer Institutes.

(f) Attempts should be made to recruit first and good second class students to teacher training institutions and adequate scholarships should be provided for them.

4.41-44

(2) *Primary Teachers.* (a) The staff in institutions for training primary teachers should hold a Master's degree either in Education or in an academic subject as well as B. Ed. and should have undergone special induction courses in teacher education at primary level.

(b) New appointments of primary teachers should be restricted to those who have completed at least ten years of general education; exceptions may be made for women teachers and teachers in tribal areas.

(c) Correspondence courses and liberal concessions for study leave should be made available to unqualified teachers in primary schools to improve their qualifications

(d) Special courses for graduates entering primary teaching should be organized.

(e) The duration of the training course for primary teachers should be uniformly two years for those who have completed the secondary school course. Teachers with different educational qualifications should not be put into the same course. 4.45-50

(3) *General.* It is necessary to introduce the following reforms in training institutions for primary as well as secondary teachers:

(a) All tuition fees in training institutions should be abolished and liberal provision made for stipends and loans.

(b) Every training institution should have an experimental or a demonstrating school attached to it.

(c) Adequate hostel facilities for trainees and residential accommodation for staff should be provided.

(d) Libraries, laboratories, work-shops, etc. are very inadequate at present in most institutions, especially at the primary level. These need to be improved. 4.51-53

(4) *Other Teachers.* Reforms on the above lines should be carried out in the training programmes for other categories of teachers. 4.40

**38. Expansion of Training Facilities.** The training facilities should be expanded on a priority basis. The objective should be to ensure that every teacher in a primary or



a secondary school is either already trained at the time of his appointment or receives such training within three years of his appointment. From this point of view:

(1) each State should prepare a plan for the expansion of training facilities in its area so that the output of trained teacher meets the demands for teachers as well as the needs for in-service education.

(2) part-time facilities and correspondence courses should be provided on a large scale and care should be taken to see that the standards in full-time institutions are not diluted.

(3) the backlog of untrained teachers should be cleared at an early date through measures of the type recommended in the Report.

(4) the size of the institutions should be fairly large and they should be located on a planned basis. 4.54

**39. In-Service Education of School Teachers.** (1) A large scale and coordinated programme of in-service education for teachers should be organized by universities, training institutions and teachers' organizations for teachers at all levels. The target should be that every teacher will receive at least two or three months in-service education in every five years of his service.

(2) The programme of summer institutes for the in-service training of secondary school teachers should be extended, with systematic follow-up and active collaboration among the agencies concerned. 4.55-57

**40. Professional Preparation of Teachers in Higher Education.** (1) Some orientation to professional education is necessary for junior lecturers in higher education and suitable arrangements should be made for the purpose.

(2) Newly appointed lecturers should be given some time to acclimatise themselves to the institution and should be encouraged to attend lectures of good teachers.

(3) Regular orientation courses for new staff should be organized in every university and where possible, in every college.

(4) In the bigger universities or groups of universities, these courses may be placed on a permanent basis by establishing a staff college. 4.58-62

**41. Standards in Teacher Education.** (1) At the national level, the UGC should take the responsibility for the maintenance of standards in teacher education. The State Boards of Teacher Education should be responsible for the raising of standards at the State level.

(2) A substantial allocation of funds should be made available to the UGC in the fourth five year plan for improvement in teacher education in the universities.

(3) The UGC should set up a joint standing committee for teacher education in collaboration with the NCERT. It should consist of competent persons from the profession and should be responsible for the maintenance of standards in teacher education.

(4) The Government of India should make provision of funds in the Centrally-sponsored sector to assist State Governments in developing teacher education which is now outside the universities. 4.63-66

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## CHAPTER V. ENROLMENTS AND MANPOWER

42. **A National Enrolment Policy.** During the next twenty years, the national enrolment policy should have the following broad objectives:

- to provide effective general education of not less than seven years' duration to every child, on a free and compulsory basis; and to expand lower secondary education on as large a scale as possible;
- to provide higher secondary and university education to those who are willing and qualified to receive such education, consistent with the demands for trained manpower and the need to maintain essential standards; and to provide adequate financial assistance to those who are economically handicapped;
- to emphasize the development of professional, technical and vocational education and to prepare skilled personnel needed for the development of agriculture and industry;
- to identify talent and to help it grow to its full potential;
- to liquidate mass illiteracy and to provide an adequate programme of adult and continuing education; and
- to strive continuously to equalize educational opportunities, beginning with the elimination of at least some of the more glaring inequalities. 5.02

43. **Raising the Educational Level of the Average Citizen.** High priority should be given to programmes of raising the educational level of the average citizen—

- (1) by providing five years of effective primary education to all children by 1975-76 and seven years of such education by 1985-86;
- (2) by making part-time education for one year compulsory for all children in the age-group 11-14 who have not completed the lower primary stage and are not attending schools. The aim will be to make these children functionally literate and stop all further additions to the ranks of adult illiterates; and
- (3) by developing programmes to liquidate adult illiteracy. 5.03

**44. Enrolment Policies in Secondary and Higher Education.** (1) The enrolment policies in post-primary education should be based on a combination of four criteria: public demand for secondary and higher education; full-development of the pool of natural ability; capacity of society to provide educational facilities at required levels of quality; and manpower requirements.

(2) The public demand for secondary and higher education has increased immensely in the first three plans and will continue to increase in future. It sets up a high target which is beyond the resources of the country in terms of men, money or materials. It is therefore necessary to adopt a policy of selective admissions to higher secondary and university education in order to bridge the gap between the public demand and available facilities.

(3) Providing secondary and higher education to all potentially able students also sets up a high target which even affluent societies find it difficult to achieve. It will be obviously beyond our reach, at least in the immediate future. While striving towards this goal, therefore, the immediate objective of the national enrolment policy should be to ensure that at least all the gifted students (5 to 15 per cent of all the students) who complete primary or secondary education are enabled to study further and that their financial handicaps are overcome through the institution of a liberal programme of scholarships.

(4) There are internal constraints in every educational system which limit expansion of facilities, especially in secondary and higher education, *viz.*, the availability of competent teachers, physical plant and finance. These constraints have often been set aside in the past to meet the pressures of public demand and standards have been diluted. This temptation will have to be resisted in the larger interests of the country.

(5) Estimated requirements of manpower needs or available job opportunities form a good basis for planning the expansion of educational facilities. This broad recommendation has to be understood in the light of three reservations:

- (a) a continuous effort should be made to improve the collection of necessary data and the techniques of forecasting and the estimates of manpower needs should be continuously revised and kept up-to-date;
- (b) the quality of manpower produced should be equally emphasized; and
- (c) the estimates of manpower needs should not be regarded as the only criterion—it should be suitably combined with other criteria in taking final decisions about expansion of educational facilities.

5.04-12

**45. A Strategy of Development.** The capacity of society to expand educational facilities in terms of real resources sets up minimum targets whereas the maximum targets are suggested by the public demand for secondary and higher education or the need to develop the available pool of native talent. The gap between these high and low targets can be bridged by considerations which emerge from the necessity to relate

the output of the educational system to manpower needs and to equalize educational opportunities. These will indicate the priorities to be adopted, the different courses of study to be developed, the extent to which facilities should be provided in the different courses, and the manner in which enrolments in them could be made to include, after equality of access is provided for all, at least the best students in the community. 5.13

46. **Future Requirements of Educated Manpower: The ISI/ISE Estimates.** We broadly accept the estimates of future requirements of educated manpower given in the ISI/LSE Paper. This will, however, have to be continually revised in the light of the best data available and kept up-to-date. The table given on page 95 (Table 5.3) shows the estimates of the required workers, stock and out-turn of educated persons during the next twenty years.

47. **Educational Implications of the Estimates.** The following are the main policy implications of these estimates:

- to restrict the unplanned and uncontrolled expansion of general secondary and higher education, if massive educated unemployment is to be avoided;
- to make special and intensive efforts to vocationalize secondary education and to develop professional education at the university stage; and
- to devise suitable machinery, both at the national and State levels, which will relate the estimates of manpower needs effectively to the output of the educational system so that, by and large, there is some assurance that a suitably trained person would be available for every job to be done and every educated person would find a job appropriate for his education and professional training. 5.26

48. **Enrolments.** The enrolments implied in these targets of out-turn, workers and stock have been discussed in the appropriate context in the different sections of this Report. 5.40

49. **Machinery for Manpower Planning.** The first two of these have been discussed in their appropriate context in later chapters. With regard to the third, the following recommendations are made.

(1) At the *national* level, the Planning Commission, which is responsible for preparing estimates of manpower requirements in all sectors of national development, should set up a Standing Committee for Manpower. Its main responsibility should be to prepare and revise, from time to time, manpower forecasts for the overall output of the educational system as well as for different categories of specialists.

(2) At the *State* level, it may be desirable to set up State Committees on Manpower on the broad lines of the Standing Committee for Manpower at the Centre and having similar functions and responsibilities.

50. **Relating Manpower Estimates to Output of Educational Institutions.** The following measures will have to be taken to relate the output of the educational system to manpower needs:

(1) *National Level.* Planning at the national level should be done by the Centre in consultation with the States and should cover all sectors crucial for national development, where the mobility of trained personnel is or should be high, where it is very costly to set up institutions for training personnel or where the very high level staff required for such institutions is in short supply. These should include engineering, agricultural and medical education, and the preparation of teachers for higher education.

(2) *State Level.* The planning of the remaining sectors should be done at the State level by State Governments. The planning of facilities in secondary and higher education (excluding the sectors for which planning would be done at the Central level) should be done at the State level.

(3) The provision of vocational education—both of school and college standard—will have to be expanded in all areas on a priority basis in keeping with manpower needs.

(4) For enrolments in general education, however, which is under-developed in some areas and over-developed in others, a policy of equalization will have to be adopted. Decisions will have to be made by each State in view of its conditions; but as a general basis, the following may be suggested:

- (a) In all areas where the level of expansion reached is below the national average in 1966, steps should be taken to promote expansion;
- (b) In all areas where the level of expansion reached is about equal to the national average expected in 1986, a restrictive policy should be adopted, unless there are special reasons to the contrary;
- (c) It will be for the Government of India to suggest the targets to be reached from time to time, at the State level. State Governments may, in their turn indicate suitable targets at the district level;
- (d) The planning of higher education should be done on a State-basis. All universities in the State should be involved in this. Each university should be required to prepare a five-year plan of the facilities to be provided in all its teaching departments and affiliated colleges and the output there from and these should be approved after bringing them into accord with manpower needs. In granting affiliations or expanding their departments, the universities should be required to follow these plans.
- (e) It is also essential to have an authority at the district level which can plan all school education. This authority will plan in the light of general

directives given from the Centre and the State. In order to assist in its work, local studies of manpower needs, etc., will have to be carried out. 5.43-48

51. **Education and Employment.** We should move in the direction of giving every graduate an offer of employment along with his degree or diploma. From this point of view, the system of one year internship now prescribed for medical graduates should be extended to other categories of graduates. 5.49

52. **A Wider Perspective.** The basic problem of human resource development can be solved only against a wider perspective. From this point of view, it is necessary to formulate and implement integrated plans which will have three objectives: (1) to reduce the birth-rate by about half; (2) to bring about an expansion of employment; and (3) to provide such education as will qualify young people for specific jobs. Such integrated plans are needed at the national, State and district levels. 5.50-51

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## CHAPTER VI. TOWARDS EQUALIZATION OF EDUCATIONAL OPPORTUNITIES

53. **Fees in Education.** The country should work towards a stage when all education would be tuition free. From this point of view:

(1) tuition fees at the primary stage should be abolished in all government, local authority and aided private schools as early as possible and preferably before the end of the fourth plan.

(2) lower secondary education should be made tuition free in all government, local authority or aided private institutions as early as possible and preferably before the end of the fifth plan. If necessary, a phased programme may be drawn up for the purpose.

(3) for the next ten years, the main effort with regard to fees in higher secondary and university education should be to extend provision of tuition free education to all needy and deserving students. As a first step, the proportion of free studentships should be increased to 30 per cent of the enrolment. 6.08-15

54. **Other Private Costs.** Other private costs in education have increased greatly in recent years and not necessarily for educational reasons. Efforts are needed to reduce them to the minimum.

(1) Free textbooks and writing materials should be provided at the primary stage. Children freshly joining schools should be welcomed at a school function and presented

with a set of books. Others should be presented with a complete set of books for the next year as soon as the results of the annual examinations are declared and before the long vacation starts so that they can use the vacations for further study.

(2) A programme of book-banks should be developed in secondary schools and institutions of higher education. The State Education Departments should have a fund at their disposal from which they can encourage the establishment of book-banks in secondary schools and a similar fund should be placed at the disposal of the UGC for organizing them in the universities and affiliated colleges.

(3) The libraries of secondary schools and institutions of higher education should contain an adequate number of sets of textbooks so that the students can have easy access to them.

(4) Grants for the purchase of books, which need not necessarily be textbooks, should be made to talented students—the top 10 per cent—in educational institutions. The scheme should begin in the universities and later on be extended to affiliated colleges and secondary schools.

55. **Scholarships.** The programme of scholarships has received considerable emphasis in recent years, but it needs reorganization on the following lines:

(1) The scholarships programme is a continuous process and has to be organized at all stages of education. At present, the programme is weak and needs to be strengthened at the school stage.

(2) It is necessary to evolve a more equitable and egalitarian basis for the award of scholarships.

(3) A scholarships programme will yield better results if it is accompanied by a programme to maintain an adequate number of quality institutions at every stage and in every sector and an attempt is made to place the talented students in these institutions.

(4) A careful watch should be kept at all points of transfer from one stage or sub-stage of education to another to ensure that all the abler students continue their studies further.

(5) An adequate machinery should be created for administering this combined programme of scholarships, placement and maintenance of quality institutions. 6.18

56. The following programme of scholarships is proposed at the different stages of education:

- (1) *Primary Stage.* Steps should be taken to ensure that, at the end of the lower primary stage, no promising child is prevented from continuing his studies further and to this end, a scholarship of an adequate amount will have to be provided to every child that may need it. It has been assumed that the target should be to provide scholarships for 2.5 per cent

of the enrolment at the higher primary stage by 1975-76 and to 5 per cent of the same enrolment by 1985-86. 6.19

- (2) *Secondary Stage.* Steps should be taken to ensure that the top 15 per cent of the children in the age-group do get scholarships from higher primary to the secondary stage. To this end, the necessary financial assistance should be provided to about 10 per cent of the top students in Class VII or VIII in each higher primary school. At least one good secondary school, with adequate residential facilities, should be developed in each community development block and admission to such institutions should be regulated on the basis of merit. 6.20-23
- (3) In every school, there should be a programme for the identification of talented students who should be provided with special enrichment programmes to suit their needs and to help in their growth.
- (4) *University Stage.* At the university stage the target for the provision for scholarships should be as follows:
  - (a) Scholarships should be available to at least 15 per cent of the enrolment at the undergraduate stage by 1976 and to 25 per cent of such enrolment by 1986; and
  - (b) scholarships should be available to at least 25 per cent of the enrolment at the postgraduate stage by 1976 and to 50 per cent of such enrolment by 1986.
- (5) There should be two kinds of scholarships:
  - (a) for those who have to stay in hostels; these should cover all the direct and indirect costs of education, such as tuition fees, books, supplies, etc.; and
  - (b) for those who can stay at home and attend schools or colleges: These should mainly cover direct and indirect costs.

At the lower stages, the scholarships of the second type would be most needed. As one goes up the educational ladder, the proportion of scholarships of the first type would have to be increased.

- (6) Steps should be taken to study the indirect costs of education and living costs and to reduce them to the minimum. In particular, it is necessary to cut down hostel expenses by reducing the number of servants, etc.
- (7) The amount of scholarships should be regulated in such a manner as to cover all costs. 6.24-26

57. **National Scholarships.** (1) The scheme of national scholarships should be expanded. The target to be reached should be to cover the top 5 per cent of the students



who pass out of the examinations by 1975-76 and 10 per cent of such students by 1985-86. The administration of the scheme should be still further simplified and decentralized. In particular, the power to issue entitlement cards should be delegated to the authorities holding the examinations at which these scholarships have been instituted.

(2) With a view to introducing a greater egalitarian element in the award of these scholarships, it is suggested that 50 per cent of these scholarships should be awarded, as at present, on the State basis. The remaining 50 per cent should be awarded on the 'school-cluster' basis in which a group of schools with similar socio-economic background of students are grouped into a cluster and the top students from each cluster are awarded the scholarships. 6.27

58. **University Scholarships.** To supplement the above, a scheme of university scholarships should be instituted and implemented through the UGC. The target to be reached should be to cover 10 per cent of the enrolment at the undergraduate stage and 20 per cent of the enrolment at the post-graduate stage by 1976.

59. A Standing Committee on Postgraduate and Research Scholarships should be set up at the national level in the Ministry of Education. It should consist of the representatives of the Ministries which award scholarships at the postgraduate stage and its main function would be to coordinate the different scholarship programmes. 6.28-30

60. **Scholarships in Vocational Education.** With regard to scholarships in vocational education, the following reforms are necessary:

(1) It is necessary to make a more intensive effort to introduce an egalitarian element in admissions.

(2) The admission examinations to IITs should be held in English and also in regional languages and the best students from each linguistic group should be selected, if necessary, on the basis of quota related to population. If some of these students are not quite up to the standard in English, this deficiency should be overcome by giving an intensive training in English to the selected students in their first year at the institute.

(3) At the school stage, about 30 per cent of the students should be given scholarships; and this proportion should be increased to 50 per cent at the collegiate stage. 6.31-33

61. **Scholarships for Study Abroad.** There should be a national programme for the award of scholarships to the highly talented students for study abroad. About 500 scholarships should be awarded each year. 6.34

62. **Loan Scholarships.** It is necessary to institute a programme of loan scholarships to supplement the outright grant scholarships described above. It should be

organized on the following lines:

(1) The programme would be a supplement to that of outright scholarships which should be provided on the scale we have suggested.

(2) It would be essentially meant for students in the sciences and the professional courses where the chances of employment and levels of earning are comparatively better and are more likely to make the scheme successful. There should be no upper limit to the number of such loan scholarships in this sector and an attempt should be made to provide financial assistance to every needy student. To a limited extent and in deserving cases, the programme should be extended to cover arts students also.

(3) If a person who holds a loan scholarship joins the teaching profession, one-tenth of the loan should be written off for each year of service. This will encourage good students to join this profession.

(4) For convenient administration of the loan scholarships programme, a National Loan Scholarships Board may be set up as recommended in the Report.

**63. Other Forms of Student Aid.** Some other forms of student aid need development.

(1) Transport facilities should be provided imaginatively to reduce the cost on hostels and scholarships, *e.g.*, we have seen schools in rural areas which provide bicycles to students who come from a distance.

(2) Day-Study Centres and lodging houses (*i.e.*, places where the students can stay throughout the day and even at night but can go home for food) should be provided on a liberal scale.

(3) Facilities for students to earn and pay a part of their educational expenses should be developed. 6.35-37

**64. General.** (1) In all programmes of scholarships, preferential consideration should be given to the needs of girls.

