

SATISCHANDRA COMMITTEE

Report

Report of the  
Review Committee on  
UGC Programmes

NIPAC



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## FOREWORD

The Review Committee was appointed by the University Grants Commission with a view to undertaking a comprehensive review of the various programmes being implemented by it and the impact that these have made on the fulfilment of the statutory responsibilities of the Commission, namely, determination and maintenance of standards of teaching, examinations and research in universities. The Commission took the view that the review should be in the nature of self-appraisal and introspection and it was, therefore, decided to have on the committee persons with an intimate knowledge and experience of the functioning of the UGC as well as the university system in India during the past three decades or so. It also involved those not belonging to universities, but having a background and knowledge of their functioning.

Introspection is not an easy exercise. Yet, in less than two years from the start the first such effort by the Commission was completed. I am happy to place the results before the public.

The review has had a fortuitous beginning. The Jha Review Committee had already carried out a critical examination of the structure and functioning of the UGC. The Commission had also decided upon an in-depth examination of its programmes, when the government directive for the review arrived. The Commission's decision was prompted by the need to prepare for the next five-year plan. Of its own volition, the Commission wanted to assess the usefulness of its important schemes to determine whether they were to get a fresh lease, specially in view of the constraint of resources. A committee was already on the ground. To save time, its composition was enlarged and its scope of activities expanded to conform to the objectives the government had in mind. It was, however, decided to take up only those programmes which had been in operation for about three years, so that their impact could be assessed in an objective manner.

Impact could mean many things to many people. After some efforts, certain parameters were evolved to identify the impact in a tangible manner. This process of self-examination was in no way a domestic exercise, as the term is commonly understood. In fact, the members were drawn from amongst the educationists and academics from the universities and IITs besides representatives from the Ministry of Education, Planning Commission and the University Grants Commission, etc. The members of the main Review Committee and the twelve

sub-committees which assisted the main committee were specifically requested to make the exercise as objective as possible.

The various sub-committees visited universities and colleges, selected on a zonal basis to represent different stages of development, and tried to make an on-the-spot examination of the various schemes of the Commission being implemented by them. The central report was thus born out of the regional reviews. These preliminary reports were given a final shape after a series of discussions in the main committee. Eight such meetings were held, and the discussions were sometimes animated. I am happy that a consensus was finally arrived at. I am grateful to all members of the review committee and sub-committees for their keen and sustained interest. A special word of thanks is due to the member-secretary, Dr. S.C. Goel, who had to catch the nuances of the discussions in order to produce a comprehensive and tangible report.

The report, I hope, will be of use to the Commission as also to the universities and colleges to critically assess their achievements and failures in raising standards of teaching and research, strengthening their academic infrastructure and their organisational set up. The report also highlights the urgent need of monitoring at various levels, and of greater interaction between the UGC and other central agencies, including the government, and the State governments as well as the universities and colleges in the length and breadth of the country.

This report and the UGC publication "*Policy Frame for Higher Education*" would, I hope, provide a broad framework for developing higher education in the country in the 80s, and helping to build linkages between the university system and the wider community — a task which had been postulated in a definitive manner for the first time in the *Report of the Education Commission* in 1964.

1.1.1981

SATISH CHANDRA  
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University Grants Commission  
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## I

### Introduction

1.01 In exercise of the powers conferred under section 20 of the UGC Act, 1956, the Central Government in the Ministry of Education and Social Welfare (Department of Education) directed the University Grants Commission vide its letter No. 10-14/78.U-1 dated the 18th October, 1978 to undertake a comprehensive review of the various programmes being implemented by it and the impact that these have made on the fulfilment of the statutory responsibilities of the Commission, namely, determination and maintenance of standards of teaching, examinations and research in universities. The Commission was also asked to identify schemes which are considered peripheral or which have not registered any impact on the maintenance and improvement of standards of university education and to discontinue them.

1.02 The University Grants Commission at its meeting held on the 14th of November, 1978 noted the contents of the above letter and observed that it had already taken steps to review the existing schemes being implemented by it to determine the schemes that may be continued in the next plan. In this context, the Commission desired that only those quality programmes be reviewed at this stage which have been in operation for about three years or so, in order that their full impact may be assessed.

1.03 In pursuance of the above resolution of the Commission, the committee already constituted by the Commission to review its ongoing programmes was enlarged and the following committee constituted in terms of the government directive:—

1. Professor Satish Chandra,  
Chairman,  
University Grants Commission,  
New Delhi.
2. Professor B. Ramachandra Rao,  
Vice-Chairman,  
University Grants Commission,  
New Delhi.
3. Shri P. Sabanayagam,  
Secretary,  
Ministry of Education & Culture,  
New Delhi.

4. Professor B.M. Udgaonkar,  
Tata Institute of Fundamental Research,  
Bombay.
5. Professor R.P. Bambah,  
Director,  
CAS in Mathematics,  
Punjab University,  
Chandigarh.
6. Dr. Malcolm S. Adiseshiah,  
Chairman,  
Madras Institute of Developmental Studies,  
Madras.
7. Professor G. Rama Reddy,  
Vice-Chancellor,  
Osmania University,  
Hyderabad.
8. Dr. Ramaranjan Mukherji,  
Vice-Chancellor,  
Burdwan University,  
Burdwan.
9. Professor (Miss) A.J. Dastur,  
Former Member,  
University Grants Commission,  
New Delhi.
10. Professor Ram Lal Parikh,  
Member of Parliament,  
4, Ferozeshah Road,  
New Delhi.
11. Dr. C.S. Jha,  
Educational Advisor (Technical),  
Ministry of Education & Culture,  
New Delhi.
12. Dr. S.N. Saraf,  
Chief (Education Division),  
Planning Commission,  
New Delhi.

*Member-Secretary*

13. Dr. S.C. Goel,  
Joint Secretary,  
University Grants Commission,  
New Delhi.

1.04 The Review Committee met on the 14th of December, 1978 and agreed that a sub-committee may be appointed to consider review notes on the ongoing programmes of the Commission as also the question of continuation of the peripheral schemes. The sub-committee was also requested to identify a few schemes for detailed examination on the basis of the importance of the scheme and the allocation made for the purpose.

1.05 The Review Committee also took note of the fact that the Commission had invested a significant portion of its funds on the development of universities and colleges during the fourth and fifth plan and desired that an effort should be made to study the impact of development programmes on the determination and maintenance of standards of teaching, research and examinations by selecting a few universities and colleges on a zonal basis.