(2) The Government of India should assume the bulk of the responsibility for providing scholarships in higher education. At the school stage, this responsibility should vest in the State Governments. To develop a good programme of scholarships at the school stage, however, the funds needed for it should be provided in the Centrally sponsored sector in the next two plans. The State Governments may be able to develop the programme on their own thereafter. 6.39-41

**65. Handicapped Children.** The progress in providing educational facilities to handicapped children will be limited by two main considerations: lack of teachers and financial resources. A reasonable target will, however, be to provide, by 1986, education for about 15 per cent of the blind, deaf and orthopaedically handicapped

children and to about 5 per cent of the mental retarded ones. This will mean the provision of educational facilities for about 10 per cent of the total number of handicapped children. As a part of this programme, it should be possible to have at least one good institution, for the education of the handicapped children in each district.

66. In the educationally advanced countries, a great deal of stress is now being laid on the integration of the handicapped children into regular school programmes. We feel that experimentation with integrated programmes is urgently required in our country and that every attempt should be made to bring in as many children into the integrated programmes as possible.

67. In addition, it will be desirable to develop services on a pilot basis for some other categories of children who have peculiar educational needs, viz., the partially-sighted, the speech-handicapped, the aphasic, the brain injured and the mentally disturbed.

68. To develop the above programmes for the education of the handicapped children on proper lines, it will be necessary to emphasize the training of teachers, the coordination of the efforts of the different agencies working in the field and to promote adequate research into the problem. 6.42-49

69. **Regional Imbalances.** There are wide differences in the educational development in the different States. These become wider still at the district level. A reduction of these differences to the minimum is desirable and the programme for this will have to be pursued side by side with the wider programmes for reducing the imbalances in the socio-economic development of the different States and districts in the country. The solution of this complex problem will, however, be facilitated if action is taken on the following lines:

(1) A total elimination of these differences in educational development is neither possible nor desirable. What is needed, however, is a balancing factor, a deliberate and sustained effort to assist the less advanced areas to come up to at least certain minimum levels so that the gap between them and the advanced areas will be reduced.

(2) The district should be adopted as the basic unit for educational planning and development.

(3) At the State level, there should be a deliberate policy of equalization of educational development in the different districts and the necessary administrative and financial measures to this end should be taken.

(4) At the national level, it should be regarded as the responsibility of the Government of India to secure equalization of educational development in the different States. The necessary programmes for this, including special assistance to the less advanced States, should be developed. 6.50-52

**70. Education of Women.** We fully endorse the recommendations of the three committees which have examined the problem of women's education in recent years: (a) The National Committee on the Education of Women under the chairmanship of Shrimati Durgabai Deshmukh; (b) The Committee on Differentiation of Curricula between Boys and Girls under the chairmanship of Shrimati Hansa Mehta; and (c) The Committee under the chairmanship of Shri M. Bhaktavatsalam which studied the problem in the six States where the education of girls is less developed.

71. We invite special attention to the following recommendations of the National Committee on Women's Education:

(1) The education of women should be regarded as a major programme in education for some years to come and a bold and determined effort should be made to face the difficulties involved and to close the existing gap between the education of men and women in as short a time as possible;

(2) Special schemes should be prepared for this purpose and the funds required for them should be provided on a priority basis; and

(3) Both at the Centre and in the States, there should be a special machinery to look after the education of girls and women. It should bring together officials and non-officials in the planning and implementation of programmes for women's education:

72. In addition, it will be also necessary to give adequate attention to the education of girls at all stages and in all sectors.

73. The role of women outside the home has become an important feature of the social and economic life of the country and, in the years to come, this will become still more significant. From this point of view, greater attention will have to be paid to the problems of training and employment of women. Opportunities for part-time employment which would enable women to look after their homes and to have a career outside will have to be largely expanded. As the age of marriage continues to rise, full-time employment will have to be provided for almost all young and married women. As the programme of family planning develops, older women whose children have grown up, will also need employment opportunities. Teaching, nursing and social service are well-recognized areas where women can have a useful role to play. In addition, several new avenues will have to be opened out to them. 6.53-58

**74. Education of the Backward Classes.** (1) The existing programme for the education of the scheduled castes should continue and be expanded.

(2) Greater efforts are needed to provide educational facilities for the nomadic and semi-nomadic groups.

(3) Hostels should be provided for the children of the denotified communities.

**75. Education of the Tribal People.** The education of the tribal people deserves great emphasis and attention. We broadly agree with the recommendations made in this respect by the Commission on Scheduled Areas and Scheduled Tribes under the chairmanship of Shri U.N. Dhebar and in the seminars on the Education and Employment of the tribal people organized by the Planning Commission and the NCERT. We invite special attention to the following programmes in this context.

(1) At the primary stage, the provision of facilities will have to be improved and Ashram schools will have to be established in sparsely populated areas. The teachers should be invariably conversant with tribal languages. The medium of education for the first two years of the school should be the tribal language; and during this period, the children should be given oral instruction in the regional language. By the third year, the regional language should become the medium of education. The programmes of the schools should be attuned to tribal life and atmosphere.

(2) At the secondary stage, provision of schools, hostel facilities and scholarships has to be greatly expanded.

(3) In higher education, the administration of the scholarships programme will have to be decentralized and made more efficient.

(4) Provision for special tuition will have to be made both at the secondary and university stages.

(5) It is essential to develop cadres of persons who will devote themselves to the service of the tribal people. In the early stages, these cadres will consist mostly of non-tribals but an effort has to be made to develop such cadres among the tribals themselves. From this point of view.

- (a) non-official organizations working in the tribal areas should be encouraged.
- (b) special sub-cadres should be formed among the official ranks with the object of selecting persons for work in the tribal areas. The emoluments for these sub-cadres should be good enough to attract the best persons available.
- (c) promising young persons from the tribals should be selected and specially trained to work in tribal areas. The usual prescriptions regarding recruitment or minimum qualifications will often have to be set aside in this programme.

6.59-75

## CHAPTER VII. SCHOOL EDUCATION : PROBLEMS OF EXPANSION

76. The entire pre-university period of education should be treated as one single and continuous unit. It may be subdivided into sub-standards such as pre-primary, lower and higher primary, and lower and higher secondary. But it has to be noted that the similarities between the problems of the different sub-stages are more significant than the differences. 7.01

77. **Pre-primary Education.** Pre-primary education is of great significance to the physical, emotional and intellectual development of children, especially those with unsatisfactory home backgrounds. An enrolment of five per cent of the population in the age-group 3 to 5 in the pre-primary schools proper and of 50 per cent in the age-group 5-6 in pre-school classes will be a reasonable target to be attained by 1986.

78. Pre-primary education should be developed on the following lines during the next twenty years:

(1) State-level development centres for pre-primary education should be set up in each State Institute of Education; in addition, a district level centre should be set up in each district for the development, supervision and guidance of pre-primary education in the area.

(2) Private enterprise should be made largely responsible for setting up and running pre-primary centres, the State assisting with grants-in-aid on the basis of equalization.

(3) Experimentation in pre-primary education should be encouraged especially to devise less costly methods of expanding it. This may be done on the Madras pattern. In the alternative, children's play centres should be attached to as many primary schools as possible and should function as pre-school classes.

(4) The State should maintain State and District level play centres, train pre-primary teachers, look after research and preparation of literature on pre-primary education, supervise and guide pre-primary schools and training institutions, assist private agencies with grants-in-aid and run model pre-primary schools.

(5) The programme of pre-primary schools should be flexible and consist of various types of play, manual and learning activities accompanied by sensorial education. 7.03-07

79. **Expansion of Primary Education.** The objective of primary education should be to prepare individuals to be responsible and useful citizens.

The constitutional directive of providing free and compulsory education for every child up to the age of 14 years is an educational objective of the highest priority and should be fulfilled in all parts of the country through the development of the following

programmes:

(1) Five years of good and effective education should be provided to all children by 1975-76.

(2) Seven years of such education should be provided by 1985-86.

(3) Emphasis should be laid on the reduction of wastage and stagnation. The objective should be to ensure that not less than 80 per cent of the children that enter Class I reach Class VII in a period of seven years.

(4) Children who are not yet fourteen years old at the end of Class VII and who do not wish to study further should be retained in the educational system till they complete 14 years of age but should be provided with short vocational courses of their choice.

(5) Each State and district should be required to prepare a perspective plan for the development of primary education in its area in the light of the targets stated above and its local conditions. It should be given full assistance to move forward at its best pace; and care should be taken to see that its progress is not held up for want of financial resources. 7.08-11

80. **Universal Provision of Schools.** The expansion of primary schools should be so planned that a lower primary school is available within a distance of about a mile from the home of every child. A higher primary school should be available within one to three miles from the home of every child. 7.13

81. **Universal Enrolment.** A programme of universal enrolment should be organized simultaneously with emphasis on the following:

(1) The present heterogeneity of cohort in Class I should be reduced and the bulk of the students in this class should consist of children in the age-group 5-6 or 6-7;

(2) A system of pre-registration should be introduced;

(3) The transfer rate of students from the end of the lower primary stage to the higher primary (which is now about 80 per cent) should be raised to 100 per cent by the end of the fifth plan. 7.15-18

82. **Universality of Retention.** The most important programme to be implemented during the next ten years is to improve the quality of primary education and to reduce stagnation and wastage to the minimum. The target should be to reduce stagnation and wastage by about half by 1976 and to almost eliminate them by 1986.

(1) Stagnation and wastage are very high in Class I and their reduction should be a major programme. Of the various measures to be adopted for the purpose, three are very important:

(a) treating Classes I and II (and wherever possible even Classes I—IV) as one integrated unit;

(b) introducing a year of pre-school education; and

(c) adopting play-way techniques in Class I.

(2) Stagnation and wastage in other classes should be reduced by providing various forms of part-time education, by implementing a nation-wide programme of school improvement, and by an intensive programme of parental education.

(3) All children in the age-group 11-14 not attending schools and who have not completed the primary stage of education and become functionally literate, should be required to attend literacy classes for a period of at least one year. The classes should be organized in primary schools and in a flexible manner to suit the convenience of the pupils. They should begin on a voluntary basis; but compulsion may be tried when the local community has become familiar with the concept.

(4) Similar facilities for part-time education should be provided for children who have completed the lower primary stage and who desire to study further. (Their magnitude may be 10 per cent of the total enrolment in 1975-76 and 20 per cent in 1985-86). The curriculum may follow the general education pattern or contain a large vocational element as required by local needs. 7.19-35

**83. Education of Girls — Primary Stage.** The education of girls requires special attention in fulfilling the constitutional directive and should be accelerated on the lines of the measures recommended by the National Committee on Women's Education. 7.38

**84. Improvement of Quality.** Expansion of facilities at the primary stage and programmes of universal enrolment and retention should be accompanied by qualitative improvement. 7.42

**85. Expansion of Secondary Education.** (1) Enrolments in secondary education should be regulated during the next 20 years by (a) proper planning of the location of secondary schools, (b) maintaining adequate standards and to that end, by determining the enrolment in terms of facilities available, and (c) selecting the best students.

(2) A development plan for secondary education should be prepared for each district and implemented in a period of ten years. All new institutions should satisfy essential standards, and existing institutions should be raised to the minimum level.

(3) The best students should be selected for admission into secondary schools, through a process of self-selection at the lower secondary stage, and on the basis of external examination results and school records at the higher secondary stage. 7.43-46

**86. Vocationalizing Secondary Education.** (1) Secondary education should be vocationalized in a large measure and enrolments in vocational courses raised to 20 per cent of total enrolment at the lower secondary stage and 50 per cent of total enrolment at the higher secondary stage by 1986.



(2) A variety of part-time and full-time facilities in vocational education should be available at both these stages to meet the needs of boys and girls, in urban and rural areas. Special sections should be set up in the Education Departments to help young people who drop out after Class VII or VIII to obtain training on a full-time or part-time basis, and to be in overall charge of the organization of these courses.

(3) The Central Government should provide special grants to State Governments in the centrally sponsored sector for the vocationalization of secondary education.

7.47-49

87. **Part-time Education.** Facilities for part-time education should be provided on a large scale at the lower and higher secondary stages, in general and vocational courses. A desirable target would be 20 per cent of the total enrolment, at the lower secondary stage and 25 per cent at the higher secondary stage. Special emphasis will have to be placed on agricultural courses for those who have taken to farming as a vocation and on courses in home science or household industries for girls. 7.50-51

✓ 88. **Education of Girls — Secondary Stage.** (1) Efforts should be made to accelerate the expansion of girls education so that the proportion of girls to boys reaches 1:2 at the lower secondary stage and 1:3 at the higher secondary stage in 20 years.

✓ (2) Emphasis should be placed on establishing separate schools for girls, provision of hostels and scholarships, and part-time and vocational courses. 7.52-53

89. **Planning and Location of Schools.** (1) A national policy for the location of new institutions of each category should be adopted so as to avoid waste and duplication. The second education survey should be used for the careful planning of the location of educational institutions.

✓ (2) Public opinion should be educated to accept mixed schools at the primary stage and the sharing of bigger and efficient schools in common. Villages should be grouped so as to make the economic provision of primary schools possible.

(3) At the secondary stage, the establishment of small and uneconomic institutions should be avoided, and existing uneconomic schools should be consolidated.

(4) Vocational schools should be located near the industry concerned.

7.55-63

## CHAPTER VIII. SCHOOL CURRICULUM

90. In recent years, the explosion of knowledge and the reformulation of many concepts in science have highlighted the inadequacy of existing school programmes and brought about a mounting pressure for a radical reform of school curriculum. A unified approach should be taken to the framing of the entire school curriculum, a new definition of the content of general education and a new approach to the place of specialisation. 8.01-82

91. **Essentials of Curricular Improvement.** (1) School curricula should be up graded through research in curriculum development undertaken by University Departments of Education, training colleges, State Institutes of Education and Boards of School Education; (b) periodical revision based on such research; (c) the preparation of textbooks and teaching-learning materials; and (d) the orientation of teachers to the revised curricula through in-service education.

(2) Schools should be given the freedom to devise and experiment with new curricula suited to their needs. A lead should be given in the matter by training colleges and universities through their experimental schools.

(3) Ordinary and advanced curricula should be prepared by State Boards of School Education in all subjects and introduced in a phased manner in schools which fulfil certain conditions of staff and facilities.

(4) The formation of Subject Teachers' Associations in the different school subjects will help to stimulate experimentation and in the upgrading of curricula. The State Education Departments, State Institutes of Education and NCERT should help the associations in their educational activities and coordinate their work. 8.03-09

92. **Organization of the Curriculum.** (1) In non-vocational schools, a common curriculum of general education should be provided for the first ten years of school education, and diversification of studies and specialisation should begin only at the higher secondary stage.

(2) Standards of attainment should be clearly defined at the end of each sub-stage.

(3) At the lower primary stage, the curriculum should be simple with reduced load of formal subjects and emphasis on language, elementary mathematics and environmental studies. A study of problems relating to beginning reading accompanied by a vigorous programme of improving reading instruction at the lower primary stage should receive great emphasis.

(4) At the higher primary stage, the curriculum will broaden and deepen, teaching methods will become more systematic, and standards of attainment more specific.

(5) At the lower secondary stage, study of subjects will gain in rigour and depth.

(6) At the higher secondary stage, courses will be diversified in such a manner as to enable pupils to study a group of any three subjects in depth with considerable freedom and elasticity in the grouping of subjects. In order to ensure the balanced development of the adolescent's total personality, the curriculum at this stage should provide half the time to the electives, one-fourth of the time to the languages, and one-fourth to physical education, arts and crafts, and moral and spiritual education.

(7) At the higher primary stage, enrichment programmes should be provided for the talented children. It may take the form of additional subject or greater depth in the same subject.

(8) At the secondary stage, courses should be provided at two levels—ordinary and advanced—beginning with Class VIII. The programme may be done within or out side school hours or on a self-study basis. A beginning may be made with advanced courses in mathematics, science and languages at the lower secondary stage and in all the specialised subjects at the higher secondary stage. 8.10-29

93. **Study of Languages.** (1) The language study at the school stage needs review and a new policy regarding language study at the school stage requires to be formulated.

(2) The modification of the language formula should be guided by the following guiding principles:

- (a) Hindi as the official language of the Union enjoys an importance next only to that of the mothertongue;
- (b) A working knowledge of English will continue to be an asset to students;
- (c) The proficiency gained in a language depends as much upon the types of teachers and facilities as upon the length of time in which it is learnt;
- (d) The most suitable stage for learning three languages in the lower secondary (Classes VIII-X);
- (e) The introduction of two additional languages should be staggered;
- (f) Hindi or English should be introduced at a point when there is greatest motivation and need;
- (g) At no stage should the learning of four languages be made compulsory.

(3) The three language formula modified on these principles should include (a) the mother-tongue or the regional language; (b) the official language of the Union or the associate official language of the Union so long as it exists; and (c) a modern Indian or European language not covered under (a) and (b) and other than that used as the medium of education.

(4) At the lower primary stage the pupil will ordinarily study only one language—the mother-tongue or the regional language. At the higher primary stage, he will study

two languages — the mother-tongue (or the regional language) and the official language of the Union (or the associate language). At the lower secondary stage, he will study three languages, the mother-tongue (or the regional language); the official or associate official language; and a modern Indian language, it being obligatory to study the official or the associate official language which he had not studied at the higher primary stage. At the higher secondary stage, only two languages will be compulsory.

(5) The study of important modern library languages other than English should be made possible in selected schools in each State with option to study them in lieu of English or Hindi. Similarly, in non-Hindi areas, the study of modern Indian languages should be made possible in selected schools with a similar option to study them in lieu of English or Hindi.

(6) The study of English and Hindi will be indicated in terms of hours of study and level of attainment. Two levels of attainment should be prescribed in the official and associate official languages—one for three-year and one for a six-year study.

(7) The study of a language should not be compulsory in higher education.

(8) A nation-wide programme should be organized for the promotion of the study of Hindi on a voluntary basis but the study of the language should not be forced on unwilling sections of the people.

(9) The burden of studying languages is made heavier by the great differences in script. Some literature in every modern Indian language should be produced in Devanagari and Roman scripts. All modern Indian languages should adopt the international numerals.

(10) The teaching of English should ordinarily not begin earlier than Class V after adequate command has been acquired over the mother-tongue. The introduction of the study of English earlier than Class V is educationally unsound.

(11) The study of classical Indian languages such as Sanskrit or Arabic should be encouraged on an optional basis from Class VIII and should be positively emphasized in all universities. Advanced Centres of Study may be set up in selected universities in these languages. No new Sanskrit University should be established. 8.30-49

**94. Science and Mathematics Education.** Science and mathematics should be taught on a compulsory basis to all pupils as a part of general education during the first ten years of schooling.

(1) *The Study of Science.* In the lower primary classes science teaching should be related to the child's environment. The Roman alphabet should be taught in Class IV to facilitate understanding of internationally accepted symbols of scientific measurement and the use of maps, charts and statistical tables.

(2) At the higher primary stage emphasis should be on the acquisition of knowledge and the ability to think logically, to draw conclusion and to make decisions at

a higher level. A disciplinary approach to the teaching of science will be more effective than the general science approach.