1.06 The above matters (para 1.04 and para 1.05) were referred to a sub-committee consisting of the following members:

1. Professor Satish Chandra,  
Chairman,  
University Grants Commission,  
New Delhi.
2. Professor B. Ramachandra Rao,  
Vice-Chancellor,  
University Grants Commission,  
New Delhi.
3. Dr. Malcolm S. Adiseshiah,  
Chairman,  
Madras Institute of Development Studies,  
Madras.
4. Professor G. Rama Reddy,  
Vice-Chancellor,  
Osmania University,  
Hyderabad.

5. Professor (Miss) A.J. Dastur,  
Former Member,  
University Grants Commission,  
New Delhi.
6. Shri S.N. Pandita,  
Joint Secretary,  
Ministry of Education & Culture,  
New Delhi.
7. Dr. S.N. Saraf,  
Chief (Education Division),  
Planning Commission,  
New Delhi.
8. Dr. S.C. Goel,  
Joint Secretary,  
University Grants Commission,  
New Delhi.

1.07 The sub-committee at its meeting held on the 5th of February, 1979 identified universities and colleges for visit by committees and also made suggestions regarding the composition of the visiting committees. The sub-committee also reviewed the position of some of the peripheral schemes to see if these should be continued in the current plan period.

The sub-committee suggested that a further indepth study by way of a review of the objectives and procedures be made in respect of the following schemes:

- (i) Centres of Advanced Study and Departments of Special Assistance.
- (ii) College Science Improvement Programme and College Humanities and Social Science Improvement Programme.
- (iii) Research Fellowships.
- (iv) Financial Assistance to teachers for research work.

1.08 In pursuance of the decision of the Review Committee as also the recommendations of the sub-committee, three universities and three colleges were selected from each of the four zones viz. North, South, West and East in such a manner that the selected institutions represented different levels of development. A list of universities and colleges visited by sub-committees is at Annexure-I.

1.09 The sub-committees were constituted so as to include experts in the field of humanities, social sciences, natural sciences, biological sciences, engineering and technology, as also experts from outside the

university system. The state governments were also requested to associate their representatives with the visits. A list of members of the sub-committees is at Annexure-II.

1.10 Each sub-committee, constituted for visiting universities and colleges, was given basic information regarding the allocation and utilisation of grants during the period 1973-74 to 1977-78 as also extracts from the recommendations of the Public Accounts Committee and the UGC Review Committee (Jha Committee). The norms and guidelines laid down by the Commission in respect of various schemes e.g. postgraduate courses in colleges, correspondence courses, college development council, publication of theses, autonomous colleges, examination reforms, restructuring of courses, evaluation of Ph.D. theses, award of fellowships etc. were also supplied. Members were given notes based on factual information collected from the universities and colleges in response to a questionnaire besides a copy each of the UGC annual report.

1.11 The sub-committees were asked specifically to look at developments in the universities in a comprehensive manner in relation to the development grants paid by the UGC as well as the support provided by the Commission under various quality improvement programmes.

1.12 Although it is not easy to define standards or to measure them with the help of a yardstick, the following parameters were suggested to help the sub-committees in their work:

- (i) Contribution of teaching staff to research by way of monographs, brochures, articles or papers in learned journals etc.
- (ii) Participation of teachers in seminars, workshops, conferences and other forms of academic get-together.
- (iii) Calibre of students over a period of time as judged by admission requirements and examination results.
- (iv) Improvement and modernisation of courses and their relevance.
- (v) Effective utilisation of infrastructural facilities by way of libraries, laboratories, classrooms, hostels, study centres etc.
- (vi) Procedures for purchase of books, journals, equipment etc.
- (vii) Adoption of UGC norms and guidelines.
- (viii) Implementation of the recommendations of the visiting committees.
- (ix) Utilisation of UGC grants-shortfalls, if any.
- (x) Nature and extent of interaction between the universities and national laboratories and other academic organisations, particularly those in the neighbourhood and the benefits accruing from it.

1.13 A meeting of the convenors of the sub-committees was also held on the 6th of March, 1979. There was a general discussion on the parameters suggested above in relation to the measurement of standards and impact of UGC grants. In this context, the following suggestions were made:

- (a) It was noted that the main purpose is to assess the impact of UGC grants. In so far as the utilisation of grants paid by the state governments is concerned, this should be considered in relation to the matching contributions and the taking over of liability by the state governments at the end of the plan period:
- (b) It may be clarified to the universities and colleges identified for visit that the selection has been made in order to have a representative sample and that the results of this assessment by expert committees would help the UGC as well as the institutions concerned and that it should not be construed as an enquiry into the affairs of the university or college.

1.14 The sub-committees visited the universities and colleges between March 19 and April 12, 1979 and submitted their reports by May 20, 1979.

1.15 Our report is based on the recommendations in the reports of the individual universities and colleges, and discussions held with the convenors of the sub-committees on the 4th of June, 1979 and our own deliberations and formulations. In all, eight meetings were held as detailed below:

	<i>Date of the Meeting</i>	<i>Place</i>
First meeting	14th December, 1978.	UGC, New Delhi.
Second meeting	9th January, 1979.	UGC, New Delhi.
Third meeting	26th April, 1979.	UGC, New Delhi.
Fourth meeting	4th-5th June, 1979.	UGC, New Delhi.
Fifth meeting	9th-10th August, 1979.	UGC, New Delhi.
Sixth meeting	13th November, 1979	UGC, New Delhi
Seventh meeting	16th-17th January, 1980	UGC, New Delhi
Eighth meeting	30th July, 1980.	

1.16 Our terms of reference include a review of the ongoing programmes of the Commission, which can best be done keeping in view the objectives and functions of the Commission. In this connection, it may be noted that the UGC Review Committee (Jha Committee) has dealt

with the objectives and functions of the Commission in a comprehensive manner, as also with other problems such as the coordination of standards, organisation, structure, research, planning, evaluation etc.

1.17 In view of the ground covered by the Jha Review Committee, we have not considered it necessary to go into the problems of organization and management. Even so our report and recommendations would be understood better in the light of a broad perspective of the objectives and functions of the UGC and its role in relation to the maintenance and coordination of standards. We have, therefore, touched upon these aspects in a general way in the following paragraphs.

1.18 *Objectives of the Commission:* The UGC in India, which in a sense is a unique institution, owes its existence as an autonomous and statutory body to the recommendations of the University Education Commission (1948-49) which considered "a Committee or Commission for allocating both recurring and capital grants to universities from the Centre. . . . .so fundamental to our proposals for improving and developing our universities that if it were not in existence we would have to invent one." The Commission recommended the setting up of the UGC with five or seven members and with "panels of experts in each subject or group of cognate subjects" appointed for a fixed period. The University Education Commission was of the view that the duty of the UGC should be allocation of grants – recurring as well as capital – to universities within the total limits set by the government. Another function that would "accrue" to the UGC would be that of always being available for consultation and advice – the initiative in seeking advice resting entirely with the universities. The University Education Commission was of the view that proffering unsought advice would spoil the UGC's relation with the universities which should be that of "friendship and not that of the policemen or even the inspector."

1.19 On November 3, 1952, the Government of India resolved to create a University Grants Commission in pursuance of the recommendations of the University Education Commission. The interim Commission started functioning in December, 1953. The UGC Act was passed by the Parliament in 1956. The main provisions of the Act are detailed in Annexure II.

1.20 The UGC has been functioning as an autonomous and statutory body since 1956. In our opinion, the existence of a body like the UGC has significance for the development of higher education from many points of view. With the help of periodic visiting committees, the Com-

mission continually reviews the programmes and monitors the progress of universities; and is also able to interact closely with a large number of academics in formulating policies and programmes. The main significance of the establishment of the UGC is that a body has come into being which ensures that universities and colleges in the country are insulated from bureaucracy (in the narrow sense of the term) or from the government at the Centre which is often subject to political vicissitudes. Though the Commission is appointed by the government, there is no direct intervention in its day-to-day functioning. A set-up like this has visible as well as invisible gains for the system of higher education in the country.

1.21 It was expected that the UGC would be able to evolve new procedures of financial management and impart a certain degree of flexibility and would thus be fully responsive to the growing and changing needs of higher education and its management. The extent to which this expectation has been fulfilled will need to be examined closely in the light of the recommendation of the sub-committees which visited universities and colleges and our analysis presented in sections II and III.

1.22 Although the UGC has been designated as a grant-giving body, its main function is related to the maintenance and coordination of standards. Accordingly, the UGC Act contains the following provision (section 12):

“It shall be the general duty of the Commission to take, in consultation with the universities or other bodies concerned, all such steps as it may think fit for the promotion and coordination of university education and for the determination and maintenance of standards of teaching, examination and research in universities.”

It may be noted that in the Government of India Act of 1935 there was no reference to the coordination and determination of standards. The fact that an entry to this effect was made in our Constitution in the central list, while education continued to be a state subject, shows that the framers of our Constitution desired that we should maintain the highest possible standards in the field of higher education on a uniform basis throughout the length and breadth of the country.

1.23 In terms of the above provision, we suggest that the main objective of the UGC should be to raise the level of university education, firstly, to the highest standards obtaining in our own country; and, secondly, to raise ‘standards’ in our country to the highest standards anywhere in the world. However, in the situation prevailing in the field



of higher education in India the pursuit and realization of excellence cannot be a universal phenomenon. Such an attainment is possible only in limited areas, and our efforts have to be directed to extending the boundaries of these areas, as well as raising the level of those which have already attained a certain position. Coordination, in our opinion, is far more difficult. This involves, in the first place, a proper linkage of educational facilities with the resources available for higher education. Given the financial and other inputs, a central agency is in a much better position to determine the areas which should be consolidated and strengthened and to indicate the directions in which further growth and expansion may take place. Similarly, coordination has also to be brought about between the need for maintaining quality through a proper consolidation of the existing facilities and expansion in order to meet the development requirements of the country, especially the need for trained personnel produced by universities for shouldering positions of responsibility in various fields. It is also necessary to avoid duplication in highly selective areas of specialization in order that the available material and academic resources may be used to the best possible advantage, and to bring about institutional cooperation among the universities, regionally and nationally, in respect of various facilities required for teaching and research.

1.24 So far steps for the maintenance and coordination of standards have been taken by the Commission "in consultation" with the universities as required by the UGC Act. However, the Commission has not as yet carried out any formal inspection of a department under section 13(1) of the UGC Act, nor has it exercised the power under section 14 for withholding grants. Grants were temporarily withheld in a few cases and this had a salutary effect. As such there has been no occasion to resort to the provisions of section 14. The Education Commission (1964-66) considered the criticism of the UGC on the ground of not withholding grants as ill-founded and expressed the following view:

"We do not think that the vigilance of the UGC in financial matters is to be judged by the extent to which it has withheld grants — this is an extreme power which is not to be lightly exercised and the effects of which are likely to be adverse to the larger interests of education. In our opinion, a better basis for judgement is provided by the projects for which grants-in-aid have been sanctioned and which have been implemented so far. On this ground, we have hardly heard any criticism and have had considerable evidence to the contrary. . . . . It has to be borne in mind that the relationship between the universities and the UGC is a very delicate one, and that the UGC can become an effective instrument for upgrading of standards only if it follows the method

of persuasion rather than coercion.”

We are in general agreement with the above view and would suggest that the powers given to the UGC under the Act should be used only as a last resort. It would be unfortunate if the UGC were to stress, time and again, those powers which make it a directorate.

*1.25 Functioning of the Commission:* The UGC Review Committee (Jha Committee) has already reviewed critically the functioning of the Commission during the following three phases:

Phase I	—	August 1956 to January 1961.
Phase II	—	March 1961 to January 1973.
Phase III	—	January 1973 to March 1975.

In this connection, we may refer to pp. 9-19 of the Report of the UGC Review Committee. Developments in the Commission since April, 1975 have been reviewed by us in the following paragraphs.

*1.26* During the close of the Fourth Plan period, the Commission appointed a Planning Group to determine priorities and programmes for the fifth plan in relation to the requirements of higher education, national development and social change. The guidelines formulated by the Commission on the basis of the recommendations of the Planning Group are summarized below:

(a) Financial resources for higher education during the fifth plan period will be limited. Development programmes may be classified according to priorities I, II & III to represent the first 50 per cent, the next 25 per cent and the remaining 25 per cent respectively.

(b) In preparing programmes for the fifth plan period beginning April 1974, the university may keep in view the need of bringing to successful completion the programmes already initiated during the fourth plan period or earlier.

These programmes and the grants to be paid for their completion after the 1st of April 1974, will be taken as the first charge on the fifth plan allocation for university development programmes.

(c) In the case of building programmes approved during the fourth plan period, but where construction work has not yet been started, the universities may review the position and decide whether such building activities should be included within the fifth plan allocations.