(3) A science corner in lower primary schools and laboratory-cum-lecture room in higher primary schools are minimum essential requirements.

(4) At the lower secondary stage, science should be developed as a discipline of the mind. The newer concepts of physics, chemistry and biology and the experimental approach to the learning of science should be stressed.

(5) Science courses at an advanced level may be provided for talented students in selected lower secondary schools with necessary facilities of staff and laboratory.

(6) Science teaching should be linked to agriculture in rural areas and to technology in urban areas. But the levels of attainment and avenues to higher education should be the same in both types of schools.

(7) *The Study of Mathematics.* (a) Special attention should be given to the study of mathematics in view of the importance of qualification and the advent of automation and cybernetics.

(8) The mathematics curriculum needs to be modernized and brought up-to-date at all stages with emphasis on laws and principles of mathematics and logical thinking.

(9) *Methods of Teaching Science and Mathematics.* Methods of teaching mathematics and science should be modernized, stressing the investigatory approach and the understanding of basic principles. Guide materials should be made available to help teachers adopt this approach. Laboratory work will need considerable improvement. There should be flexibility in the curriculum in order to cater to the special needs of the gifted. 8.50-66

95. **Social Studies and Social Sciences.** (1) An effective programme of social studies is essential for the development of good citizenship and emotional integration.

(2) The syllabus should stress the idea of national unity and the unity of man.

(3) The scientific spirit and method of the social sciences should permeate the teaching of social studies at all stages. 8.67-71

96. **Work-Experience.** (1) Work-experience should be forward-looking in keeping with the character of the new social order. It will take the form of simple hand-work in the lower primary classes, and of craft in the upper primary classes. At the lower secondary stage, it will be in the form of workshop training, and at the higher secondary stage, work-experience will be provided in the school workshop, farm or commercial and industrial establishments.

(2) Where school workshops cannot be provided, suitable kits of tools and materials should be made available at low cost.

(3) The training of teachers, provision of workshops, mobilization of local resources, preparation of literature and the phased introduction of the programme are essential to the success of the scheme. 8.72-78

97. **Social Service.** (1) Programmes of social service and participation in community development should be organized at all levels as suited to the different age-groups, in a phased manner.

(2) Labour and social service camps should be run throughout the year; and for this purpose, a special organization set up in each district. These camps will facilitate the organization of social service programmes in schools. Such programmes may be started as a pilot project in 5 per cent of the districts and extended gradually to the others. 8.79-87

98. **Physical Education.** Physical education is important for the physical fitness and efficiency, mental alertness and the development of certain qualities of character. The programme of physical education, as it is in force today, needs to be re-examined and redesigned in the light of certain basic principles of child growth and development. 8.88-93

99. **Education in Moral and Spiritual Values.** (1) Organized attempt should be made for imparting moral education and inculcating spiritual values in schools through direct and indirect methods with the help of the ethical teachings of great religions.

(2) One or two periods a week should be set aside in the school time-table for instruction in moral and spiritual values. The treatment of the subject should be comprehensive and not divorced from the rest of the curriculum. 8.94-98

100. **Creative Activities.** (1) The Government of India should appoint a committee of experts to survey the present situation of *art education* and explore all possibilities for its extension and systematic development.

(2) Bal Bhawans should be set up in all parts of the country with substantial support from the local community.

(3) Art departments should be set up in selected university centres to carry out research in art education.

(4) A variety of co-curricular activities should be organized to provide pupils opportunity for creative self-expression 8.99-101

101. **Differentiation of Curricula for Boys and Girls.** The recommendations of the Hansa Mehta Committee that there should be no differentiation of curricula on the basis of sex is endorsed. Home science should be provided as an optional subject but not made compulsory for girls. Larger provision should be made for music and fine arts; and the study of mathematics and science should be encouraged. 8.102-104

102. **The New Curriculum and Basic Education.** The essential principles of basic education, namely, productive activity, correlation of curriculum with productive activity and the environment, and contact with local community, are so important that they should guide and shape the educational system at all levels, and this is the essence of the proposals made in this report. No single stage of education need be designated as basic education. 8.105-109

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## CHAPTER IX. TEACHING METHODS, GUIDANCE AND EVALUATION

103. **Teaching Methods : Discovery and Diffusion.** The continual deepening of the curricula should be accompanied by an equally vigorous improvement in the method of teaching and evaluation. The main factors responsible for the dull and uninspiring school teaching today are the rigidity of the educational system and the failure of the administrative machinery to diffuse new educational practices to schools. These weaknesses should be overcome. 9.02-03

(1) *Elasticity and Dynamism.* A good educational system should be dynamic, flexible and discriminating enough to help institutions and teachers to proceed along different levels of development—the good schools be free to go ahead on creative and experimental lines while the weaker ones should be supported to gain a sense of security.

(2) Such elasticity and dynamism are possible if the experimenting teacher is supported by the administrative authority, a general atmosphere of reform, the encouragement of the head of the institution, a mastery of subject-matter, leadership provided by training institutions, and the availability of teaching materials.

(3) Elasticity in a school system will have little value if new practices developed are not diffused to schools and teachers given skilled help in trying out innovations. The educational administration can encourage and hasten the diffusion of new teaching methods by:

- combining permissiveness with persuasion;
- approaching the new methods in stages according to the ability of schools;
- giving necessary in-service training to teachers;
- providing adequate guide materials which should be constantly revised and improved.

At the same time the administrator has to guard himself against letting any 'progressive' measure settling down into another orthodoxy. 9.04-12

**104. Textbooks, Teachers' Guides and Materials.** (1) Provision of quality textbooks and other teaching-learning materials is a key programme for raising standards at comparatively low cost.

(2) A comprehensive programme of text book production at the national level should be implemented by mobilising the best talent in the country on the lines already being attempted by NCERT. Such books will facilitate the definition and practical indication of expected standards. They will also help in national integration.

(3) The Ministry of Education should take steps to establish in the public sector, an autonomous organization, functioning on commercial lines for the production of textbooks at the national level, especially scientific and technical books. A small committee may be set up to work out the details of the project.

(4) The effort at the national level should be supported and augmented by each State setting up an expert section for the production of textbooks.

(5) The preparation, try-out and evaluation of textbooks should be the responsibility of the State Education Departments. The production aspect of the textbooks may preferably be done by the State Education Departments, wherever possible, through their own textbook presses. The sale and distribution of textbooks are better left to the student cooperatives and not be assumed directly by the Departments.

(6) The production of textbooks and teaching aids at the State level should preferably be entrusted to an autonomous agency functioning in close liaison with the Education Department.

(7) The machinery set up should be such that the textbooks are subjected to continuous revision and improvement.

(8) At least 3 or 4 books should be provided in each subject to provide a multiple choice of books for the schools.

(9) Liberal policies should be adopted for remunerating authors.

(10) The entire organization of state production of textbooks should be run on a no-profit-no-loss basis.

(11) Manuscripts should be invited from a variety of sources including teachers, and a high-level committee of professional persons should select and approve manuscripts.

(12) Teachers' guides and other instructional material should supplement textbooks.

(13) Lists of minimum teaching aids and equipment needed by each category of schools should be prepared and steps taken to provide the equipment to every school on a high priority basis.

(14) Education Departments should work with the All-India Radio for the use of radio lessons, supplemented by printed guide materials for teachers and pupils.



Broadcasting of special radio talks specially designed for teachers in the mornings and evenings will help teachers in lesson preparation. Sophisticated forms of newer techniques would not be suitable at present in the general run of schools but may be tried out experimentally in teacher training institutions.

(15) Teachers should be helped and trained to rely on inexpensive and locally available or improvised teaching aids. Costly equipment should be shared by schools in a neighbourhood. 9.13-25

105. **Class Size.** (1) Classes of somewhat larger size than what is strictly considered as desirable cannot be avoided in our country for a long time. However, it is necessary to restrict the number of pupils admitted to each class to a maximum of 50 in the lower primary, 45 in the higher primary and lower secondary, and 40 in higher secondary classes. 9.26-31

(2) *Multiple-class Teaching.* Research should be undertaken in the problems and techniques of multiple-class teaching. Training institutions should orient teachers to these techniques. 9.32

106. **School Buildings.** (1) In view of the present unsatisfactory position regarding school buildings, it is necessary to take steps to clear the backlog of unconstructed school buildings as well as to provide additional buildings for new enrolment. 9.33

(2) Allocations for construction of school buildings should be increased in the Central and State budgets, and community resources mobilised on the basis of equalization. Loans and grants-in-aid should be given on a liberal basis to private schools for the construction of buildings. 9.34

(3) *Reduction of Costs.* The norms and guidance already available for spacing and planning of school buildings should be put into practice.

(4) In view of the shortage of traditional building material and the cost involved, well-designed and constructed *kacha* structures should be accepted as part of the school system. 9.35

(5) *Buildings in Rural Areas.* In rural areas, efforts should be made to encourage local initiative and contribution in putting up school buildings. The 'nucleus' approach suggested by the Ministry of Education is recommended for general adoption. 9.37

(6) *Buildings in Urban Areas.* Economy in these buildings should be effected by using locally available materials, omission of certain finishes, and acceptance of a lower standard of construction. Temporary structures may be used wherever possible, and improved techniques of construction may be adopted in putting up *pucca* buildings. 9.39

(7) *Expeditious Construction.* In order to accelerate provision of school buildings, construction in rural areas may be entrusted to local communities or village panchayats, and in urban areas, municipalities and corporations may be utilized for the purpose.

(8) In order to supervise and guide the programme of construction of school buildings and introduce improved techniques, an Educational Building Development Group should be set up in each State within the Public Works Department and working in close association with the Education Department. These groups will standardise details of construction in the region so as to make possible the mass production of the components on a factory scale. A similar Building Development Group should be set up at the Centre to coordinate the work of the State groups.

(9) To avoid delays in the construction of government buildings, a separate unit of the PWD should be set up for the execution of education building programmes. At a later stage an Education Building Consortia may be set up to exploit the advantages of industrialized buildings.

(10) The economy measures worked out by the Educational Building Development Group should be made known to private institutions and grants-in-aid given on the basis of upper cost limits. 9.40

**107. Guidance and Counselling.** Guidance and counselling should be regarded as an integral part of education, meant for all students and aimed at assisting the individual to make decisions and adjustments from time to time. 9.43

(1) *Guidance at the Primary Stage.* Guidance should begin from the lowest class in the primary school and in view of the large numbers of schools involved, the programme may be introduced through simple measures such as (1) familiarising teachers under training with diagnostic testing and the problem of individual differences; (2) organizing in-service courses for primary teachers; (3) producing occupational literature; and (4) helping pupils and parents in choice of further education. 9.44-45

(2) *Guidance at the Secondary Stage.* Guidance at the secondary stage should, among other things, help in the identification and development of the abilities and interests of adolescent pupils. The ultimate objective should be to introduce adequate guidance services in *all* secondary schools with a trained counsellor in charge of the programme. But in view of the limited financial and personnel resources, a short-range programme should be adopted for the next 20 years consisting of—

- (1) a minimum guidance programme for all secondary schools through a visiting school counsellor for a group of ten schools, assisted by the school teachers in the simpler guidance functions;
- (2) comprehensive guidance programme in selected schools, one in each district, to serve as models; and
- (3) provision of necessary supervisory staff in the State Bureaus of Guidance.

(3) All secondary school teachers should be introduced to guidance concepts through pre or in-service training. The training colleges should be suitably staffed for the purpose. 9.46-50

(4) *General.* Arrangements should be made for the professional training of guidance workers by the State Bureaus of Guidance and training colleges. Advanced training should be organized at the national level.

(5) Ancillary programmes should include the production of guidance literature and materials and research into problems of guidance in the Indian situation. 9.51

108. **Search for the Development of Talent.** (1) The search for talent must be a continuous process, pursued at all stages, but the secondary stage is the most crucial.

(2) In addition to programmes of enrichment and advanced curricula, a variety of extra-mural programmes should be organized for the talented such as summer schools, visits to places of educational interest and provision of hostels and day-centres for those whose home environment is not conducive to study.

(3) Teachers should be oriented to the special techniques of dealing with the talented children, especially to the need for providing an atmosphere for free expression and creative work. 9.52-57

109. **The Backward Child.** Neglect of backward children leads to wastage of educational facilities and human resources and it is necessary for a developing country to reduce this wastage to the minimum. In particular, attention has to be given to the under-achievers who represent a loss of potential manpower often of high ability. Steps should therefore, be taken to diagnose the causes of under-achievement and to formulate and implement remedial programmes within the school system, with the help of interested teachers and child guidance clinics, where available, and parent-teacher associations. 9.58-64

110. **Evaluation.** Evaluation is a continuous process, forms an integral part of the total system of education and is intimately related to educational objectives. It exercises a great influence on the pupil's study habits and the teacher's methods of instruction and thus helps not only to measure educational achievement but also to improve it.

(1) The new approach to evaluation will attempt to improve the written examination so that it becomes a valid and reliable measure of educational achievement and to devise techniques for measuring those important aspects of the student's growth that cannot be measured by written examinations. 9.65-68

(2) *Evaluation at the Lower Primary Stage.* Evaluation at this stage should help pupils to improve their achievement in the basic skills and development of right habits and attitudes.

(3) It would be desirable to treat Classes I to IV as an ungraded unit to enable children to advance at their own pace. Where this is not feasible, Classes I and II may be treated as one block divided into two groups—one for slow and the other for fast learners. Teachers should be appropriately trained for the ungraded system. 9.69-70

(4) *Evaluation at the Higher Primary Stage.* In addition to written examinations, weightage should be given at this stage to oral tests as a part of internal assessment. Diagnostic testing should be through simple teacher-made tests. Cumulative record cards are important in indicating pupils' growth and development but should be very simple and should be introduced in a phased manner. 9.71

(5) *External Examination at the End of the Primary Stage.* Although the first national standard of attainment is to be set at the end of the primary stage, it is not considered necessary or desirable to prescribe a rigid and uniform level of attainment through a compulsory external examination. However, for the proper maintenance of standards, periodic surveys of the level of achievement of primary schools should be conducted by district school authorities through refined tests prepared by State Evaluation Organizations. 9.72-73

(6) *A Common External Examination for Inter-School Comparability.* The district educational authority may arrange for a common examination at the end of the primary stage for schools in the district, using standardised and refined tests. This examination will have greater validity and reliability than the school examination and will provide inter-school comparability of levels of performance.

(7) The certificate at the end of the primary course should be given by the school and should be accompanied by the cumulative record card and the statement of results of the common examination, if any.

(8) In addition to the common examinations, special tests may be held at the end of the primary course for the award of scholarships or certificates of merit and for the purpose of identifying talent. 9.74-76

(9) *Improvement in External Examinations.* External examinations should be improved by raising the technical competence of paper-setters, orienting question papers to objectives other than to acquisition of knowledge, improving the nature of questions, adopting scientific procedures, and mechanising the scoring of scripts and the processing of results. 9.77-79

(10) *Certificate given by the Board and School.* The certificate issued by the State Board of School Education on the basis of the results of the external examination should give the candidate's performance in different subjects for which he has appeared and there should be no remark to the effect that he has passed or failed in the whole examination. The candidate should be permitted to appear again, if he so desires, for the entire examination or for separate subjects in order to improve his performance.

(11) The student should receive a certificate also from the school, giving the record of his internal assessment as contained in his cumulative record card and this should be attached to that given by the Board. 9.80-81

(12) *Establishment of Experimental Schools.* A few selected schools should be given the right of assessing their students themselves and holding their own final

examination at the end of Class X, which will be regarded as equivalent to the external examination of the State Board of School Education. The State Board of School Education will issue the certificates to the successful candidates of these schools on the recommendation of the schools. A committee set up by the State Board of School Education should develop carefully worked out criteria for the selection of such schools. The schools should be permitted to frame their own curricula, prescribe their own textbooks, and conduct their educational activities without external restrictions. 9.82-83

(13) *Methods of Internal Assessment.* Internal assessment by schools should be comprehensive and evaluate all aspects of student growth including those not measured by the external examination. It should be descriptive as well as quantified. Written examinations conducted by schools should be improved and teachers trained appropriately. The internal assessment should be shown separately from the external examination marks. 9.84-86

(14) *Higher Secondary Examination.* During the transition period, higher secondary students will have to appear for two successive external examinations—at the end of Classes X and XI, within one year. Where however the courses in Classes IX to XI are integrated, the examination at the end of Class X need not be insisted upon. 9.87-89

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## CHAPTER X. SCHOOL EDUCATION: ADMINISTRATION AND SUPERVISION

111. A sympathetic and imaginative system of supervision and administration is essential for initiating and accelerating educational reform. 10.01

112. **The Common School System of Public Education.** The Common System of Public Education would include all government schools, all local authority schools and all aided private schools. Only two types of schools will remain outside it—independent schools and unrecognized schools.

- (1) The objective of educational policy should be to evolve, over the next 20 years, a common school system of public education which would cover all parts of the country, provide equality of access to all children and will maintain such a standard that an average parent will not feel the need to send his child to an independent or unrecognized school.
- (2) The following steps will have to be taken to create the common school system of public education:
  - (a) The existing discrimination between teachers working under different managements should be done away with.

- (b) Tuition fees should be abolished in a phased programme—at the primary stage by the end of the fourth plan and at the lower secondary stage by the end of the fifth plan.
- (c) The existing discrimination between schools under different managements should be reduced to the minimum and all schools should be provided with the minimum essential conditions necessary for good education.
- (d) The neighbourhood school plan should be adopted at the lower primary stage so as to eliminate the segregation between schools for the privileged and schools for the underprivileged. 10.02-06

(3) *Government and Local Authority Schools.* Government and local authority schools do not generally maintain requisite standards because teachers in these schools develop little institutional loyalty and the contact with the local community is either negligible or absent. These weaknesses should be overcome by the following measures:

- (a) A school committee with local representation should look after the management of every government and local authority school or a group of schools in an area. Each committee will operate its own school fund for the provision of services in schools.
- (b) Rational policies of transfers should be formulated so that teachers are not changed too often.
- (c) Greater freedom should be given to these schools. 10.07-08

(4) *Private Schools.* It is the responsibility of government to see that private aided institutions are satisfactorily managed through adequate support. Those that are not so managed should be taken over or eliminated.

(5) A discriminating policy needs to be adopted in respect of assistance and control of private aided institutions. The better schools should be given more freedom and assistance so as to enable them to develop into the nucleus of the common school system.

(6) With the abolition of tuition fees, most private schools will come within the common school system and should be assisted to strengthen their management in the following ways:

- (a) Each private school should have a managing committee consisting of representatives of the management, the Education Department and teachers.
- (b) The staffing of these schools should be broadly on the pattern of government or local authority schools.
- (c) Grant-in-aid should be improved on the basis indicated in the Report.

(7) It should be an invariable rule that educational institutions must be conducted by non-profit-making bodies in order to be eligible for assistance.

(8) Grant-in-aid codes should be amended to authorize the State Education Departments to take over the management of private schools which do not satisfy requirements and which have persistently failed to come up to prescribed standards.

10.08-17

(9) *Good Quality Private Schools.* Good private schools which abolish tuition fees under the common school system should be helped to maintain existing standards and grant-in-aid should be adjusted on the basis of the quality schools as recommended in the Report and not on the basis of the level of the ordinary schools.