(d) There will have to be considerable restraint on expansion of enrolment in formal and full-time courses, particularly at the undergraduate stage.

(e) Each university may prepare a comprehensive plan of development to cover the programmes of the university departments and

of its postgraduate centres, if any.

(f) Consolidation would imply, inter-alia, participation in various faculty improvement programmes initiated by the Commission or by the universities themselves. Universities may encourage their staff to make maximum use of the programmes.

(g) The universities may try to develop appropriate extension programmes like part-time education in science subjects for industrial workers in their neighbourhood either as evening or as correspondence courses. These would have to be in collaboration with the industry concerned.

(h) Postgraduate teaching should be consolidated as far as possible in university departments or at postgraduate centres set up by the university, or through a coordinated programme – by groups of colleges, rather than allowing individual colleges to start sub-viable postgraduate departments. The universities may assess the need for fresh postgraduate seats and facilities for the fifth plan period, and indicate an outline of a plan of how they propose to meet these needs.

(i) Efforts may be made to develop collaborative and inter-disciplinary programmes of courses and research involving several departments, e.g., programmes in area studies, biological sciences, earth sciences, law and social change, development studies in relation to science and technology and social sciences, environment and ecology etc.

1.27 The implementation of the fifth five year plan programmes in the universities and colleges was generally to conform to the guidelines formulated by the Planning Group and accepted by the Commission. The Commission also took decisions regarding the distribution of grants between the universities and colleges and pattern of assistance, as detailed below:

1.28 The Commission agreed that during the fifth plan period the UGC would utilise about 2/3rd of the allocation for general development programmes of the universities and colleges and the balance for special programmes to be initiated by the UGC on a selective basis. About 1/3rd of the amount proposed for the universities and colleges could be earmarked for the general development of colleges.

1.29 The Commission decided that assistance for different inputs may broadly conform to the limits indicated below while accepting development schemes of universities.

(i) Buildings*	–	25% of total allocation
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\*In case of established universities the distribution of expenditure on items (ii), (iii) and (iv) could vary, if necessary.

(ii) Staff	—	27%
(iii) Equipment	—	20%
(iv) Books	—	20%
(v) Miscellaneous	—	8%

1.30 The broad distribution of grants on major items for development of postgraduate education in affiliated colleges may be the same as for the universities and as indicated above. The expenditure on staff in postgraduate colleges should be so arranged that about 50% is utilised for the appointment of additional staff and the remaining 50% is utilised for faculty improvement programmes.

1.31 In the case of colleges, the assistance for different items in the plan was broadly to conform to the limits indicated below:

Building	..	1/3
Faculty Improvement and additional staff	..	1/6
Books and equipment	..	1/2

1.32 A word may be said at this stage about the approach of the UGC towards development of universities during the current plan period.

Towards the close of the year 1977-78, the University Grants Commission finalised an important document, *Policy Frame for the Development of Higher Education in India* (Annexure IV) over the next 10-15 years. The Policy Frame outlines the main achievements and failures of the system of education in India and suggests a framework which would help transform the value system and the basic structure and processes of the educational system; make it more flexible and dynamic and enable us to move in the direction of providing opportunities for life-long learning to every individual. The formulations in the Policy Frame concern the regulation of admissions/institutions, restructuring of undergraduate education, development of postgraduate studies and research, extension programmes for the community and the maintenance of standards.

It has been suggested in the Policy Frame that attempts should be made, on the basis of the highest priority, to improve standards. Apart from various measures the document calls for the regulation of admissions and establishment of new institutions. The programmes

for raising standards would include faculty development, provision of essential equipment, buildings and other facilities and organisation of an adequate programme of student services. These would need considerable investment in men, materials and money. But more importantly, they need commitment and competence on the part of the teachers, high motivation in students who should be selected for their capacity and a climate of sustained and dedicated hard work. A selective approach, proper planning and concentration of resources are also equally essential to achieve good results.

*1.33* As part of the new development strategy, the Commission has proposed that universities may be grouped under three categories on the basis of profiles of departments being prepared by the subject panels. The categories are well-developed universities, developing universities, and universities which have the potential to reach the well-developed stage in the next five years. The main attempt would be to see that (a) in the case of well-developed departments, the general plan assistance is utilised to a very minimal level, (b) to make available to the developing departments necessary amounts to bring their facilities and activities to an optimum level essential for maintenance of proper standards, and (c) to identify from amongst the developing departments, a few departments which are in a stage of development and have the potential to become fully developed over the next five years with the help of some critical inputs and academic guidance.

*1.34* In so far as the college sector is concerned, it is proposed to provide to all eligible colleges fulfilling certain minimum eligibility conditions, basic grants for purposes of faculty improvement, book banks and bringing science laboratory facilities and equipment to an optimum level. On the other hand, developmental assistance to colleges would be on a selective basis, based upon well-defined eligibility criteria, academic viability, potential for change and capacity to attain high standards.

## II

### Commission's Programmes and Schemes—A Review

2.01 The programmes implemented by the Commission (Annexure V) in the fifth plan may be put under the following broad heads (a) development of universities; (b) development of colleges; (c) faculty improvement programmes; (d) support for research work; (e) student welfare programmes; and (f) academic and cultural programmes. The objectives of these programmes and the Commission's *modus operandi* in this regard are discussed in the following paragraphs.

2.02 *Development of Universities:* The general approach of the Commission to the development programmes of universities was decided in accordance with the recommendations of the Planning Group summarised in Section I of the report. The main emphasis was on consolidation, flexibility and reorientation of the existing departments towards social needs, specially those of the under-developed sections and more particularly those living in the rural areas.

2.03 Development grants to the universities for the fifth plan period were paid on the basis of proposals made by the universities and accepted by the Commission on the basis of evaluation by expert committees. These included continuing schemes and projects relating to the construction of academic buildings, library buildings, staff quarters, teachers hostels, student hostels, study homes, non-resident student centres, canteens, guest houses, purchase of books, journals and equipment, appointment of additional teaching staff and other miscellaneous schemes approved by the Commission.

2.04 The visiting committees consist of experts in various fields of specialisation who are generally drawn from the university system and have, therefore, intimate knowledge of the needs and requirements of individual departments, inter-disciplinary approaches and the general direction in which the university should move in order to improve its standards of teaching and research. Representatives of the state governments were also associated with the work of the visiting committees in order to involve the state governments fully in the development programmes of the universities from the initial stage of planning itself. The visiting committees were specially asked to take a coordinated view of the development of the universities within a state. This procedure ensured the largest measure of participation by the academic

community in planning and in determining priorities and programmes and in bringing about coordination as well as the optimum utilisation of resources.

2.05 The Commission had invited proposals from the universities/institutions deemed to be universities and postgraduate centres concerned within an allocation of Rs. 107.25 crores.

2.06 *Development of colleges:* The Commission's policy in regard to the development of colleges was governed mainly by two factors, firstly, removal of disparities and regional imbalances and secondly, improvement of standards and quality of education in the institutions. The Commission's strategy for the development of colleges, keeping in view the limitations of resources and the immensity of the problems, was to bring about qualitative improvements through various programmes.

2.07 The Commission provides assistance to colleges under (a) general development including construction of libraries, laboratories, classrooms, hostels, staff quarters, workshops, animal house, non-resident student centres, purchase of books and equipment, appointment of additional staff, introduction of remedial courses and faculty improvement programmes; (b) development of postgraduate studies in the humanities, social sciences and science subjects, (c) quality programmes, such as, college science improvement programme, college humanities and social science improvement programme, faculty improvement, support for research etc. and (d) restructuring of courses to make undergraduate education more relevant to the rural environment and to the development needs of the community and to link theory with field work and practical experience.

2.08 During the fourth plan period the Commission provided assistance generally upto rupees three lakhs to colleges for the development of undergraduate education in arts, science and commerce. Depending upon the progress of the implementation of the scheme, a college could be further assisted for an additional amount of Rs. One lakh. In addition, assistance upto rupees three lakhs was made available to selected colleges for construction of a teacher's hostel on approved sharing basis of 80 (UGC): 20 (college), outside the general financial ceiling of rupees three lakhs.

2.09 At the beginning of the fifth plan, the Commission agreed to provide assistance upto rupees five lakhs during the plan period for the development of undergraduate education in arts, science and com-

merce courses in the colleges. Assistance was available in two phases viz. rupees three lakhs in phase I and rupees two lakhs in phase II. In June, 1976 the Commission reviewed the position and agreed that in the case of colleges which have a student enrolment and a staff of 50% more than the prescribed eligibility condition, the proposals may be considered for the total rupees five lakhs instead of limiting them to rupees three lakhs in the first priority. The Commission also decided that colleges having an enrolment beyond 1,000 students in degree classes would be eligible for assistance upto Rs. eight lakhs and beyond 2,000 students upto Rs. ten lakhs. The actual utilisation of this provision shows some variations among different zones in the country.

2.10 For women's colleges and colleges where 50% of the enrolment constitutes scheduled caste and scheduled tribe students as also colleges situated in backward areas, the conditions regarding minimum enrolment and the minimum number of qualified permanent teachers were relaxed in order to bring in more such colleges within the purview of UGC assistance.

2.11 In the interest of social justice, the Commission decided that in the fifth plan, all institutions assisted by it to construct student hostels would be required to reserve 20% of the seats in such hostels for students belonging to scheduled castes and scheduled tribes. The Commission also decided that its assistance for construction of hostels in backward areas would be at the rate of 75% of the total expenditure as against 50% available for other areas.

2.12 Under the scheme of grants for the development of colleges during the fifth plan period, the Commission decided to take out of the scheme some of the peripheral items of assistance viz. semi-micro analysis equipment, tube-wells, overhead tanks, cycle-sheds and chalk boards, as it was felt that these items should go into maintenance rather than the development of colleges.

2.13 The philosophy of matching contributions was continued in the fifth plan in order that the states contribute to the development of colleges and also to enable the local community to contribute its mite to the growth of higher education. However, in programmes of vital importance such as faculty improvement, autonomous colleges, workshops, remedial courses etc., the Commission agreed to support the colleges on a 100% basis.

2.14 Another significant feature of assistance to colleges in the fifth plan was the decision of the Commission to provide assistance to col-



leges for the development of postgraduate studies in humanities, social sciences and science subjects on the basis of the recommendations of visiting committees, keeping in view the norms laid down in this regard. Assistance for the purpose was provided for buildings (25%), equipment (20%), books (20%), additional staff (27%) and miscellaneous (8%), subject to a ceiling of Rs. one-two lakh per department.

2.15 The Commission also laid down comprehensive norms for starting postgraduate courses in colleges in different subjects taking into consideration the need for starting new courses, adequate facilities by way of libraries, laboratories, classrooms, minimum number of teachers and their qualifications, areas of specialisation, potentiality for development etc.

2.16 During the period 1974-75 to 1977-78, 1,873 colleges qualified for central assistance. Of these, 1,402 applied. Proposals of 998 colleges were accepted and 216 were rejected. Clarifications were sought from the remaining colleges. In addition to the above, the Commission provided assistance on 100% basis towards core grant for books & equipment to 2,245 colleges which were eligible.

2.17 *Faculty Improvement Programmes:* The Commission has been attaching great importance to faculty improvement programmes by (a) providing opportunities to teachers to keep abreast of modern developments in their fields of study and research and to exchange ideas with experts in similar or related fields through seminars, summer institutes, workshops, conferences etc., (b) enabling teachers, especially in the affiliated colleges, to improve their professional competence through the award of teacher fellowships by providing opportunity to them to work for M.Phil. or Ph.D. with adequate provision for salary plus living expense, (c) increasing the mobility of teachers and enabling colleges and departments in backward and other areas to avail of the services of outstanding teachers in different disciplines through such programmes as national lectures, utilisation of services of retired teachers, travel grants, visiting professorships, fellowships etc., and (d) enabling teachers to take time off their normal teaching and engage themselves in writing up the results of their studies/research through such programmes as national fellowships, national associateships etc.

2.18 The Commission has formulated guidelines (Annexure VI) for the implementation of these programmes. Selections are made on the advice of expert committees especially constituted for the purpose.

**2.19 Support for Research Programmes:** The programme has three important components viz. (a) research fellowships and scholarships, (b) support for research projects in the humanities, social sciences and science subjects, and (c) assistance towards the publication of theses and learned research works.

**2.20** The Commission has given high priority to the award of scholarships and fellowships for the development of research in the universities and colleges. The objective of the scheme is to enable academically bright students to carry on their research as an independent and full-time activity through adequate support for their maintenance and for the purchase of books, journals, equipment etc. by them. In addition to the fellowships specially created for centres of advanced study and those provided for approved programmes of research and departments selected for special assistance, the UGC awards annually senior and junior research fellowships in science, humanities and social sciences and research fellowships in engineering and technology on an all-India basis.