10.18

(10) *The Neighbourhood School.* The present social segregation in schools should be eliminated by the adoption of the neighbourhood school concept at the lower primary stage under which all children in the neighbourhood will be required to attend the school in the locality. This plan should be implemented in a period of 20 years as follows:

(a) During the first ten years, all primary schools should be improved to the minimum level and about 10 per cent of schools should be raised to a higher standard.

(b) Simultaneously the neighbourhood school system should be introduced at the lower primary stage as a pilot project in areas where public opinion is in favour of it.

10.19-20

(11) To encourage children to study in the common school system, scholarships at the school stage given by government and local authorities should be tenable only in a school functioning within the common school system of public education. Similarly, ninety per cent of the scholarships awarded from public funds at the university stage should be open only to those students who have received their secondary education in schools functioning within the common school system

10.21

**113. A Nation-Wide Programme of School Improvement.** In view of the great need to improve standards of education at the school stage, a nation-wide programme of school improvement should be developed in which conditions will be created for each school to strive continually to achieve the best results of which it is capable. From this point of view, the following steps should be taken:

(1) Each institution should be treated as a unit by itself and helped to grow at its own individual pace. For this purpose, it should prepare its own developmental programme of optimum utilization and growth.

(2) The emphasis on these plans should be on motivating human agencies to make their best effort for the improvement of education rather than on increasing physical resources. Physical facilities should be improved through the cooperation of the local community.

(3) The success of the programme will depend upon the degree to which the effort is sustained over a period of time.

(4) Evaluative criteria for schools should be worked out by each State and may be used by schools for self-evaluation and by inspecting officers for their annual and triennial inspections. On the basis of these criteria, the schools should be classified on a three-point scale, norms being defined at optimum and minimum levels.

(5) During the next ten years, at least 10 per cent of the schools at the primary stage and one secondary school in each block should be raised to the optimum level. At the lower primary stage, access to these schools will be for the children in the neighbourhood. At the higher primary and secondary stages, admission will be on the basis of merit. 10.24-32

**114. Supervision: Reorganization of the State Department.** (1) The State Education Department will be the principal agency to deal with educational matters and will therefore be responsible for:

- the development and implementation of a programme of school improvement;
- the prescription and enforcement of standards;
- the training and supply of teachers;
- inspection and supervision;
- the establishment and maintenance of a State Evaluation Organization;
- the maintenance of quality institutions and provision of extension services;
- the establishment and maintenance of a State Institute of Education; and
- the coordination and eventual assumption of responsibility for vocational and technical education at the school stage. 10.33

(2) In view of the importance of strengthening the departmental organization at the district level—

- (a) the District Education Officer should be given adequate status by including the post in the proposed Indian Educational Service;
- (b) adequate authority should be delegated to the district level;
- (c) scales of pay and qualifications of inspectorial staff at the district level should be upgraded;
- (d) the strength of the district staff should be increased with the addition of 'specialists' and a statistical cell; and
- (e) A fair proportion of the district staff should consist of women officers in order to encourage girls' education. 10.34-37

(3) Headmasters should be selected carefully and specially trained. They should be vested with necessary authority and freedom, 10.38



115. **Role of the School Complex in the New Supervision.** (1) The District Education Officer will be in touch with each school complex and as far as possible, deal with it as a unit. The complex itself will perform certain delegated tasks and deal with the individual schools within it. Adequate powers and responsibilities should be delegated to the complex so that better methods of teaching and evaluation are made possible, facilities are shared, in-service training programmes are facilitated and new programmes are tried out.

(2) The scheme should be first introduced in a few selected districts in each State as a pilot project before being implemented on a large scale.

(3) The school complex should not only encourage experimentation *en bloc* but also foster individual experimentation within the unit. 10.39-43

116. **The New Supervision.** Supervision being in a sense the backbone of educational improvement, it is imperative that the system of supervision should be revitalized.

(1) Administration should be separated from supervision, the District School Board dealing with the former and the district Education Officer with the latter. But the two should function in close collaboration.

(2) Recognition should not be a matter of course but should be continuously earned by every school, irrespective of its management.

(3) Every school should have two types of inspections: an annual one by the officers of the District School Board for primary schools and by officers of the State Education Departments for the secondary schools; and a triennial or quinquennial inspection organized by the District Education Officer for the primary schools and by the State Boards of School Education for the secondary schools.

(4) The provision of guidance and extension services to schools is one of the major responsibilities of the new supervision.

(5) In-service training should be provided for all supervisory and administrative officers by State Institutes of Education and the National Staff College for Educational Administrators. 10.44-49

117. **State Institutes of Education.** An academic wing will have to be developed in the State Institutes of Education to look after the in-service training of departmental officers, improvement of teacher education, curricula and textbooks, guidance and evaluation, and research and evaluation of programmes. 10.50-53

118. **State and National Boards of Education.** In order to secure continuous improvement in standards, an adequate machinery should be set up at the State and national levels.

(1) Standards should be defined at the end of the higher primary and lower secondary stages and later on, at the end of the higher secondary stage also when it covers a period of two years.

(2) All these standards should be prescribed by the State Government in the light of local conditions: the State Evaluation Organization and the State Boards of School Education will assist in defining, measuring and periodically revising these standards.

(3) The National Board of School Education will coordinate standards at the national level and help States to raise them continuously.

(4) The national standard will only indicate the minimum below which no State should fall. These minima should be kept rising from time to time. 10.54-58

**119. State Evaluation Organization.** To assist the State Education Department in this programme of prescribing, maintaining and revising standards, a State Evaluation Organization should be set up in each State, as an independent institution, preferably autonomous, and its services should be available to all concerned.

(2) The State Evaluation Organization will assist the District Education Officers in improving evaluation practices in schools, will advise the State Education Departments on curricula geared to expected standards, preparation of textbooks and other materials and measure accomplished standards from time to time.

(3) An advisory Committee presided over by the Chairman of State Board of School Education will assist the State Evaluation Organization. 10.59-63

**120. State Boards of School Education.** In each State, a State Board of School Education should be established and it should take over the functioning and the responsibilities of the existing Boards of Secondary Education and allied agencies. The Board should be established by law and should have large powers and freedom to enable it to function and discharge its responsibilities satisfactorily. This would be greatly facilitated if its finances are pooled together in a separate fund managed and maintained by the Board. The Board should function as an integral part of the Department.

(1) The Board will be in charge of the entire school stage in respect of curricula. Recognition of primary schools will be given by the District Education Officer and of secondary schools by both the Department and the State Board of School Education.

(2) In addition to conducting the external examination at the end of the lower secondary stage, the Board will also conduct examinations in general education at the end of the higher secondary stage.

(3) In the long run, it would be desirable to bring all school education—general and vocational—within the scope of a single organization like the State Board of School Education. But this step may not be immediately practicable. Therefore, separate

organizations may be set up, for the time being, for different vocational courses at the State level. There should, however, be a close coordination between these bodies and the State Board of School Education and there should be overlapping membership to some extent.

(4) A special committee of the Board should be established to look after the higher secondary stage. Half of its members should represent the schools and the other half, the universities.

(5) The time taken for the declaration of examination results should be minimised by (1) mechanising the procedures, and (2) setting up sub-Boards to cover one or more districts in order to handle smaller numbers of candidates. 10.64-69

**121. Role of the Centre.** (1) A National Board of School Education should be established in the Ministry of Education to advise the Government of India on all matters relating to school education. It will define expected standards at different stages of education, revise these standards from time to time, evaluate standards attained in different parts of the country, and advise and assist State Education Departments in curricular reform and in improving standards. It will maintain close collaboration with the UGC and the universities.

(2) A large programme should be developed in the centrally sponsored sector for the development of school education, particularly in respect of the establishment of vocational institutions, developing quality institutions and provision of scholarships.

(3) The Central Board of Secondary Education should conduct some high standard examinations in individual school subjects at two levels—Classes X and XII—in consultation with the National Board of School Education. Curricula for these examinations should be prescribed in relation to the national standards. A beginning may be made with mathematics and science subjects. It should be open to the student of any recognized secondary school in the country to appear at these examinations and he should be awarded a certificate about his performance therein, separately for each subject. Such examinations would help in raising standards. 10.70-76

**122. Unrecognized Schools.** It may be desirable to introduce legislation for the compulsory registration of all educational institutions and it should be made an offence to conduct an unregistered institution. Power should also be vested in the State Government to remove any educational institution from the register if stipulated conditions are not fulfilled. 10.80

## CHAPTER XI. HIGHER EDUCATION : OBJECTIVES AND IMPROVEMENT

123. **Objectives of Universities.** In broad terms, the functions of the universities in the modern world may be said to be the following:

- to seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth, and to interpret old knowledge and beliefs in the light of new needs and discoveries;
- to provide the right kind of leadership in all walks of life, to identify gifted youth and help them develop their potential to the full by cultivating physical fitness, developing the powers of the mind and cultivating right interests, attitudes and moral and intellectual values;
- to provide society with competent men and women trained in agriculture, arts, medicine, science and technology and various other professions, who will also be cultivated individuals, imbued with a sense of social purpose;
- to strive to promote equality and social justice and to reduce social and cultural differences through diffusion of education; and
- to foster in the teachers and students, and through them in society generally the attitudes and values needed for development and society.

124. In addition to these broad functions which they share in common with all universities, Indian universities will have to shoulder some special responsibilities in the present state of our social and educational development. For instance,

- they must learn to serve as the conscience of the nation; and from this point of view, they should encourage individuality, variety and dissent, within a climate of tolerance;
- they should develop programmes of adult education in a big way and to that end, evolve a widespread net-work of part-time and correspondence courses;
- they should assist the schools in their attempts at qualitative self-improvement;
- they should shake off the heavy load of their early tradition which gives a prominent place to examinations and strive to improve standards all-round by a symbiotic development of teaching and research; and
- they should create at least a few centres which would be comparable to those of their type in any other part of the world and thus help to bring back the 'centre of gravity' of Indian academic life within the country itself.

11.04-10

125. If these objectives are to be realised, we need a well-conceived and comprehensive plan for the development of higher education, spread over the next twenty years, which will include, among other things, the following three programmes of high priority:

- A radical improvement in the quality and standards of higher education and research;
- Expansion of higher education to meet the manpower needs of national development and, to some extent, the rising social ambitions and expectations of the people; and
- Improvement of university organization and administration. 11.11

126. **Major Universities.** The most important reform in higher education is the development of some 'major universities' where first-class postgraduate work and research would be possible and whose standards would be comparable to the best institutions of their type in any part of the world. The UGC should select, as soon as possible, from amongst the existing universities, about six universities (including one of the IITs and one Agricultural University) for development as major universities. The programme should begin in 1966-67.

127. A major university should have a 'critical mass' of students and teachers of outstanding capacity and promise. From this point of view,

(1) each major university should be assigned a number of scholarships for the undergraduate stage which will provide it with enough talented students for its post-graduate classes. Of these scholarships, about half should be from outside the area of the university.

(2) each department or faculty of a major university should have a specially appointed personnel advisory committee, which should work in close collaboration with the appointing authorities of the university. The search for staff, instead of being limited to the State or the region, should be made nation-wide and, in a sense, world-wide. Where necessary, the selected candidates should be offered advance increments. What is even more important, they should be assured of research opportunities, opportunities for study leave and the possibility to achieve professional excellence. There should be room for flexibility in the appointments and promotions. The UGC should place at the disposal of each university a contingency fund which may be used to provide more attractive salaries to persons of exceptional promise and performance.

128. It is necessary to establish 'clusters' of advanced centres in the major universities. They will add strength to, and enrich one another and be specially helpful in promoting inter-disciplinary research. About fifty such centres should be established, including some in modern Indian languages over the next five to ten years. At least one

of them should concentrate on developing an inter-disciplinary approach to education. Other important areas to be covered are agriculture, engineering and medicine.

129. (1) The administration of a centre, subject to the overall supervision of the university's Executive Council, should be the responsibility of its director assisted by a small but representative committee of his colleagues.

(2) The original selection of a university department as a centre should be made on the basis of the quality and extent of work already done by it, its reputation for good teaching, its contribution to research and its potentiality for further development. The process of selection should be so devised that it will win the confidence of the universities and the academic community generally.

(3) The privilege of being a centre of advanced study should be continually earned and deserved. Each centre of advanced study should have, say, once in three to five years, a visiting committee, consisting of outstanding Indian and, where possible and necessary, foreign experts who will conduct a review and appraisal of the accomplishments of the centre.

(4) The centres within a university should function in close collaboration with other centres and departments which are not centres of advanced study and measures should be adopted to involve the entire staff of the university in functioning as an intellectually effective community.

(5) The major universities should constantly strive to enlarge the area of their excellence. For this purpose, they might be given a grant in proportion to the number of centres they already possess, to be used for the purpose of raising other departments within the university to their level.

(6) Centres for advanced study should seek to bring the relevant teachers of their affiliated colleges into closer contact with their work.

130. The recurring and capital costs of the major universities should be met by the UGC. 11.17—35

131. **Improvement of Other Universities.** The major universities should be utilized to provide teachers of quality to the other universities and to the affiliated colleges. From this point of view,

(1) every effort should be made to induce talented students from the major universities to join the teaching profession and to place a majority of them in universities and colleges, other than their own, so that they can help to raise standards.

(2) the UGC should sponsor a scheme for instituting a number of fellowships at three levels—lecturers, readers and professors. Outstanding persons, who may otherwise be lost to the profession, should be granted these fellowships and seconded to work in suitable departments of universities, care being taken to see that they are appointed against permanent posts as early as possible.

(3) The universities and affiliated colleges should be encouraged, so far as possible, to pre-select their new teachers and attach them to the major universities for a specified period.

(4) Strong inter-university links should be formed among members of centres of advanced study, members of aspirant centres, leading university departments and outstanding affiliated colleges, in particular fields of research.

(5) Invitations may be given to promising scholars and scientists from other universities or affiliated colleges to do research and to conduct seminars (say for a term or a session) at one of the centres of advanced study.

(6) The other universities should be helped, through concentration of resources, to develop excellence in selected departments and ultimately to raise them to the level of Centres of Advanced Studies. 11.36-39

**132. Development of Affiliated Colleges.** There are several colleges of long-standing which have done and are doing as good work as any good university and it should be an objective of educational policy to encourage them. The following steps may be taken to assist in this process:

(1) Affiliated colleges should be classified in terms of the level of their performance and assistance should be related to such classification.

(2) Where there is an outstanding college (or a small cluster of very good colleges) within a large university which has shown the capacity to improve itself markedly, consideration should be given to granting it an 'autonomous' status. This would involve the power to frame its own rules of admissions, to prescribe its courses of study, to conduct examinations and so on. The parent university's role will be one of general supervision and the actual conferment of the degree. The provision of the recognition of such autonomous colleges should be made in the constitution of the universities. It should be possible, by the end of the fourth five year plan, to bring at least fifty of the best colleges under this category. 11.40-41

**133. Improvement of Teaching and Evaluation.** (1) The number of formal classroom and laboratory hours should be somewhat reduced. The time thus saved should be devoted, under the guidance of instructors, to independent study, assigned reading, writing of essays solving of problems and small research projects in which the student seeks out and learns to use independently the books and documents he needs.

(2) Every effort should be made to build up good libraries in universities and colleges.

(3) It is most important to emphasize original thinking in the study of all subjects and to discourage memorizing.

(4) There should be a possibility of undergraduates coming into occasional contact with senior and outstanding teachers, particularly when a new subject has to be introduced for the first time.

(5) The content and quality of lectures in general needs to be considerably improved. One way of characterizing the level of class work is that every one hour of instruction should receive about 3-4 hours of study-time to digest the lectures.

(6) It may be laid down as a rule that no teacher should be away from his institution during 'term time' for more than seven days in a year.

(7) All new appointments should be made during the period of vacation so that teachers join their new posts at the beginning of the academic year. Further, unless there be compelling reasons, no teacher should be permitted to leave an institution to take up another appointment during term time.

(8) There is great need for experimentation, especially in two important areas. One such area concerns the manner of handling larger numbers of students without a proportionate increase in educational expenditure or the number of faculty members. Another desirable experiment would be to have a certain amount of teaching done by research students and by selected post-graduate students after their first year.

(9) The problem of teaching methods in higher education has been relatively neglected. It should be examined by the UGC through a special committee appointed for the purpose. The schools of education should make a special study of the teaching methods, not only at the school stage, but also in the universities and affiliated colleges.

(10) In all teaching universities, external examinations should be replaced by a system of internal and continuous evaluation by the teachers themselves.

(11) In universities with affiliated colleges, a system of internal assessment should supplement the external examination.

(12) The University Grants Commission should set up a Central Examination Reform Unit to work in collaboration with the universities. Special units for examination reform should also be set up in some universities who can be persuaded to organize examination reform in a big way.

(13) University teachers should be reoriented to adopt the new and improved techniques of evaluation through a large programme of seminars, discussions or workshops.

(14) Early measures should be taken to abolish payment of remuneration to examiners. As a first step, the total number of scripts to be examined by any teacher during a year should not exceed 500.

11.42-57

**134. Medium of Education.** (1) The regional languages should be adopted as media of education at the university stage in phased programme spread over ten years.



(2) At the earlier stage of the undergraduate course, the bulk of the instruction may be given through the regional language while at the postgraduate stage, it may be in English.

(3) In due course, all teachers in higher education should, as far as possible, be bilingual and postgraduate students should be able to follow lectures and use reading materials in the regional language as well as in English.

(4) The maintenance of colleges teaching through the medium of Hindi in the non-Hindi areas or of Urdu in any part of the country where there is a reasonable number of Urdu-speaking students, should be permitted and encouraged.

(5) Centres of advanced study should be established for the development of all modern Indian languages including Urdu.

(6) The classical and modern Indian languages should be provided as elective subjects, no language being made compulsory subject of study at the university stage.

(7) Adequate facilities should be provided in universities and colleges for the study of English. Special units for teaching English should be established in universities to give a good working knowledge of it to new entrants by the adoption of modern techniques. It would also be an advantage to teach some English as part of the elective subject course in the first year of the degree course.

(8) The teaching of important library languages other than English should be stressed, in particular the study of Russian, on a larger scale. 11.58-61

**135. Student Services.** Student services are not merely a welfare activity but constitute an integral part of education. These should include orientation for new students, health services, residential facilities, guidance and counselling including vocational placement, student activities and financial aid.

(1) All institutions of higher education should organize orientation programmes for new students in the beginning of the academic year to facilitate adjustment. Each student should be assigned to an academic adviser who would assist him in planning and organizing his programme and studies. Every member of the teaching faculty should be expected to serve as an academic adviser to a group of students.

(2) Steps should be taken to organize, on a high priority basis, adequate health services in universities and colleges. Adequate provision should also be made for health education of students. The UGC may explore the possibility of organizing health services for university teachers and students on the lines of the Contributory Health Services of the Government of India.

(3) Hostel accommodation should be provided, as soon as possible, for about 25 per cent and 50 per cent of the enrolment at the undergraduate and postgraduate stages respectively.