**2.21** The scheme of junior research fellowships has now been decentralised. Selections for senior research fellowships are made on an all-India level by expert committees especially constituted for the purpose.

**2.22** The Commission provides support towards advanced and short-term research projects in the humanities, social sciences and science subjects. While formulating research projects, universities were requested to keep in view (a) the importance of defining major thrust areas and detailing the plans for coordinating and making the best use of visiting facilities and staff, (b) inter-departmental and/or interdisciplinary proposals as well as collaboration with universities, national laboratories, and industries (c) scarcity of resources of foreign exchange, and therefore, the need to emphasise indigenous instruments and design, fabrication and building of equipment, (d) the need for utilization of sophisticated equipment by scientists from other departments or other universities or colleges etc. (e) installation of computer or purchase of computer time and (f) repair and servicing of instruments. The projects are approved by the subject panels concerned.

**2.23** The Commission has been providing assistance to individual teachers working in the universities and colleges for undertaking research in their specific fields. Support under this programme is specially provided to college teachers and junior teachers in the universities

who do not have adequate resources to meet the expenses connected with their individual research either for a degree or as part of their individual project. Assistance towards the publication of theses and learned research works is provided on the basis of guidelines formulated by an expert committee. Lump sum grants ranging from Rs. 10,000 to Rs. 60,000 were allocated to each university for the purpose for two years viz. 1977-79.

*2.24 Student Welfare Programmes:* The Commission initiated a number of programmes of student welfare, specially in regard to needy and poor students on the one hand and meritorious students on the other. These include student aid fund, non-resident student centres, student study homes and book banks. Assistance is provided to universities and colleges on the basis of the norms laid down by the Commission in each case. The Standing Committee on Student Welfare Programmes advises the Commission in this regard.

*2.25 Academic and Cultural Programmes:* While there are a large number of academic and cultural programmes for which the Commission provides assistance, the more important among these include correspondence courses, adult education, cultural and bilateral exchange programmes, examination reforms, centres of advanced study and departments of special assistance, university centres for postgraduate studies and area studies.

*2.26* In the present section, we have reviewed the Commission's programmes and schemes of assistance under two broad heads viz. (a) general development and (b) special programmes insofar as universities are concerned. As already stated, grants for general development of universities are provided for additional staff positions, buildings, books and journals and equipment etc.

*2.27 Additional Staff Positions:* The additional staff positions are sanctioned by the UGC on the recommendation of the plan visiting committees with a view to enabling the departments concerned (a) to have a minimum viable strength for proper coordination, specialisation and mutual interaction, (b) to undertake and strengthen various quality programmes like centres of advanced study, departments of special assistance, university leadership projects, M.Phil. courses, research projects etc. and (c) to introduce new courses or areas of specialisation.

*2.28* A statement showing the additional staff positions approved by the Commission under general development and those filled by the

12 universities included in the sample in the fourth plan and during the period 1974-75 to 1978-79 is given in Annexures VII and VIII. It will be seen that the position regarding the utilisation of approved posts was highly satisfactory in the fourth plan period; the overall position being that the universities were able to fill 90% of the posts approved by the Commission during the plan period itself. However, the ratio of posts filled to posts approved came down to about 69% during the period 1974-75 to 1978-79 for reasons explained in paragraphs 2.33 and 2.34.

2.29 The position regarding the posts approved by the Commission and filled by the universities during the period 1974-75 to 1978-79 varies considerably from one university to another. There was full or adequate utilisation of staff positions in Sri Venkateswara, Madras, Poona and Sardar Patel Universities. The progress was rather slow in the Gauhati, Gorakhpur, Jabalpur, Ranchi and Panjab Universities.

2.30 The categorywise utilisation of staff position shows that during the period 1974-75 to 1978-79, the ratio was 70% for professors, 66% for readers and 70% for lecturers, which means a more or less uniform position for each of the three categories, in contrast to the fourth plan when the problem in recruitment and selection and filling of approved posts was mainly at the level of professors.

2.31 The ratio of senior teachers viz. professors and readers to total teaching staff in the 12 universities visited by sub-committees (Annexure IX) shows that the position improved from 38 per cent in 1969-70 to 46 per cent during the year 1977-78. Generally speaking, the ratio varies from 40 to 60 per cent i.e. around the accepted norm of 50 per cent; the only exceptions being Ranchi (72 per cent) and Gorakhpur (22 per cent).

2.32 Eight universities viz. Sardar Patel, Poona, Sri Venkateswara, Calicut, Madras, Gauhati, Gorakhpur and Panjab have given the year-wise position of posts filled by them during the fourth plan period. This shows that the yearwise percentage of posts filled was 28.0 in 1969-70, 19.0 in 1970-71, 26.0 in 1971-72, 19.0 in 1972-73 and 8.0 in 1973-74. Similar information is available for the period 1974-75 to 1978-79 in respect of ten universities viz. Sardar Patel, Poona, Sri Venkateswara, Calicut, Madras, Gauhati, Gorakhpur, Panjab, Delhi and Calcutta. The yearwise percentage of posts filled was 2.3 in 1974-75, 2.5 in 1975-76, 24.5 in 1976-77, 34.6 in 1977-78 and 36.1 in 1978-79. Thus in contrast to the fourth plan period, most of the positions during the period 1974-75 to

1978-79 were filled during the last two years viz. 1977-78 and 1978-79. It may, however, be mentioned that the fourth plan was preceded by three years of annual plans during which the work of the visiting committees had been completed. On the other hand, during the period 1974-75 to 1978-79, the work of the visiting committees was taken up during the plan period itself. This is one of the main reasons why the Commission agreed to continue assistance towards the plan posts upto 31st March 1981 instead of 31st March 1979 as agreed to earlier. It is expected that during the period 1st April 1979 to 31st March 1981 about 15 per cent of the positions would be filled according to indications given by the universities concerned.