(4) Day-study Centres, with subsidized or low-cost cafeterias, should be provided for about 25 per cent of the non-resident students.

(5) There should be at least one counsellor for every thousand students. A project for the training counsellors should also be organized in some university. A combined information and employment centre should function directly under the supervision of the dean of students in each university.

(6) It is necessary to develop a rich and varied programme of co-curricular activities for students not only during term-time but also during vacations.

(7) There should be a full-time dean of student welfare for the administration of welfare services. 11.62-72

136. **Student Unions.** (1) Each university should decide how its student union will function, as experimentation in this matter is welcome.

(2) Membership of the student union should be automatic, but every student should be expected to choose at least one activity organized in the union.

(3) The office-bearers should be elected indirectly by the different student societies in the university, those who spend two or more years in the same class being disqualified for the purpose.

(4) Joint Committees of teachers and student should be established and fully utilized to ascertain and redress the genuine difficulties of students.

(5) The UGC should take initiative in convening and financially supporting an annual conference of representatives of the student unions in universities and colleges. 11.73-76

137. **Student Discipline.** (1) Education should enable young men and women to learn and practise civilized forms of behaviour and to commit themselves to special values of significance.

(2) The responsibility for indiscipline taking place is multi-lateral and no effective solution is possible unless each agency—students, parents, teachers, State Governments and political parties—does its own duty.

(3) Earnest efforts should be made to remove the educational deficiencies that contribute to student unrest and set up an adequate consultative and administrative machinery to prevent the occurrence of acts of indiscipline.

(4) The incentives to positive discipline have to come from opportunities that the institution presents to the intellectual and social demands it makes on the students. A better standard of student services is also necessary.

(5) The whole university life should be treated as one and polarization between teachers, students and administration should be avoided. 11.77-80

## CHAPTER XII. HIGHER EDUCATION : ENROLMENT AND PROGRAMMES

138. **Expansion of Facilities.** The expansion of facilities in higher education should be planned broadly in relation to manpower needs and employment opportunities. On the basis of the present trends, it appears that the enrolments in undergraduate and postgraduate courses will have to be increased from about 1 million in 1965-66 to 4 million in 1985-86. Facilities in professional courses such as agriculture, engineering or medicine and those at the postgraduate stage will have to be specially expanded. 12.02-09

139. **Selective Admission.** Since the demand for higher education will be much larger than the provision that can be made for it or is needed on the basis of manpower needs, a system of selective admissions will have to be adopted. Three measures would have to be adopted from this point of view:

- the determination of the number of places available in an institution in relation to teachers and facilities available to ensure that standards are maintained at an adequate level;
- prescription of eligibility by the universities; and
- selection by the institution concerned of the best students from amongst those who are eligible and seek admission.

(1) While the use of examination marks as a major basis for admissions may continue until better selection methods are devised, their arbitrariness or lack of reliability should be compensated, to the extent possible, by making due allowance for the socio-economic handicaps of students so as to relate selection more directly to innate talent. The final selection should also take into consideration such factors as the school record and the proficiency of the student in fields not tested in the examination. This is especially important in border-line cases. In exceptional cases, the universities should have the right and courage to suspend the rules and give admissions to students whose talent has been identified but who may not have been able to fulfil the entrance requirements. The procedure proposed for selecting students on the basis of 'school clusters' for the award of scholarships may also be adopted for making admission to quality institutions.

(2) Each university should constitute a Board of University Admissions to advise the university about all matters relating to admissions.

(3) The University Grants Commission should set up a Central Testing Organization for the development of appropriate selection procedures for different courses of higher education. 12.10-20

140. **Part-time Education.** Opportunities for part-time education (correspondence courses, evening colleges) should be extended widely and should include

courses in science and technology. By 1986, about a third of the total enrolment in higher education could be provided through a system of correspondence courses and evening colleges. 12.21-22

141. **College Size.** The general policy should be to encourage the establishment of bigger institutions which tend to be more efficient and economic. A college should normally have a minimum enrolment of 500 and it would be preferable to raise it to 1,000 or more in as many colleges as possible. From this point of view

(1) the UGC should undertake a study of the planning of the location of colleges with special reference to small colleges.

(2) In granting affiliation to colleges, the universities should emphasize the expansion of existing colleges, rather than establishing new ones.

(3) In granting affiliation to a new college, care should be taken to see that its location is so planned that it does not interfere with the proper growth of an existing institution of its own. 12.23-26

142. **Postgraduate Education and Research.** Postgraduate education and research work should ordinarily be organized in the universities or in university 'centres' where a good programme can be developed co-operatively by a group of local colleges. The increase in enrolments at the postgraduate stage should always be contingent on adequate increase in material and staff resources. A rigorous test of admission should be introduced and adequate scholarships should be available (to cover 50 per cent of the students) and these should be supplemented by loan scholarships. The Government of India should be made almost exclusively responsible for postgraduate education and research. 12.27-31

143. **Education of Women.** (1) At present, the proportion of women students to men students in higher education is 1:4. This should be increased to about 1:3 to meet the requirements for educated women in different fields. For this purpose, a programme of scholarships and provision of suitable but economical hostel accommodation should be developed.

(2) At the undergraduate stage, separate colleges for women may be established if there is a local demand. At the post-graduate level, however, there is no justification for separate institutions.

(3) Women students should have free access to courses in arts, humanities, sciences and technology. Courses in home science, nursing, education and social work need to be developed as these have attraction for a large proportion of girls. Facilities for advanced training in business administration and management should also be provided.

(4) Research units should be set up in one or two universities to deal specifically with women's education. 12.32-34

144. **New Universities.** The establishment of new universities is inescapable. The metropolitan cities of Bombay, Calcutta, Delhi and Madras should have, by the end of the fourth plan, two universities each which would supplement to some extent the work of each other. The demand from the States of Kerala and Orissa for additional universities is justifiable. The proposals for the establishment of a university for the hill areas of the North-Eastern Region should be supported as a major measure for spear-heading economic and social development in the area.

145. In establishing new universities, the following principles should be kept in view:

(1) The establishment of a new university can be justified only if it leads to a substantial improvement in standards and in the output and level of research.

(2) No new university should be started unless the agreement of the UGC is obtained and adequate provision of funds is made.

(3) Co-operative effort by postgraduate centres to provide facilities for post-graduate education should be developed as a first step towards the establishment of a university. A new university should not ordinarily be established in a place where a university centre has not been in operation for some time.

(4) Good university organization would be one in which a university has a strong core of teaching departments combined with about 30 affiliated colleges in close proximity.

(5) The UGC may explore the possibility of bringing together all universities in a State in a 'consortium' to operate all the affiliated colleges in the State.

(6) A time of two to three years should be allowed to elapse between the appointment of the first vice-chancellor and the direct commencement of the university's work, the vice-chancellor being assisted by a Planning Board during the period.

(7) Larger resources should be placed at the disposal of the UGC so as to increase the amount of Central assistance to all State universities on the basis of their performance and merit. 12.35-43

146. **Calcutta University.** The State Government in consultation with the UGC and the Government of India may have the affairs of the University of Calcutta examined with a view to finding a way out of the difficulties created by a rapidly increasing undergraduate population. 12.36

147. **Inter-University Collaboration.** Universities should join together, at the regional and national levels, in cooperative programmes and supplement mutually their available facilities, especially in research. It should be the special responsibility of the UGC to promote collaborative and cooperative programmes which cut across state, regional or linguistic frontiers. 12.39

148. **Reorganization of Courses.** (1) The combination of subjects permissible for the first degree should also be more elastic than at present, both in the arts and in the sciences. It should not be linked too rigidly to the subjects studied at school.

(2) There should be general, special and honours courses at the undergraduate stage. Universities which have better facilities should only provide for special courses or for general (honours) courses. Affiliated colleges should have an option to provide either the general courses—both at the pass and honours level—or the special courses, minimum enrolment being prescribed for the general (honours) and special courses to economize on costs.

(3) It is an urgent need to introduce flexibility and innovation in the organization of the courses for the Master's degree. The curricula should be framed as to provide a general broad-based course or intensive training in one or two special fields.

(4) A student should be expected to work for two to three years for a Ph.D. degree which should be regarded as the beginning and not the climax of the research career of the student. During the first year of the Ph.D. course, students should attend lectures and tutorials of an advance nature to overcome inadequacy of preparation at the Master's degree stage.

(5) Students for the Ph.D. courses should be carefully selected, a time-limit being set within which a student is expected to submit his thesis. There should also be a limit on the number of students to be guided by a teacher at any given time.

(6) The procedure for evaluation of the Ph.D. degree should be improved, a defence of the thesis being considered an essential requirement for the degree.

(7) A study of a second world language should be obligatory for all Ph.D. students and compulsory for the Master's degree in certain subjects.

(8) It would be desirable to institute the degree of Doctor of Science as the highest award given on the basis of recognized research work.

(9) Special efforts should be made to promote inter-disciplinary studies in universities which have adequately staffed departments in related subjects. To further this objective, a broad-based staffing pattern is also needed. 12.44-51

149. **The Social Sciences.** The social sciences should be given a significant position in Indian universities and research institutions. From this point of view:

- there should be adequate provision of scholarships in the social science courses;
- the choice of subjects at the first degree stage should be elastic and it should be possible for students to combine study of a social science with any other group of subjects;

- the financial assistance available to universities for the development of social sciences should be considerably increased; and
- high level schools or Centres of Advanced Study for allied groups of social sciences should be developed in a number of universities. 12. 52-56

150. **Area Studies.** It should be our endeavour to develop a significant and effective programme of area studies in a few selected universities and institutions. Such a programme would require intensive courses in the languages of the areas concerned, and the introduction of optional groups of papers in certain social science subjects having reference to the different areas selected for intensive study. Close inter-disciplinary collaboration would also be necessary. 12. 57

151. **Study of Humanities.** The need for strengthening the humanities cannot be overstressed. In science education, we shall have to depend inevitably on developments in advanced countries with which we will not be able to catch up in the foreseeable future. To redress the balance, our scholars should strive to make significant contributions to the sum total of human knowledge and experience in the fields of the social and pedagogical sciences and humanistic studies, where our old traditions and the present challenges posed by social development present unique opportunities for creative work. 12. 58-59

152. **Educational Research.** Urgent steps have to be taken to develop educational research and relate it effectively to the formulation of educational policies and improvement of education. From this point of view, the following programmes need to be developed.

(1) A documentation centre and a national clearing house in educational research should be developed at the NCERT.

(2) Educational research has to be developed in teams and in inter-disciplinary fields. While all training colleges should do some research, the restriction of educational research to training colleges has hampered its growth. It will be the special responsibility of Schools of Education to develop educational research in a big way in collaboration with other departments.

(3) It is desirable to set up a National Academy of Education consisting of eminent educationists, broadly on the lines of the National Institute of Science, to promote educational thought and research. This should essentially be a non-official professional body. But it should receive adequate financial support from the Government of India.

(4) An Education Research Council should be set up in the Ministry of Education for the promotion of research.

(5) There is urgent need to provide good specialized training for research work and services for data-processing, statistical analysis and consultation.

(6) It would be the responsibility of the NCERT at the national level and the State Institutes of Education at the State level to bridge the serious gap between the educational research and current school practices. A similar role will have to be played by the UGC in the field of higher education.

(7) The total expenditure on educational research has to be increased considerably, the goal being to devote about one per cent of the State expenditure on education to it. 12.60-65

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### CHAPTER XIII. THE GOVERNANCE OF UNIVERSITIES

153. Universities should evolve dynamic techniques of management and organization suited to their special functions and purposes. The UGC should encourage the formation of groups in universities to study the problem of educational administration and management of university affairs. 13.02

154. **University Autonomy.** The proper sphere of university autonomy lies in the selection of students, the appointment and promotion of teachers and the determination of courses of study, methods of teaching and the selection of areas and problems of research. 13.05

155. **Autonomy within a University.** (1) The representation of the non-academic element on university bodies should be mainly for the purpose of presenting the wider interests of society as a whole to the university but not to impose them.

(2) The universities should give considerable autonomy to their departments. The principle that good ideas often originate at the lower levels must be recognized and respected in the governance of a university. Wider administrative and financial powers should be delegated to a Committee of Management to be set up in each Department under the chairmanship of the head of the department.

(3) The freedom and autonomy of colleges must be recognized and respected in the same spirit as the university wants it for itself.

(4) There should be joint committees of teachers and students in each department and in every college, and a central committee under the chairmanship of the head of the institution for the discussion of common problems and difficulties. Student representatives should also be associated with the Academic Councils and the Courts of Universities. 13.09



156. In India, the tradition of university autonomy is fairly strong and will have to be consolidated in time. This imposes special responsibilities on Government, UGC, IUB, the public and the universities themselves. In particular, the following need emphasis:

(1) A suitable machinery for consultations between universities, the UGC, IUB and the Government should be developed for reaching decisions regarding number of students to be trained, courses of study and problems of applied research.

(2) The UGC, the IUB and the intelligentsia have an important role to play in creating a strong public opinion in favour of university autonomy.

(3) The universities have to continually earn and deserve their autonomy by discharging their intellectual and public obligations effectively. 13.10-15

157. **University Finances.** (1) The State Governments should place adequate financial resources at the disposal of universities and simplify rules and procedures for operating them.

(2) The UGC should be enabled to give both development and maintenance grants to State Universities.

(3) There should be some reasonable sharing of developmental expenditure on universities between the UGC and State Governments.

(4) UGC should take steps to resolve problems faced by some universities on account of the non-payment of grants on committed expenditure by State Governments.

(5) The system of grant-in-aid from the State Governments to the universities should be reorganized on the basis of a suitable system of block grants.

(6) The finance of universities should be placed on a sound footing on the basis of advice given by the UGC to the State Governments and the universities after periodical review.

(7) Universities should be immune from *direct* governmental intervention and also from *direct* public accountability. 13.16-31

158. **Role and Appointment of the Vice-chancellors.** (1) While the choice of the vice-chancellor should eventually be left to the university concerned, for the time being, the present 'Delhi' pattern, or some variation of it may be adopted. The members of the Selection Committee for the vice-chancellor should be known for their eminence and integrity and there should be no objection to one of them being connected with the university but he should not be a paid employee of the university.

(2) The authority to appoint the vice-chancellor during the first years of a university's life should vest in the Visitor/Chancellor.

(3) The vice-chancellor should, as a rule, be a distinguished educationist or eminent scholar with adequate administrative experience.

(4) The term of office of the vice-chancellor should be five years and he should not be appointed for more than two terms in the same university.

(5) All posts of vice-chancellors should be whole-time and carry a salary.

(6) The retirement age for the vice-chancellor should be 65 years, an exception being made in the case of exceptionally qualified persons of all-India eminence.

(7) It would be an advantage if the successor to a vice-chancellor could be designated, so far as possible, in advance by a year or so.

(8) Adequate powers should be vested in the vice-chancellor for the efficient working of the university. 13.32-40

**159. Legislation for Universities.** (1) The Court should be the policy making body of the university with a membership of not more than 100, of which about half should be external.

(2) The Executive Council with the vice-chancellor as chairman should consist of 15—20 members, about half being internal and half external.

(3) The Academic Council should be the sole authority for determining the courses of study and standards.

(4) A standing committee of the Academic Council should deal with urgent matters, if the Academic Council cannot meet frequently enough for the purpose.

(5) Each university should have an Academic Planning Board for permanent planning and evaluation, detached from day-to-day administration.

(6) The IUB should appoint a committee to go into the question of reform of ritual and procedure of convocation functions.

(7) The Governors of the States should be the Visitors of all universities in the State and should have power to direct inspection or inquiry into the affairs of a university.

(8) The Ministry of Education and the UGC should take the initiative to revise existing university legislation in India and to amend it in the light of the recommendations made.

(9) The constitution of a university should be formulated in sufficiently general terms so as to leave room for, and promote, innovation and experimentation.

(10) A suitable machinery for tripartite consultations between the UGC, the Ministry of Education and the State Governments should be evolved before legislation relating to universities is enacted. 13.41-48

**160. Universities and the Law Courts.** The Government of India may request the Supreme Court to frame a suitable policy to help the maintenance of university autonomy and the proper development of higher education. 13.49-51

161. **Affiliated Colleges.** (1) Affiliation of colleges should be granted by the universities after consultations with the State Government have been made.

(2) A committee of vice-chancellors in the State should be set up to advise the Education Department regarding the grant-in-aid to affiliated colleges.

(3) There should be a Council of Affiliated Colleges in every affiliating university to advise the university on all matters relating to affiliation of colleges.

(4) The existing machinery for the grant of affiliation to colleges and for their periodical inspection should be strengthened.

(5) Affiliation should be regarded as a privilege which is to be continually earned and deserved.

(6) The UGC may examine the question of a small nucleus staff being sanctioned to each affiliating university for the proper organization of an inspection programme.

(7) The most important reform which alone will make it possible to improve affiliated colleges is to relate enrolments to the facilities available. 13.52-60

162. **Government Colleges.** (1) Different approaches to suit local conditions and traditions may be devised for the management of Government colleges, *e.g.*, the establishment of a separate Directorate of Collegiate Education, or an autonomous organization for all government colleges in a State, or placing each college under an autonomous Board of Governors. 13.57-58

163. **Private Colleges.** (1) A discriminating policy should be adopted so that greater freedom and assistance to the really good private institutions could be given.

(2) The procedure for calculation and payment of grants-in-aid should be simplified on the lines recommended. 13.59-60

164. **The Inter-University Board.** (1) All statutory or deemed universities should become members of the IUB automatically.

(2) The degree or diplomas granted by a statutory or deemed university in India should receive automatic recognition from all the other statutory or deemed universities.

(3) The IUB should be strengthened financially to enable it to develop advisory, research and service functions for and on behalf of the universities. 13.62-66

165. **The University Grants Commission.** (1) All higher education should be regarded as an integrated whole and the UGC should eventually represent the entire spectrum of higher education. For the time being, however, it would be more feasible to set up separate UGC-type organizations for agricultural, engineering and medical education and to create a machinery that would effectively coordinate them.

(2) The UGC should consist of 12-15 members; not more than one-third should be officials of government and at least one-third from the universities. There should be no objection to a serving vice-chancellor being appointed as a member of the UGC.

(3) The UGC should adopt a practice of working through standing committees set up to deal with important responsibilities entrusted to it.

(4) The visiting committees appointed by the UGC should visit each university every three years and work in greater detail and depth.

(5) Considerably larger funds should be available to the UGC to enable it to deal effectively with the magnitude and importance of the problems and responsibilities as envisaged.

(6) The responsibility of coordinating standards should continue to vest in one body, viz., the UGC. State UGCs should not, therefore, be created. 13.67-76

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#### CHAPTER XIV. EDUCATION FOR AGRICULTURE

166. A programme of education for agriculture will have to be based on an effective organic link between the three main elements of teaching, research and extension. 14.01-06

167. **Agricultural Universities.** At least one agricultural university should be established in each State.

(1) Beginning with traditional agricultural specialities, these universities should gradually extend their scope of studies to cover a wide range of specialized courses to suit the needs of the day.

(2) A clear delineation of responsibilities between Agricultural Universities and the State Departments of Agriculture is necessary. The former should take over all research, education and extension programmes.

(3) Postgraduate work should become a distinctive feature of the Agricultural Universities which should be staffed with adequately trained personnel. The intake at the postgraduate level, particularly in the hitherto neglected areas, will have to be considerably increased. To ensure maintenance of standards, however, this expansion should be related to available personnel and facilities and no institution should be allowed to undertake postgraduate instruction unless it has adequate, integrated facilities for education and research.

(4) Central Research Institutes like the Indian Agricultural Research Institute (IARI) and the Indian Veterinary Research Institute (IVRI) and the National Dairy Research Institute (NDRI) and the Agricultural Universities would constitute suitable centres for strong postgraduate schools in agriculture. Close coordination among these institutions on the one hand and with ICAR on the other should be established.

(5) Admission to postgraduate courses should not be restricted to agricultural graduates only. Talent from as many fields as possible should be harnessed to the betterment of agricultural research and education.

(6) To enable the students to undertake independent study and to ensure their introduction to research as early as possible, each university should have a well-equipped library with adequate staff.

(7) Coordinated, problem-and-production oriented research projects recently evolved by the ICAR should be developed further.

(8) Duration of first degree course should ordinarily be five years, after ten years' schooling.

(9) *Teachers.* For as many of the staff members as possible, there should be integrated assignments between classroom teaching and laboratory research, experimental research and work in the field with rural people.

(10) The UGC scales of pay should be extended to Agricultural Universities also. Other conditions of service should be made attractive.

(11) The strength of any faculty should be determined by needs and quality of staff and not by any rigid hierarchy. Merit should be the main consideration for promotion within a faculty.

(12) The faculties should have reasonable academic freedom.

(13) External examinations should be reduced in importance and abolished as early as possible.

(14) A large scale programme of teacher training should be undertaken immediately in 5 or 6 existing high quality centres, offering attractive scholarships to graduates in science and agriculture.

(15) *Students.* Scholarships awarded should cover not less than 25 per cent of the students in Agricultural Universities.

(16) To attract talented students the present scales of pay offered to agricultural graduates should be improved.

(17) *Farm.* Well-managed farms, about 1,000 acres in size and with not less than 500 acres of cultivated area, should be attached to every agricultural university.

(18) *Internship.* Possibilities of providing one year internship on a well-managed State university demonstration farm before awarding the degree to the students should be explored.

(19) *Number, Size and Organization.* In the process of establishing one agricultural university in each State, the possibilities of converting existing universities into agricultural universities should also be studied.

(20) While some experimentation should be allowed, it is essential that all agricultural universities should conform to some important principles such as, being single campus universities without any affiliated colleges. If for any exceptional reasons, the university should take over the responsibility for colleges outside its campus, they should be made constituent colleges under a unified administration. 14.07-34

**168. Contribution of other Universities for the Development of Agriculture.** (1) Other universities wishing to introduce agricultural studies should be given all assistance.

(2) An academic relationship between some of the agricultural universities and the IITs should be developed. This can take the form, among other things, of an exchange of students and staff, and arranging common programmes of study and research.

(3) The possibility of organizing agricultural faculties in one or two of the IITs and in some leading universities should be explored. 14.35

**169. Agricultural Colleges.** (1) New agricultural colleges should not be established and the training of undergraduates and postgraduates in agriculture should be done in agricultural universities.

(2) Where agricultural colleges are constituent colleges of a university, it should be assisted to develop strong agricultural faculties.

(3) Every agricultural college should have a well managed farm of at least 200 acres.

(4) Quinquennial inspections of agricultural colleges jointly by ICAR and UGC should be undertaken, and such colleges as do not come up to the requisite standards should be disaffiliated. Some of the colleges may be converted to offer courses at a higher technician level instead of a degree. 14.36-37

**170. Agricultural Polytechnics.** (1) Agricultural polytechnics at post-matriculation level should be organized on a priority basis. These should be attached to agricultural universities and be large institutions with enrolments around 1,000 students. To meet immediate needs, courses may also be added to existing polytechnics located in predominantly rural surroundings.

(2) The polytechnics should be multipurpose institutions providing training for imparting the wide range of skills needed in agriculture and allied fields. While reasonable flexibility should be allowed in their organization, these courses should be distinctly practical in nature. Courses offered should be predominantly terminal in character leading to specific employment, with adequate provision for the exceptionally brilliant students to take up courses in higher education through further study. In course of

time, the polytechnics should offer short condensed courses, particularly for the young farmers and also of special interest to girls and women in rural areas.

(3) Attractive scales of pay and adequate qualifications should be prescribed for the staff of these polytechnics. 14.38-43

**171. Agricultural Education in Schools.** (1) Attempts to train for vocational competence in farming through formal schooling in agriculture at primary and lower secondary levels have failed and further efforts should be held in abeyance.

(2) Instead of any narrow vocational training, the school should impart a sound general education with particular emphasis on mathematics and science, as the best preparation for coping with the inevitable rapid changes characterizing our future agriculture.

(3) The proposal for setting up a large number of junior agricultural schools is beset with several difficulties and may fail to serve its objectives. It should be abandoned. 14.44-49

**172. Agricultural Education as Part of General Education.** (1) In all primary schools including those in urban areas, some orientation to agriculture should form an integral part of general education.

(2) Agriculture should also be made an important part of the work-experience at the school stage.

(3) Undergraduate and postgraduate courses in the colleges and universities should give prominence to orientation to rural and agricultural problems. UGC and other authorities should take suitable steps in this regard.

(4) Similar orientation in agriculture and rural problems should be introduced in all teacher training programmes. 14.50-51

**173. Extension Programmes.** (1) In raising the professional and technical competence of the VLWs and of the specialists who support them, the agricultural university and polytechnics should render all necessary assistance by making available the specialist staff and by organizing special courses.

(2) When the proposed separation of supply services from the extension work takes place, the extension part of it should be transferred to the agricultural university maintaining, at the same time closest liaison between the extension work, supply and other programme services of the department of agriculture.

(3) The target should be to set up at least one primary extension centre in every community development block for purposes of extension work, within cycling distance of the area served. It is essential that these centres are manned by staff with a practical knowledge superior to that of the farmers whom they are educating and also that

they receive the strongest support and guidance from the extension services of the agricultural university.

(4) Greater use should be made of successful farmers in the carrying out of extension work in education about agriculture generally.

(5) The individual village farmers attending courses at primary extension centres should be encouraged to start Farmers' Study Circles in their villages.

(6) Fullest use should also be made of radio, films and other audio-visual aids in educating farmers and the rural community. 14.52-67

174. **Manpower Needs.** Steps should be taken for preparing more accurate estimates of the requirements of manpower in the agricultural development. In the meantime, vigorous efforts should be made at least to double the output of graduates and to produce an equal number of diploma holders, in the next ten years. 14.68-69

175. **The Role of the ICAR and UGC.** (1) Responsibility for ensuring that agricultural education is launched on the basis of an integrated approach to teaching, research and extension can best be carried out by ICAR.

(2) To enable the ICAR to fulfil its responsibility in this regard, a special Standing Committee of the Council should be set up with a scholar or scientist of national repute at its head.

(3) There should be some overlap in the membership of the UGC and the above Standing Committee and they should evolve common programmes for the development of higher education in agriculture. 14.70-71

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## CHAPTER XV. VOCATIONAL, TECHNICAL AND ENGINEERING EDUCATION

176. (1) A concerted and sustained programme is needed to ensure that by 1986, some 20 per cent of all enrolments at the lower secondary level and some 50 per cent beyond Class X are for part-time or full-time vocational and professional courses.

(2) Vocational education courses at school stage should be predominantly terminal in character, with adequate opportunities, for the exceptionally gifted child, to rejoin the main stream and move higher, through further study. 15.09-10

177. **Training Semi-skilled and Skilled Workers.** (1) There should be further expansion of facilities in ITIs, beginning by at least a doubling of available places in the the fourth plan. The minimum admission age should be gradually lowered to 14, with suitable adjustments in courses.



(2) Junior Technical Schools should be renamed Technical High Schools and along with the existing Technical High Schools should offer courses clearly terminal in character. There should be greater use of available time to meet the requirements of the Apprenticeship Act. Enough flexibility and experimentation should be permitted in the organization of the various courses.

(3) Training in ITIs and technical schools must be production-oriented.

(4) Skilled workers' training courses with entry requirements below Class X should also be attached to polytechnics to make better use of existing facilities.

(5) Facilities for vocational and technical training for school leavers entering employment should be greatly expanded on a part-time, day-release, correspondence, sandwich or short-intensive course basis. Rigidity of approach in the organization of these courses, should be avoided. 15.12-18

178. **Technician Training.** (1) The over-all ratio of engineers to technicians should be raised from the present figure of 1:1.4 to 1:2.5 by 1975 and to 1:3 or 4 by 1986.

(2) Courses for the training of technicians should be revised in the light of periodic investigations to be carried out in cooperation with industry, aimed at job analysis and specifications in terms of levels and clusters of skills and responsibilities for technicians.

(3) Diploma training should be more practical, by including industrial experience. This practical training should be of a project or problem-oriented type.

(4) Polytechnics should be located only in industrial areas, while those already functioning in rural areas should develop courses allied to agriculture and agro-industries.

(5) Teachers for polytechnics should be increasingly recruited from industry, by relaxing, if necessary, academic admission requirements. Salaries should not be linked to academic qualifications only.

(6) To give training in as near realistic conditions as possible, vacations should be used by the students and staff to do production work on simple tools either for equipping secondary schools or for sale.

(7) Teaching of science and mathematics in polytechnics should be strengthened, particularly in the first two years. Technician courses should include introduction to industrial psychology, and management, costing and estimation.

(8) Polytechnics should increasingly adopt sandwich type of courses in cooperation with industry.

(9) In view of low mobility of diploma holders in the country, the courses offered in polytechnics during the fourth and fifth plans should be designed largely with local requirements in view, keeping at the same time, a watchful eye on total national needs.

(10) Courses of special interest to girls should be offered in all polytechnics at both the certificate and diploma levels and girls completing the lower secondary course should be encouraged to take them up.

(11) Every effort must be made to reduce the present high wastage rates in polytechnics to a minimum and to expand existing polytechnics to their optimum size.

(12) Selected polytechnics should provide post-diploma courses for technicians with some years of experience in industry to qualify as higher level technicians. 15.19-32

**179. Other Vocational Education.** (1) At the higher secondary level (Classes XI & XII), alongside the polytechnics, there is considerable scope for starting a range of interesting courses in commercial, clerical, scientific and industrial trades and in areas of special interest to girls. This should be fully exploited.

(2) Products of Technical High Schools and Polytechnics should be encouraged to set up small enterprises of their own or to join together with others in creating small-scale workshops, industries and services needed in the community. 15.33-36

**180. Education of Engineers.** (1) All institutions not conforming to the standards should be improved, converted to institutions training technicians or closed.

(2) For selected branches of engineering such as electronics and instrumentation, recruitment of well-qualified B.Sc. students should be encouraged, with courses suitably adjusted.

(3) Anomalies in the scales of pay between staff members in science and technology faculties in engineering institutions should be removed. An appropriate number of posts in each of these faculties should be reserved for well-qualified persons of the other faculty.

(4) Practical training for full-time degree students should commence from the third year of the course, and should be properly prepared and supervised in cooperation with the industry. Wherever possible, sandwich type of courses should be adopted.

(5) Workshop practice should be more production-oriented.

(6) Courses at both degree and diploma levels should be diversified to meet the changing needs.

(7) For colleges and institutes of technology to become more concerned with the needs of industry, research design projects sponsored either by industry or government should be made a part of the curriculum.

(8) Syllabus should be continually revised in consultation with expert committees, avoiding rigid conformity.

(9) Development of courses and manpower estimates in new fields such as electronics, instrument technology including automation, chemical technology, aeronautics and astronautics, and nuclear power generation should be carefully planned in advance.

(10) *Teachers.* Teachers should be allowed to undertake consultancy for industry. Widespread summer institutes should be organized.

(11) Suitable salary scales should be offered to make the profession attractive and to ensure that well-qualified engineers may work in teaching and research for significant periods in their careers.

(12) Institutes of technology should undertake large scale teacher training programmes for graduate and postgraduate students. All such courses should include a study of a second modern 'world language' such as Russian or German. The scheme for centres of advanced study should be extended to cover technological field also.

(13) Frequent transfers of teachers and principals in Government colleges for other than professional reasons must be stopped.

(14) *Equipment.* Special consideration should be paid for the timely release of foreign exchange and the stock-piling of essential equipment.

(15) Polytechnics should be discouraged from acquiring sophisticated equipment which is used for only a few days in the year.

(16) Institutions should be encouraged to manufacture proto-type substitutes for imported items of equipment.

(17) *Postgraduate Courses.* Admission requirements to these courses should include at least one year's experience within industry. Rigid uniformity in the organization of these courses is not desirable.

(18) Research at this level should be diverted towards problems of industry. Larger numbers of those taking up post-graduate courses should be sponsored by industry.

(19) A regular doctorate degree for professional development work within industry in addition to a Ph.D. research degree should be created.

(20) Indiscriminate proliferation of courses should be avoided and location of highly specialised courses should be determined at the national level.

(21) The practice of levying capitation fee for awarding seats in engineering colleges should be stopped. 15.37-61

181. **Manpower Requirements.** (1) There is need for rigorous and more refined studies for estimating technical manpower requirements at all levels. Opening of new training facilities and admissions to courses should be linked to such forecasts.

(2) In the immediate future, attention should be given to the elimination of present high wastage rates at all levels and to improvement in quality of instruction offered. Existing facilities should be expanded to their optimum size and part time courses developed for those already in employment.

(3) Existing marked variations in the socio-economic background of students in technical institutions can be reduced by a greater equalization of educational attain-

ments in secondary schools between urban and rural areas and by adoption of better admission tests. 15.62-64

182. **Medium of Education.** At the secondary and polytechnic stages, the regional language should be the medium of instruction. Its use at higher levels should be related to the position in science faculties. Vigorous action is required for the preparation of good technical textbooks in regional languages. 15.65

183. **Practical Training.** Industrial concerns or Departments selected under the Central Government Practical Training Scheme as also the trainees, should be carefully chosen. The number of training places needs to be increased. If for any reason, the apprenticeship schools started by some public sector undertakings are to be closed down, Central Government should take them over. 15.66-69

184. **Co-operation with Industry.** A Central scheme of subsidy to industrial concerns providing training facilities should be started. Suitably qualified training officers should be posted to such industry or groups of industries. 15.70

185. **Professional Societies.** Adequate safeguards have to be devised to ensure that requisite standards are maintained by the professional bodies in all the examinations conducted by them. These professional societies should also be associated with the recommended programme of organizing a wide range of part-time technical courses at higher secondary level (Classes XI and XII). 15.71-73

186. **Correspondence Courses.** An immediate beginning should be made to develop, a wide range of vocational and technical courses through correspondence. However, before this medium could be adopted extensively, very careful preparation and testing would be required. 15.74-75

187. **Administration.** (1) A UGC-type organization for technical education with a full-time chairman should be set up with adequate representation for UGC, professional bodies, industry and concerned Ministries.

(2) The Institutes of Technology and comparable institutions should be given full university status, while retaining their individual names and characteristics.

(3) As part of Boards of School Education, Directorates of Technical Education should be set up at the State level, with adequate powers, among other things, for recruitment of staff thus removing a number of procedural delays.

(4) Chairmen of Boards of Governors of Regional Engineering Colleges should be drawn from a panel of distinguished educationists.

(5) Principals of colleges should have, among other powers, full discretion in matters relating to the building up of educational facilities in their institutions within financial ceilings and policy guide-lines. 15.76-86

## CHAPTER XVI. SCIENCE EDUCATION AND RESEARCH

188. **General Principles.** The progress, welfare and security of the nation depend critically on a rapid, planned and sustained growth in the quality and extent of education and research in science and technology. It is unfortunate that India today is almost at the bottom end of the ladder of GNP per capita, as also of the ladder of per capital expenditure on education and research. In view of the limited resources available, the following measures are needed to make rapid progress:

- (1) A rigorously selective approach has to be adopted.
- (2) In postgraduate studies and research, the standards of attainment must bear international comparison. The only way this can be done is through a most careful selection of subjects for advanced study and research, selection of the most able students for such courses, and by building a small number of centres of excellence and assigning to each of these, resources exceeding a certain critical size.
- (3) In the utilization of our scientific manpower we must strive our utmost to achieve high efficiency—higher even than in the industrially developed countries. We should determine our priorities and programmes in education and research on the basis of hard ‘indigenous’ thinking and needs, and not follow the fashion set by other countries whether highly ‘advanced’ or not so advanced.
- (4) The development of science must derive its ‘nourishment’ from our cultural and spiritual heritage and not bypass it.
- (5) The need from the earliest stage of science education for a proper understanding of the basic principles and the process of scientific abstraction and creative thinking must be emphasized. 16.01-14

189. **Science Education.** (1) Apart from improving the standard of the post-graduate courses, the postgraduate enrolments in science and mathematics need to be expanded several-fold in the coming decades to meet the demands of rapidly expanding secondary and higher education and of research and industry. 16.22

(2) It is necessary to develop a number of Centres of Advanced Study in science and mathematics. Their academic staff should be of the highest quality and should include, wherever possible, some persons of international standing. There should also be a number of visiting professorships on contract appointments for a period of two to three years. The UGC should constitute an all India committee to make offers of such visiting professorships. Some of the internationally famous Indian scientists at present working abroad as well as distinguished foreign scientists could be invited under this scheme. 16.23

(3) The regional imbalances in the development of science education should be reduced to the minimum. The development of science and technology in a State should be related closely to its potential for economic growth. 16.24

(4) There is an urgent need to revise drastically the undergraduate and postgraduate curriculum in science. 16.25

(5) In our science departments a proper balance between experimental and theoretical aspects should be maintained. Special and urgent attention should be paid to the development of experimental physics and chemistry. In the field of biology, the study of micro-organisms and their role in medicine and agriculture deserves much more attention than is generally the case. Astronomy and astro-physics also need emphasis. 16.26-27

(6) There should be well-equipped workshops in every college and university department of science. Students should be encouraged to learn the use of workshop tools and get acquainted with some of the essential laboratory techniques and practices. The workshops should work far more intensively than is usually the case. It would be desirable to permit their use by industrial workers enrolled for evening and correspondence courses. 16.28

(7) Students in science subjects should have some knowledge of the theory of errors, basic statistical concepts, and statistical design of experiments. 16.29

(8) Apart from the evaluation of class records and the experiments performed by students, there need be no practical examinations as part of the final examination. 16.29

(9) There is urgent need to introduce an element of flexibility and innovation in the organization of courses for the Master's degree. Combination courses consisting of, say, one major subject and one subsidiary subject should be provided. 16.30

(10) It will be a great advantage if major departments in life sciences have on their academic staff a small number of physical scientists (including mathematicians) specially selected for their interest in the study of biological phenomena. 16.31

(11) The need of the day is to bring science and technology closer together in our educational system. 16.31

(12) Apart from the regular two-year M.Sc. courses there is need to provide one-year courses, or of even shorter period, for specialised training in subjects relevant to present scientific, industrial and other needs. These courses could be provided by selected science and technology departments in universities, engineering and agricultural institutions or the National Laboratories. 16.32

(13) It would be desirable for universities and engineering institutions to enrol qualified industrial workers for evening and correspondence courses. Apart from the usual diploma and pass degree courses, special courses to train precision mechanics, laboratory technicians and other skilled operators should be organized. 16.34

(14) There is need for the introduction of a new degree beyond the M.Sc. stage. The course should include with advantage, on an optional basis, elements of pedagogy. 16.35

(15) The programme of the summer science institutes brings together, in active participation school and college teachers and leading university professors. It is a major instrument in the country's effort towards the improvement of science education. It should be expanded and followed up. 16.37

(16) The IUB and the UGC should take a lead to ensure that, by the end of the fourth plan, most of the books required at the undergraduate level and a considerable number at the postgraduate level are produced in the country. 16.38

(17) We welcome the steps taken for the evolution of a scientific terminology in the Indian languages. It has to be pursued further. It would be an advantage if science students are taught the few Latin roots from which a large number of international terms are derived. 16.39

**190. Investment in Research.** In an age characterised by science and technology, research is almost a necessary precondition for all kinds of human endeavour. In the industrially advanced countries the growth of investment in research and development and of manpower engaged in these activities, has surpassed all expectations. The Indian expenditure on R and D is 0.3 per cent of the GNP; and the total strength of scientists and engineers is only a few hundredths of one per cent of the labour force. The number of qualified scientists and engineers is of the order of a hundred thousand. Our effort in R and D will have to be stepped up. 16.40-44

**191. University Research in Science.** A major weakness of Indian education and research is the relatively very small part played by the universities in the sum total of Indian research which itself is far smaller than what it should be in relation to our capabilities and needs. A stage has now been reached when deliberate support and encouragement of advanced study and research in the universities should become a fundamental goal of our national policy. 16.46

(1) The creative scientists and engineers of a country are one of its most precious and scarce assets and should find place in the universities where their 'multiplier effect.' is generally maximum; they contribute not only to scientific research but also to the building up of new talent. 16.48

(2) It is important that more and more university people—that is teachers and students—should perform more and more research work and of a better and still better quality. As an ultimate goal, every university researcher should become a teacher and every teacher, a researcher. 16.48

(3) Publication of qualitative research apart from good teaching ability, should become one of the basic criteria for advancement of teachers in their university career.