2.33 The following factors seem to be responsible for the somewhat lower rate of filling of approved posts during the period 1974-75 to 1978-79, as compared to the position in the universities during the fourth plan period — (a) In the nature of things, the first two years of every plan have to be treated as a continuation of the earlier plan period in so far as the staff positions are concerned. The finalisation of the plan and the allocation to the UGC by the Government of India itself takes time and the UGC also has to lay down the priorities and programmes for a plan period after adequate preparation. (b) In view of the limited resources at the disposal of the UGC, the universities were asked during the period 1974-75 to 1978-79 to take up the first priority programmes in the first instance. The second and third priority programmes were cleared only on the basis of implementation by the universities of the first priority programmes. It would thus be evident that all the approved posts were not available to the universities from the beginning of the plan period; (c) The practice followed in the fifth plan of indicating the areas of specialisation against the posts of professors and readers had its repercussions on the existing staff and their future prospects, specially in the absence of the merit promotion scheme for existing lecturers and readers in the universities; (d) The selection committees also face innumerable administrative and legal difficulties. The procedure of holding the meetings of the selection committees is also cumbersome in some universities; (e) One has also to take into account the non-availability of qualified persons in certain fields of specialisation; (f) Local pressures are sometimes built up against open recruitment and selection on an all-India level; (g) In spite of the fact that the representatives of the state governments are associated with visits by the plan visiting committees, a number of states are hesitant to commit themselves to undertake concurrent or subsequent responsibility for funding; (h) It has also come to our notice (and the statistics presented in Annexure X confirms this), that the state governments/universities not only do not

supplement the positions created by the UGC but also sometimes keep plan and non-plan posts vacant.

2.34 It is of the utmost importance that the above factors are analysed in depth and remedial steps taken to ensure that plan positions approved by the UGC are filled as expeditiously as possible. In order to ensure that non-plan posts are not kept vacant by the universities and the plan posts are utilised for the purpose for which these are created, the universities should be asked to supply annual statements regarding teachers in position, including information regarding the number of non-plan posts lying vacant, the duration for which these posts remained vacant and justification for the same. The gaps in each case should be identified and the matter discussed with the state government/university concerned. The sanction of additional staff positions should invariably be linked with the utilization of plan and non-plan posts already available to the university concerned.

2.35 In order to attract teachers of a high calibre and to retain their services, it may be necessary to make adequate provision for faculty housing. Attention will also have to be paid to provision of quarters for essential administrative staff. While in the sixth plan, the Commission may continue to give priority to academic buildings, in universities where the provision for academic buildings has reached a reasonable level, assistance may be provided for faculty housing and quarters for essential (administrative) staff. This is an important activity and as such the central and state governments should be approached to grant low interest loans for the purpose either through the UGC or the state governments, as the UGC may not be able to find sufficient resources for the purpose.

2.36 *Buildings:* Buildings form an integral part of development as effective utilisation of grants for additional staff, equipment, books and journals cannot be ensured unless these are linked with the minimum building requirements. Buildings are also necessary in order to ensure the mobility of students and teachers on a regional and all-India level. Some buildings like student hostels are important for ensuring that students, especially those who come from the middle and lower strata of society, are able to prosecute their studies in congenial conditions.

2.37 Generally, speaking, the infrastructure provided by states at the time of establishment of new universities is inadequate. Moreover, in the case of newly established as well as older universities, student enrolment has expanded at such a rapid rate in the past three decades that a

number of departments are hard-pressed for space even to carry out their essential functions. Students also complain of lack of amenities by way of hostels, games and sports, libraries, reading seats, study centres etc. For example, it would be seen from Annexure XI that the percentage of students having facility of reading seats is woefully inadequate in a number of universities viz. Gorakhpur (2%); Ranchi (3%) and Calcutta (5%).

2.38 Keeping in view the above considerations and other priorities, the Commission has been providing assistance to universities towards the construction of buildings such as extension or construction of teaching blocks, libraries, laboratories and residence for students and staff. Grants for the purpose were provided on a sharing basis of 50 per cent to 100 per cent. 100 per cent assistance was provided for some building projects like workshop, green house, animal house, university service and instrumentation centres.

2.39 In the interest of social justice, the Commission decided in the fifth plan that all institutions assisted by it to construct hostels would be required to reserve 20% of the seats in such hostels for students belonging to Scheduled Castes and Scheduled Tribes. The Commission also decided that its assistance for construction of hostels in backward areas and in women's colleges would be at the rate of 75 per cent of the total expenditure as against 50% in other cases.

2.40 According to information available with us, the utilisation of building grants by the universities has been rather unsatisfactory. It will be seen from Annexure XII that the allocation for buildings in respect of 12 universities visited by sub-committees during the period 1974-75 to 1978-79 was Rs. 527.03 lakhs. The utilisation of grants placed at the disposal of universities for the construction of buildings went down from 83.2 per cent in the fourth plan to 52.4 per cent during the period 1974-75 to 1978-79. This may be ascribed to shortages of essential building materials during the latter period. It may also be mentioned that many of the building projects assisted on 100 per cent basis in the earlier plan are now being assisted on a sharing basis. This is also one of the factors responsible for the rather poor utilisation of building grants during the period 1974-75 to 1978-79.

2.41 In view of the low incidence of utilisation of building grants by the universities, it would be necessary to further simplify the procedures regarding certification of rates and estimates to ensure that building projects are completed as expeditiously as possible. It should also be

ensured that the existing space is utilised to the best possible advantage, by co-ordinating the requirements on a faculty basis rather than departmental basis and entrusting this to the dean of faculty/principal of college. Buildings approved by the Commission for specific purposes and quality programmes should not be utilised by the universities for meeting their other requirements, which is the responsibility of the state governments.

2.42 In view of the limited resources available with the Commission and the immensity of the problem, universities should take initiative to avail of the schemes from HUDCO, LIC etc. for construction of staff quarters and hostels. These organisations should be asked to charge lower rates of interest from the universities as compared to the existing rates which are rather high.

2.43 In view of the fact that buildings are not always utilised to an optimum level and economy in this area is of the utmost importance, visiting committees to universities should be specifically asked to look into the utilisation of existing buildings before recommending grants for new construction/extension of buildings.

2.44 *Books and Journals:* With an ever-increasing enrolment in universities and colleges, the demand for books and journals has been constantly growing. Unlike in the past, university libraries have now to cater to the diverse needs of undergraduates, postgraduates and research scholars.

2.45 There is no formula for estimating with precision how much money a university should invest in its libraries. The University Education Commission (1948-49) had suggested about 6.5% of the total educational budget as reasonable expenditure on libraries. The Education Commission (1964-66) suggested that, as a norm, a university should spend each year about Rs. 25/- for each student enrolled and Rs. 300/- per teacher. The figures would be much higher today in view of the rise in cost but even so that present position of the total expenditure on books and journals is far below the norms suggested by the Education Commission. The position would have been much worse but for the investment made by the Commission during the different plan periods.