Gifted students even at the undergraduate stage should be encouraged to participate in some form of research activity. 16.48

(4) Wherever practicable, active scientists in the CSIR, AEC and other research institutions outside the university system should be invited and inducted to participate in teaching and research work, full-time or part-time, for short or long periods. 16.48

(5) It should be made possible for selected postgraduate students to spend, during their course work, a term or two in another university or institution specializing in the subject of their interest. 16.48

(6) The UGC scheme of assisting teachers, research workers, and laboratory technicians to visit universities and research institutions for short periods (a few weeks to a few months) should be considerably expanded. 16.49

(7) The development of team-work is an essential condition for the improvement of the quality of university. But it should be real. It should be a part of university research policy to eliminate ruthlessly spurious and parasitic 'team-work'. 16.50

(8) The number of research studies under the supervision of the head of the department of any other teacher should be limited. Research students should also be assigned to younger members of the staff. 16.51

(9) The qualifications for Ph.D. enrolment need to be upgraded. We should encourage research-minded engineering graduates to go in directly for Ph.D. in mathematics, physics and other science subjects. 16.51

192. **Mathematics.** It is important that a deliberate effort is made to place India on the 'world map of mathematics' within the next two decades or so. Advanced centres of study in mathematics should be established at three or four universities in the next five to ten years. 16.53

(1) At least one of the major departments of mathematics in the universities should be encouraged to take an active interest in exploring the possibilities of *programmed learning* in mathematics for upgrading the knowledge and understanding of school and college teachers. 16.54

(2) One or two special secondary schools for pupils with unusual mathematical ability should be set up in the near future. 16.55

(3) A special effort should be made by the UGC to provide computation installations and training in programming on a selective basis in the universities. By the end of the fourth plan a good proportion of the universities should have basic computer facilities to serve the requirements of study and research in science, mathematics and social sciences. 16.57

(4) It would be desirable to support energetically and develop one or two active centres for the study of brain and psychosomatic phenomena, using modern tech-



niques and also drawing upon past Indian experience in this field which even today in some ways is of great significance. 16.58

193. **Equipment.** (1) Measures will have to be found for efficient use of existing equipment and only such equipment as cannot be produced within the country and whose import is inescapable should be imported.

(2) The UGC and the CSIR should actively encourage and support some of the universities and national laboratories to organize instrument calibration and repair service for the general use of the universities. Training of laboratory technicians should receive high priority.

(3) A special unit should be set up to study and do research in laboratory design. 16.59-61

194. **Administration of Science Departments.** The administration of science departments needs to be radically reorganized, and without delay. If it is to make the fullest use of its resources, it is necessary to associate its staff with administration and decision making in the department. 16.62-64

195. **Pure and Applied Research.** (1) It is wrong to assume that universities should perform almost exclusively pure (basic) research, leaving applied research and development in all branches of science to other institutions. The universities, in the industrialized countries, as shown by the distribution of the national research potential and programme, make a substantial contribution to applied research, and some of them to a small degree even in development research.

(2) Today, with the advance of science and technology, the distinction between pure and applied research—between a research scientist and a research engineer—has become artificial, and in service fields (*e.g.*, electronics) it has almost disappeared. Applied work such as developing important new techniques (new for the country) or designing and fabricating special instruments or apparatus should receive proper recognition, and it should be made possible for such work to earn Ph. D. awards.

(3) Left to itself, there is nearly always a tendency for research (even in project-oriented laboratories) to become 'purer and purer'. This needs to be kept in view in the organization of research in technological institutions. These should place special emphasis on applied and industrial research.

(4) A survey has not yet been made showing how in India the university research potential is distributed along basic, mission-oriented basis, applied and development research. It is essential that this survey be made as soon as possible. 16.65-70

196. **Expenditure on University Research.** (1) University research receives far too small an allocation and if this is not radically corrected, the future of the entire

research effort in the country will be in jeopardy. By the end of the decade, something like a quarter of the total university expenditure should be devoted to research.

(2) It would be desirable that in the early stages the UGC makes separate allocations to the universities for support of research.

(3) A related matter of great importance is the provision of adequate foreign exchange. 16.71-74

197. **Basic Research Outside the Universities.** At present there are a number of institutions in the country which devote almost their entire effort on university type of research but function outside the university system. A serious effort should be made to bring them within the universities, or at any rate, to link them intimately with universities. 16.75-76

198. **Brain Drain.** A considerable proportion—we have no precise estimates—of those who go abroad tend to stay indefinitely and a sizeable number accept foreign nationality. The migration is largely to the USA. Not all who go out of India are necessarily first rate scientists, nor are they of critical importance to the country's requirements. But the problem is of sufficient importance to merit a close and systematic study. 16.77-82

199. **Fellowships for Overseas Training.** Apart from fellowships awarded by foreign agencies, there is a real need for institution by the government of a limited number of research fellowships, say about 100, to be awarded every year for study and research abroad. These fellowships should be awarded to persons of outstanding ability and there should be some form of 'bonding' for them to return to their country. 16.83

200. **National Science Policy.** (1) It is most important for the governmental authorities at the highest level to ensure that on major scientific issues they can get advice which is as impartial and objective as it possibly can be. For this, it is essential to have an advisory body which should have on it, besides heads of major agencies concerned with scientific research, persons who have a high standing and regard for their professions and who inspire general confidence—a proportion of these members should be distinguished young scientists in their thirties. The number of such persons should not be less than the agency heads. They could be from the universities, research institutions (government or non-government), industry and public life. The advisory body should also have on it not only scientists and technologists but also economists and social scientists and persons with experience of industry and management. The Scientific Advisory Committee to the Cabinet should be reorganized on the above lines and provided with an effective secretariat and with a professional component adequate to its tasks. The Committee should be in a position to assess the broad scientific needs of the country including the universities and advise government on scientific policy and

allocation of total resources between different sectors of scientific activities. It should also review continuously the national research policy situation.

(2) Bodies concerned with science policy and implementation and which have executive and managerial functions requiring detailed and expert examination of diverse issues should ordinarily have professional scientists, engineers or science administrators of high standing as their chairmen.

(3) It should be a major task of the national research policy, and policies of the universities to provide a 'climate' conducive to research, and to prevent and eliminate, through energetic and public measures, all dangers and infringements of autonomy and freedom of action in research.

(4) In determining our priorities for research, we should be guided by our own national needs and not be unduly influenced by what may happen to be the current fashion in science. 16.84-93

201. **Science Academy.** (1) In India the role of a National Academy is performed partly by the National Institute of Sciences. However, it may need some drastic reorganization, if the institute is to exercise a vigorous leadership in science and play a more significant role in the scientific activities of the nation.

(2) India is almost the solitary case of a country which is not represented on the ICSU by a professional Academy but by the Government. This function should be a responsibility of the Academy. 16.94-98

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## CHAPTER XVII. ADULT EDUCATION

202. **Liquidation of Illiteracy.** (1) Every possible effort should be made to eradicate illiteracy from the country as early as possible and in no part of the country, however backward, should it take more than 20 years. The national percentage of literacy should be raised to 60 by 1971 and to 80 by 1976.

(2) As a first step to arrest the growth of illiteracy, the following measures should be taken:

- (a) Expansion of universal schooling of five years' duration to the age-group 6-11;
- (b) Provision of part-time education to those children of age-group 11-14 who either miss schooling or drop prematurely out of the school;
- (c) Provision of part-time general and vocational education to the younger adults of the age-group 15-30.

(3) For the liquidation of illiteracy a twofold strategy comprising the selective approach and the mass approach should be adopted.

(4) Under *selective* approach, programmes should be adopted for specified groups of adults which could be easily identified, controlled and motivated for intensive literacy work. All employers in large firms and commercial, industrial, contracting and other concerns should be made responsible, if necessary by law, for making their employees functionally literate within a period of three years of their employment. Big industrial plants in the public sector should take the lead immediately and set the pace in this important direction. Every development project should include, as an integral part, a plan for the education of its employees, more especially of those who are illiterate. Literacy programme should constitute an essential ingredient of all schemes launched by the Government for economic and social developments.

(5) Under *mass* approach, all available educated men and women in the country should be mobilized for raising a force to combat illiteracy and utilize it in a well-planned literacy campaign. In the organization of mass campaign, the teachers and students and all educational institutions should be actively involved. The students in the higher primary, secondary, higher secondary, vocational schools and those in the undergraduate classes of the universities and colleges should be required to teach the adults as a part of compulsory national service programme. Teachers in schools of all types should be required to teach and participate in the campaign. Every educational institution should be given responsibility for liquidating illiteracy in a specified area. The school in particular should be transformed into a centre of community life.

(6) No literacy campaign should be launched without careful planning and preparation. The various measures to be taken for this purpose have been discussed in the Report.

(7) In order to promote literacy among women, condensed courses for women sponsored by the Central Social Welfare Board should be adopted; appointment of 'village sisters' should be encouraged for teaching village women and organizing adult education among local communities.

(8) The mass media of communication should be effectively used as a powerful instrument for creating the climate and imparting knowledge and skills necessary for improving quality of work and standard of life.

(9) In order to retain the literacy achieved, literacy campaigns must have adequate follow-up including further education, the use of library, and the production of reading material.

17.7-31

**203. Continuing Education.** (1) Educational institutions of all types and grades should be encouraged and helped to throw open their doors outside the regular working hours to provide such courses of instruction as they can to those who are desirous of receiving education. A parallel part-time system of education should be created to

provide adults with opportunities for taking the same diplomas and degrees as students in schools and colleges.

(2) Educational institutions should give the lead in organizing *ad hoc* courses which will help people to understand and solve their problems and to acquire wider knowledge and experience.

(3) Further education should be provided for workers for improving their knowledge and skills, widening their horizon in life, inculcating in them a sense of responsibility towards their profession and improving their careers. Special part-time and sandwich courses should be offered for them which would lead them step by step to higher courses.

(4) Special institutions such as those run by the Central Social Welfare Board for Adult Women and the Vidyapeeths in the Mysore State should be established. The existing institutions should be frequently reviewed in order to enable them to be of service to the rural community. 17.32-43

204. **Correspondence Courses.** (1) In order to bring education to those who are unable even to attend part-time courses, widespread organization of correspondence courses should be organized.

(2) Students taking correspondence courses should be provided opportunities to meet the teachers occasionally, they should be given the status of recognized students, and where possible be attached to some colleges in order to enable them to make use of the library and other facilities.

(3) Correspondence courses should be supported by well-coordinated radio and television programmes.

(4) Correspondence courses should not be confined to preparing students for the university degrees but should also provide agricultural, industrial and other workers such special courses of instruction as would help them to improve production.

(5) Correspondence courses should be made available for those who desire to enrich their lives by studying subjects of cultural and aesthetic value.

(6) Correspondence courses should be developed for the teachers in schools to keep them abreast with new knowledge as well as with new methods and techniques of teaching.

(7) The Ministry of Education in collaboration with other Ministries should establish a National Council of Home Studies, for the purpose of accreditation and evaluation of agencies which provide correspondence courses, identification of the areas in which different types of correspondence courses would be of benefit, promote creation of such courses through proper agencies, and conducting evaluation and research.

(8) Opportunity to take examinations conducted by the Secondary Education Board and Universities in the country should be made available to those who wish to work on their own without any assistance. 17.44-56

205. **The Libraries.** (1) The recommendations of the Advisory Committee on Libraries relating to the establishment of a network of libraries throughout the country should be implemented.

(2) School libraries should be integrated in the system of public libraries and be stocked with reading material of appeal both to children and neo-literates.

(3) The libraries should be dynamic and set out to educate and attract the adults to use them. 17.57-60

206. **Role of Universities.** (1) The Universities in India should assume a much larger responsibility for educating the adults. Some of the important programmes which the University could undertake are described in paragraphs 17.62 and 17.63.

(2) In order to have an efficient machinery for launching carefully planned adult education programmes, each university should establish a Board of Adult Education with representatives from all departments involved in the adult education programmes. Universities should also set up Departments of Adult Education.

(3) Universities should be financed and equipped for carrying out the adult education work. 17.61-66

207. **Organization and Administration.** (1) A National Board of Education on which all relevant Ministries and agencies would be represented should be established. The functions of the Board are stated in paragraph 17.67. Similar bodies should be set up at the State and district levels.

(2) Voluntary agencies working in the field of adult education should be given every encouragement. financial and technical. 17.67-70

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## CHAPTER XVIII. EDUCATIONAL PLANNING AND ADMINISTRATION

208. **Planning.** (1) There has been an over-emphasis on achievement of targets in enrolments and expenditure and there is, therefore, a need to take a more comprehensive view and evolve a broader pattern of goals, especially those relating to qualitative improvement.

(2) The general policy so far has been to do something in every sector of every programme with the result that the meagre resources available have been spread thinly

over a very large area leading to considerable wastage. It has now become important to concentrate on a few crucial programmes.

(3) In the existing situation where finances are limited, programmes which call for a determined effort, organization, talent and hard work rather than large financial investment, need greater emphasis.

(4) There should be deep involvement of universities, professional organizations, training colleges, etc., in a periodical evaluation of all major programmes included in the Plans and in the development of a large-scale research programme.

(5) The Ministry of Education, in collaboration with the Asian Institute of Educational Planning, should undertake studies of educational planning in the different States and conduct intensive courses for training the personnel involved in the planning process at different levels.

(6) The University Grants Commission should also consider the possibility of setting up an Advanced Centre for Studies in Educational Planning, Administration and Finance.

(7) The process of educational planning in a Federal democracy has to be the right blend of centralization in the appropriate sectors and especially in administration. One useful suggestion which can be made in this context is to adopt a system of priorities at different levels—national, State and local.

(8) School education is predominantly a local-State partnership and higher education is a Centre-State partnership. It is this basic principle that should guide the evolution of the delicate balance between centralization and decentralization which our planning needs.

18.02-08

**209. The Role of Private Enterprise.** (1) The future role of private enterprise in education should be broadly on the following principles:

- (a) As most private enterprise has played an important role in the development of education in modern India, the State should make all possible use of the assistance that can come from the private sector for the development of education.
- (b) The State has now rightly assumed full responsibility to provide all the needed educational facilities and private enterprise can, therefore, have only a limited and minor role.

18.09-11

**210. The Role of Local Authorities.** The normal practice should be that a local authority gets the right to administer education as a privilege subject to two conditions—good administration and promoting the cause of education—and that this privilege would be withdrawn if any of these conditions is violated. The future

role of local bodies in education may be defined as follows:

- (1) As an ultimate objective, it is essential that schools and their local communities should be intimately associated in the educational process.
- (2) It would, however, not be proper to press for the universal and immediate adoption of this principle without reference to local conditions.
- (3) The immediate goal in this respect—and this should be adopted immediately as a national policy in all the States—is to associate the local communities, namely, village panchayats in rural areas and the municipalities in urban areas, with their local schools and to make them responsible for the provision of all non-teacher costs with the help, where necessary, of a suitable grant-in-aid from the States.
- (4) The ultimate goal to be reached is the establishment, at the district level, of a competent local education authority which may be designated as the District School Board and which would be incharge of all education in the district below the university level. This should also be accepted as national policy.
- (5) In all association of the local authorities with education, adequate safeguards should be provided to ensure that the teachers are not harassed and that they do not get involved in local factions and politics.

211. **District and Municipal Boards.** (1) The jurisdiction of the District School Board should cover the entire area of the district with one exception, namely, the big municipalities in the district. The Zila Parishad, municipalities, educationists and concerned Departments should be represented on it. A senior officer of the State Government should be the whole-time secretary of this Board, which should be provided with the necessary administrative and supervisory staff.

(2) The functions of this Board would cover all school education in the district—general as well as vocational. It will directly administer all government and local authority schools within the district, and it will also remain in charge of giving grants-in-aid to all private institutions in the district in accordance with the rules framed by the State Government for the purpose.

(3) It should be a responsibility of the Board to prepare plans for the development of school education within the District and it should also be the principal agency within the district to develop school education, the finances and guidance required for the purpose being provided by the State Government and the State Education Department.

(4) In big towns with a population of one lakh or more, it would be desirable to establish Municipal School Boards on the above lines since these would be viable administrative units. The composition, powers and responsibilities of these Boards should be similar to those of the district school boards.



(5) Each school board will maintain an education fund. The Zila Parishads (or Municipalities) will approve the budget of the school boards. They will also raise the resources expected of them and credit them to the School Board. In all day-to-day administration, the School Board would be autonomous. The same relation would hold good between a Municipal School Board and its Municipality.

(6) Recruitments and transfers will be done by a special committee consisting of the Chairman of the Board, its Secretary and the District Education Officer, subject to rules framed by the State Government, the general policy being to reduce transfers to the minimum and to allow teachers to develop loyalties to individual institutions.

(7) It may be better in some cases not to burden the school boards with full administrative responsibility all at once. Powers may be conferred on a board as it becomes experienced and shows its capacity to exercise them. 18.12-24

212. **The Role of the Central Government.** (1) Besides institutions in the scientific and technical sector, it is also necessary for the Centre to establish institutions specializing in social sciences including pedagogical sciences and the humanities. These should be established in close association with the universities and be an integral part of the university system.

(2) The Centre can also develop education in the Union Territories, particularly in Delhi, to serve as a pace-setter for the other areas.

(3) The Centre should scout for talent in different fields and make the services of the best people in the country available to the State Governments for advice and assistance in all matters.

(4) Funds for specific special programmes in the educational sector within the State Plans may not be earmarked. The total allocation for education, however, should not be altered without the approval of the Planning Commission. But within it, the State Governments should be free to use funds at their discretion.

(5) Considerable importance should be attached to the expansion of the Central and the Centrally-sponsored sector. It is through this mechanism that the Centre will be able to stimulate and guide educational developments in the national interest in crucial sectors.

(6) Education should not be fragmented keeping one part in the concurrent and the other in the State list. In a vast country like ours the position given to education in the Constitution is probably the best because it provides for a Central leadership of a stimulating but non-coercive character. The greatest need is for elasticity and freedom to experiment.

(7) An intensive effort should be made to exploit fully the existing provisions of the Constitution for the development of education and the evolution of a national educational policy. The problem may then be reviewed again after ten years. 18.25-30

213. **Ministry of Education.** (1) The present practice of giving the post of Secretary to the Government of India to an eminent educationist, who is designated as Educational Adviser to the Government of India and Secretary to the Ministry of Education should continue. This should be a selection post and the selection should be made from amongst all persons available, official, non-official, IES, university men, etc. It should also be a tenure post given only for six years in the first instance, with an extension in exceptional cases for three or four years but not renewable further.

(2) About half the posts of additional or joint secretaries should be filled by promotion from officers seconded from the State Education Departments and the remaining half should be filled from eminent educationists and outstanding teachers in universities and schools. The term of each tenure should be five years to be renewable at the most for a second term.

(3) The clearing house function of the Ministry of Education needs considerable strengthening and expansion. A well-staffed Division should be created to perform this function on an adequate scale.

(4) The Ministry of Education may set up a committee to examine the various types of studies required and to prepare a programme for action.

(5) It is a major responsibility of the Ministry of Education to maintain a good statistical service for educational planning, policy making and evaluation. In order that this function may be discharged properly, the Statistical Section of the Ministry should be reorganized and strengthened along the lines recommended. The statistical units of the State Departments of Education will have to be reorganized and strengthened likewise.

(6) The Central Advisory Board of Education with its standing committees should be functionally strengthened. 18.31-35

214. **National Council of Educational Research and Training.** (1) The NCERT should be developed as the principal technical agency functioning at the national level for the improvement of school education and operating through and in collaboration with the National Board of School Education, State Departments of Education and their technical agencies like the State Institutes of Education.

(2) The governing body of the NCERT should have an all-India character with a majority of non-officials. It is desirable to have at least one outstanding teacher from secondary schools and a person specialising in primary education, preferably a primary teacher.

(3) The Council should have its own full-time Director and Joint Director. The Director should be an eminent educationist in the field and his status should be that of a vice-chancellor. His term of office should be five years, renewable for not more than one term. The Joint Director would be needed mainly for the purpose of assisting the Director and relieving him of routine administrative matters.

(4) The Central Institute of Education, under the NCERT, should be transferred to the Delhi University.

(5) It is desirable that there should be considerable interchange and flow of officers from the NCERT to the State Education Departments and *vice versa*.

(6) The campus of the NCERT should be developed speedily and the building programme given the highest priority. 18.36

**215. Educational Administration at the State Level.** (1) It is desirable to create, at the State level, some machinery to coordinate educational programmes which are spread over a number of departments and take a unified view for purposes of planning and development.

(2) A statutory Council of Education should be created at the State level with the State Minister for Education as the Chairman. Its membership should include representatives of universities in the State, all Directors in charge of different sectors of education and some eminent educationists. Its principal functions would be to advise the State Government on all matters relating to school education, to review educational developments in the State and to conduct evaluation of programmes from time to time through suitable agencies. Its annual report along with its recommendations should be presented to the State legislature.

(3) A standing committee at the officers' level which would include all State level officers in charge of different sectors of education should meet periodically under the chairmanship of the Education Secretary.

(4) The Education Secretary also, like the Educational Adviser to the Government of India, should be an educationist rather than an administrative officer. It will be desirable to make this appointment a tenure post.

(5) Broadly speaking, the role of the Education Secretariat should be to examine educational problems from the administrative and financial point of view and in the wider context of governmental policies for development. It should give due weightage to the views of the Directorate in technical matters and assist the Director to function as the effective head of the Department. 18.37-42

**216. Indian Educational Service.** (1) The Indian Educational Service should be a service agency to teaching and research and should consist of persons who have teaching experience with the possibility of the educational administrator returning to teaching and the teacher going over to administration at least on a tenure assignment. Its method of recruitment should be as follows:

- (a) Only one-third of the posts should be filled by direct recruitment at the level of the junior scale. Even these selected persons should not be placed in administration direct. Their first assignments for a minimum period of

2-3 years should be in teaching and it is only after this initiation that they should be assigned to administration.

- (b) The remaining two-thirds of the posts should be filled partly by direct recruitment and partly by promotion at the level of the senior and higher scales.
- (c) Some posts of the IES should be available for being filled by tenure appointments of teachers for specified periods. In the same way, some posts in teaching and research should also be available for tenure appointments of persons from the IES.

(2) As there are insuperable difficulties, the idea of creating a teaching wing in the IES should be abandoned. The service should encadre only the posts of Directors and officers of the Directorate, District Educational Officers and headmasters of higher secondary schools in the State, and at the Centre, educational officers of the Ministry of Education and other Ministries and Education Departments of Union Territories.

(3) An adequate number of posts comparable to the higher scales of pay in the IES should be created in the universities and colleges to prevent a drain of talent from teaching and research to administration.

(4) It should be a convention that only about 50 per cent of the IES officers are assigned to their own States and there should also be a possibility of inter-State transfer (in addition to deputation to the Centre). To facilitate this, each member of the IES should be required to study and pass, within a given time after recruitment, tests in two other languages (Hindi and one more Indian language which is not his mother-tongue) to certain prescribed depth. 18.44-49

**217. State Educational Service.** (1) There should be an adequate number of posts at higher levels, namely, in Class I and Class II. The Secretaries of the District School Boards should be in Class I. The District Educational Inspectors (who will be in the IES) should have adequate assistance from officers of Class I and Class II status. In order to attract talented persons, recruitment is needed at three levels: Assistant Teachers' level; Class II level (50 per cent for freshers and 50 per cent for promotion) and Class I level (75 per cent for freshers and 25 per cent for promotion).

(2) A major reform now needed is to reorganize the State Education Departments where necessary on the basis of specialized functionaries and what is even more urgent and important is to make adequate arrangements for their specialized training with the help of the universities.

(3) To reduce anomalies in the salaries of the departmental staff and enable transfer-ability, it is proposed that (a) the scales of pay in the teaching and the administrative wings should be identical and (b) the scales of pay of the departmental staff should be correlated with the UGC scales of pay for university teachers. 18.50

218. **Training of Educational Administrators.** (1) The State Institutes of Education, in collaboration with universities where necessary, should organize the in-service educational programmes of all the non-gazetted staff on the administrative and inspectional side. In addition, they should also organize conferences, seminars and workshops for the gazetted staff.

(2) The old practice of giving furlough leave to administrators for undertaking special studies in educational problems should be revised.

(3) Some incentives should be provided for the officers who improve their qualifications materially through programmes of in-service education. 18.51-52

219. **National Staff College for Educational Administrators.** The Ministry of Education should establish a National Staff College for Educational Administrators. It should provide in-service education for all the senior officers in the educational Services—IES and State Educational Services. It should conduct two types of courses a longish induction course for new recruits and shorter courses of three to six weeks for officers in service. It should have a research wing for conducting studies in problems of educational administration and function as a clearing house of administrative procedures and practices in the States and Union Territories. It should also conduct periodical conferences, seminars and workshops on matters relating to educational administration. 18.53

220. **Education Departments.** The present position in most States is that the Education Departments are under-staffed because the growth of the departmental staff does not precede but follows the growth in the number of educational institutions; the norms fixing the number of officers required are not, even if fixed, observed in practice; the expenditure for increasing the departmental staff always has a low priority. The reversal of these policies is necessary subject to one reservation *viz.*, it is better to have a fewer officers at a higher level and on adequate scales of pay than a large number of officers at the lower level. 18.54

221. **Procedures.** (1) There should be a change in the attitudes of administrators who should cultivate an openness of mind and a spirit of enquiry rather than a rule-of-the-thumb approach which tries to stick to established practices even when they cease to be meaningful.

(2) The practice of holding periodical reviews, say, every three or five years, of important administrative practices with a view to chopping off dead wood and putting in fresh grafts where necessary should be established.

(3) Inter-State contacts should be built up and comparative studies in different State practices in all administrative matters should be encouraged. Periodical comparative studies in educational administration which would involve the State Education Departments closely should be made.

(4) The evolution of the technique of detailed programming of the plan projects and the training of officers in them is the responsibility of the State Institutes of Education and the National Staff College for Educational Administrators.

(5) The modern 'officer-oriented' system where most of the work will be done by the officers at their own level with the help of a small secretariat staff should be adopted. 18.55-56

222. **Education Acts.** (1) Education should be given a statutory basis everywhere and in all sectors and Education Acts should be passed in all the States and Union Territories. These should be comprehensive and consolidated measures which will replace all the miscellaneous laws which now exist and which will also provide a statutory basis for certain important aspects of administration (*e.g.*, grant-in-aid code) which now exists merely in the form of executive orders.

(2) The Government of India should issue a statement on the national policy in education which should provide guidance to the State Governments and the local authorities in preparing and implementing educational plans in their areas.

(3) The possibility of passing a National Education Act may also be examined. 18.57-58

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## CHAPTER XIX. EDUCATIONAL FINANCE

223. **Total Expenditure on Education.** If education is to develop adequately, educational expenditure in the next 20 years should rise from Rs. 12 per capita in 1965-66 to Rs. 54 in 1985-86 (at constant prices). This implies that the educational expenditure, which increased from Rs. 1,144 millions in 1950-51 to Rs. 6,000 millions in 1965-66, will further rise to Rs. 40,364 millions in 1985-86 and that the proportion of GNP allocated to education will rise from 2.9 per cent in 1965-66 to 6.0 per cent in 1985-86. 19.21-24

224. **Allocation of Funds.** While the broad pattern of educational expenditure in the different sectors of education during the next two or three decades will be to devote two-thirds of the available resources to school education and one-third to higher education, the relative emphasis on programmes should change from decade to decade as follows:

(1) From 1965 to 1975, the relative emphasis should be on a larger expenditure at the school stage. This will be necessary in order (i) to upgrade the salaries of school teachers; (ii) to transfer the PUC and the Intermediate classes from the university to

the school stage; (iii) to provide at least five years of effective education to all children; and (iv) to vocationalize secondary education.

(2) The programmes to be emphasized during the decade 1975 to 1985 will include the provision of seven years of effective primary education, the addition of one year to the school stage and vocationalization of secondary education. During this decade, emphasis should begin to shift in favour of higher education.

(3) After 1985, there will be increased emphasis on the development of higher education and research. 19.25

**225. Sources of Educational Finance.** (1) Although most of the responsibility for the support of education will be placed on governmental funds, a total centralization of all financial responsibility for education in the Government will not be desirable. Attempt should therefore, be made to raise contributions from local communities, voluntary organizations and the local authorities for this purpose.

(2) The assistance of the local community should be mobilized through the organization of school improvement conferences for improving the physical facilities in schools and the creation of school funds.

(3) In order to provide financial support to District School Boards, the Zila Parishads should raise funds for education by levying cess on land revenue. The State should prescribe the minimum rate of the levy and authorize the Zila Parishads to raise it to a certain prescribed maximum. In order to stimulate the collection of funds, the Government should give grant-in-aid proportionate to the additional revenues thus collected by the Zila Parishad. 19.14-20

**226. Grant-in-aid to Zila Parishads.** (1) The system of grant-in-aid from the State Government to Zila Parishads should be reformed on the following lines:

- (a) 100 per cent grant for salaries and allowances of teachers and other administrative and supervisory staff sanctioned by the Government. Definite norms regarding the number of teachers required and the administrative and supervisory staff needed should be fixed.
- (b) For non-teacher costs, a block grant per child in attendance should be given. The amount of this grant should be fixed separately for each category of schools and should be revised after every 3 to 5 years.
- (c) The resources raised locally by a Zila Parishad as well as the State grant thereon should be left with the Zila Parishad for such developmental programmes as it deems necessary; and
- (d) Grant-in-aid for non-recurring expenditure should be given separately, preferably at about two-thirds of the expenditure.

(2) The amount of grant-in-aid given by the State Government to Zila Parishads should be allowed to be funded and not made to lapse at the end of the financial year. (Para 2, Supplementary Note I, p. 491).

**227. Grant-in-aid to Municipalities.** (1) It should be made obligatory for the Municipalities to bear a certain proportion of the cost of education. For this purpose, they should levy a cess on lands and buildings.

(2) For the purpose of Government grants, the Municipalities should be classified in to groups on the basis of their wealth and the poorer Municipalities should be given grant-in-aid at a higher rate than others.

(3) All Corporations should be made responsible for supporting at least primary education within their jurisdiction. The Government grant to them should be on a proportional basis so that the Corporations contribute a certain percentage of the expenditure from their own funds. (Para 4, Supplementary Note I, pp. 491-492).

**228. The Role of the Centre.** The Central Government should assume a larger financial responsibility for education by expanding the Central and Centrally sponsored sectors. It should have the following characteristics:

(1) It should include programmes of crucial importance and national in character.

(2) In the Centrally sponsored sector, it should be possible for some programmes to vary from State to State according to their needs.

(3) Central assistance for programmes in the Centrally sponsored sector should be given for five years which may in certain cases be continued up to 10 years and not for plan periods only as at present. (Paras 9—15, Supplementary Note I).

**229. Economies and Utilization.** Even with the mobilization of maximum resources for education, the funds will still be inadequate to meet even the minimum needs of educational reconstruction, if conventional techniques involving large wastage and stagnation continue. It would, therefore, be necessary to adopt measures for economy, for eradication of wastage and for most efficient utilization of funds. Some of these measures have been indicated in paragraph 19.41. These and all other measures, which promote economy consistent with efficiency, should be adopted. 19.41

**230. Research.** Studies conducted in some other countries indicate the importance of education for economic growth but no such studies have been conducted in India so far. In view of the importance of the subject, the UGC should encourage studies on the subject to be conducted in a few universities. 19.43



## NEED FOR VIGOROUS AND SUSTAINED IMPLEMENTATION

1. In the last eighteen years, there have been two Commissions and a large number of Committees appointed by the Government of India which have reported on the different aspects of education. In addition, there have also been a large number of Committees appointed by the State Governments whose reports are of local as well as of national significance. Moreover, numerous advisory bodies have made innumerable recommendations on almost every aspect of education. All the same, the development of education in the post-independence period leaves much to be desired; and as the Government Resolution appointing this Commission has pointed out, 'a wide and distressing gulf continues to persist between thought and action and programmes concerning the quality of education, even when these were well-conceived and generally agreed to, could not be implemented satisfactorily.' It is this aspect of the problem that should be our major concern.

2. We would like to emphasize that there is no place for half-hearted policies in the days ahead. The economic prosperity of the country, the social and national cohesion of its life, the level of its cultural and spiritual development, its place in the comity of nations and its contribution to the life of Man—all these depend upon the quality of men and women we have; and this, in turn, depends essentially upon the education we provide. Educational reconstruction is thus crucial for our future and extremely urgent (it has to be completed within the life-span of a generation at the most). It is also unusually difficult because it has to be accomplished with comparatively meagre resources in terms of men, materials and money. In spite of these difficulties, it has to be taken up in earnest immediately and pursued intensively. We stand at a critical cross-road of history where the choice is between education and disaster. We must either build a sound, balanced, effective and imaginative educational system to meet our developing needs and respond to our challenging aspirations or be content to be swept aside by the strong currents of history.

3. **Essentials for Successful Implementation.** A vigorous and sustained implementation of the recommendations made in the Report demands a higher priority than that given so far to education in our national plans for development. A deliberate commitment about the crucial role of education in national development can alone provide the psychological motivation and energy needed for a massive programme of implementation. We realize that such conviction will depend essentially upon the extent to which education is effectively and demonstrably related to the life, needs and aspirations of the

country. This is a task mainly for the educators, and it is the urgency of this that we have emphasized in the Report.

4. Equally essential is the need for dedicated hard work. Today, the nation is facing, as never before, the challenge of hunger, unemployment, ill-health and poverty. A vital element which would help the country to meet this challenge is a revitalized education which, in its turn, can only be created if the leaven of idealistic teachers and administrators exist. Idealism is needed, now more, than ever, in all walks of life and especially in education. It may not be easy to plan for it; but it is doubtful if anything worthwhile will be achieved if we cannot generate it in fair measure.

5. Education thus needs and demands, more than anything else, hard work and dedicated service. In particular, it presents a supreme challenge to the students, teachers and educational administrators who are now called upon to create a system of education related to the life, needs and aspirations of the people and to maintain it at the highest level of efficiency. It is upon their response to this challenge that the future of the country depends.

6. We have emphasized that educational and national reconstruction are intimately interrelated and that perhaps the most effective way of breaking the vicious circle in which we find ourselves at present is to begin educational reconstruction in a big way. We would, however, like to point out that it will not be possible to make much headway in education unless the basic problems of life are also squarely faced and resolutely tackled. This stresses the interlinking of education and national development.

7. Finally, we would like to emphasize three points which are obvious but generally tend to be ignored:

- The Report of a Commission is not a substitute for action. Its purpose is to generate action. A Report which is shelved or does not lead to action is worse than no Report because it leads to frustration by arousing hopes that remain unfulfilled.
- Time is the essence of the problem. The next few decades are crucial and the future of the country depends largely upon what is done about education during the next ten years or so. The decisions on the several recommendations made in this Report need to be taken quickly. Action must start forthwith and continue at an ever increasing pitch of intensity in the years to come.
- The responsibility of implementing the Report is primarily that of the Government—Central and States. If they will not accept it, no one else will or can.

The stakes are too big to be taken lightly. We trust that to this tremendous challenge, there will be an adequate response.

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NEW DELHI  
29TH JUNE, 1966

Now that the work of the Commission has been completed we should like to say what a privilege it has been to have been associated with it. In particular, we wish to express our appreciation of the generosity of spirit with which our collaboration has been welcomed, not only by our fellow-members but by everyone with whom the work has brought us into contact. We would like to think that just as the invitation to us was an expression of the international-mindedness of India, so our participation may be taken as a sign of the goodwill of other countries towards India. We realise that to carry out the recommendations of the Report will be difficult and will call for great resolution; but we have confidence that their acceptance and implementation will lead to a decisive step forward in the education and the well-being of the Indian people.

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