2.46 The main problem concerning library resources is that the additional inputs provided by the Commission for the purchase of books and journals are not supplemented by other sources. Since the library is the heart of the university system, it would be desirable for the Commission to suggest to the states to treat expenditure on additional



journals subscribed to during a plan period and text books or books prescribed as necessary reading as part of maintenance during the next plan period.

2.47 It will be seen from Annexure XIII that the allocation for books and journals received very high priority during the period 1974-75 to 1978-79. The allocation in respect of 12 universities visited by sub-committees was Rs. 399.98 lakhs during this period as compared to Rs. 123.32 lakhs during the fourth plan period. The utilisation by the universities has also been the maximum; the proportion of grants utilised to the grants allocated being 90 per cent in the fourth plan and 89.1 per cent during the period 1974-75 to 1978-79. Payments were also made in 1979-80 against expenditure incurred in the earlier years.

2.48 Generally speaking, books for the central library are purchased on the advice of the university library committee which scrutinises the requirements sent to it by various departments. While this ensures coordination and is procedurally sound, in some places departments function in such an exclusive manner that the same set of journals is acquired by two or three departments. If a university has departmental or faculty libraries, reading materials should be accessioned centrally and it should be ensured that the departmental library plays a supplementary role. There would be many advantages if the departmental libraries specially cater to the needs of research scholars. The central library committee should also ensure that there is no unnecessary duplication in the acquisition of books and costly journals and particularly foreign journals.

2.49 In some universities it was noticed that a number of books were lying unaccessioned due to inefficient management or lack of qualified supervisory staff or supporting technical and administrative staff. So far, the Commission has not been able to provide adequate support for the purpose as this function was treated as primarily being the responsibility of the state governments. The existing provision of five per cent of the book grant for additional staff for processing and cataloguing of books is totally inadequate. The Commission, may therefore, consider the need for making specific provision for support towards the appointment of technical staff in the university libraries.

2.50 Universities should draw up integrated plans of library development from a long range point of view. An essential thing about the development plan of a university library is to consider it from the academic rather than the financial point of view. Even more important

is the proper use of books by students and teachers. Lectures should be supplemented by tutorial instruction and thereafter, the students should turn to the library to find for themselves, with the help of reference libraries, the relevant materials. More working hours and working days, easy accessibility to books, designing of library as a centre of community education and cultural activities, multiple copies of text-books which may be loaned to needy students, a better display of new reading material, organisation of book-clubs, exhibitions, paintings, tape-records of classical music, separate rooms for periodicals, reference books and research works, are some of the measures that would help raise the standard of library service and utilisation of available resources. The reading habit both on the part of teachers and students is low in some universities and should be promoted in every possible way.

*2.51 Equipment:* It is important that in our physical and biological sciences departments and in departments like geography, psychology, anthropology etc., a proper balance is maintained between experimental and theoretical teaching. Students have also to be encouraged to learn the use of workshop tools and get acquainted with some of the essential laboratory techniques and practices. In modern times, scientific research is also becoming increasingly complex, expensive and sophisticated. All these considerations make increasingly new demands on specialised, elaborate and costly equipment and instruments.

*2.52* It will be seen from Annexure XIV that the Commission attached high priority to the provision of science equipment in the universities and the allocation for the purpose during the period 1974-75 to 1978-79 in the universities included in the sample (viz. Rs. 517.28 lakhs) was about 2.8 times higher as compared to the provision made in the fourth plan (Rs. 188.71 lakhs). The utilisation of grants has also been satisfactory although it came down from 87.4 per cent in the fourth plan to 75.6 per cent during the period 1974-75 to 1978-79. It may, however, be noted that grants were also paid in 1979-80 against expenditure incurred in the earlier years.

*2.53* It is a matter of serious concern that even costly and sophisticated equipment is lying idle in some universities. There are atleast two universities where electron microscopes are not being put to any use. There is need for some central agency to oversee that equipment is serviced properly and remains functional over a long period of time. Similarly, equipment that has become obsolete should be disposed of from time to time.

*2.54* The Commission should give high priority in the sixth plan to

the provision of support for the appointment and training of laboratory technicians. State governments, which have primary responsibility in this regard should also pay adequate attention to these aspects which are vital for the proper functioning of laboratories.

2.55 While noting that 5% of the equipment grant sanctioned by the Commission can be used for repair etc., we would suggest that a lump sum grant should be placed at the disposal of each university for (a) maintenance of equipment and (b) training programme for technicians. In non-plan also, adequate provision should be made for repair and maintenance of equipment.

2.56 *University Service and Instrumentation Centres (USICs)*: The Commission has also tried to deal with the problem of exclusiveness in the use of equipment through the scheme of University Service and Instrumentation Centres (USICs). The programme was initiated during the year 1976 with the main objective of assisting universities to maintain and repair equipment and also to pool together costly sophisticated equipment so that the various departments can use them as a common facility. The objectives of the scheme are: (a) to repair and service instruments; (b) to design and fabricate attachments for or modifications to the existing equipment; (c) to train instrument scientists and technicians; (d) to develop instrument R & D; and (e) to provide analytical services by pooling together major equipment in the different departments under the common instrumentation centres.

2.57 The Commission has constituted a Standing Committee for the purpose of examining the various proposals received from the universities for establishing USICs. Based on the recommendations of this committee, the Commission has so far approved proposals of fifty universities for setting up USICs. These centres are expected to play a vital role in improving facilities for teaching, research and training for necessary manpower. A list of universities for which USICs have been approved is given in Annexure XV.

2.58 The Commission has also established two Regional Instrumentation Centres with a view to serving the needs of instrumentation facilities particularly regarding repair of sophisticated equipment, organising courses and also design and develop major instruments in a region. The Commission established one such centre in the Bombay University and another in the Indian Institute of Science, Bangalore.

2.59 As suggested by the Commission, user committees with represen-

tatives from all user departments should be constituted by the universities concerned in order that the common facilities and equipment pooled in USICs are utilised to the maximum advantage. USICs should also look after the repair and maintenance of equipment in the colleges in the neighbourhood.

2.60 The Commission should continue its programmes for fabrication and repair of scientific equipment to develop indigenous capability and self-reliance.

2.61 *Computer Development:* In view of the role of the computer as an essential aid to research, the Commission, in consultation with the Electronics Commission, agreed to the provision of medium-sized computers in selected universities and later on to provide assistance to some universities for the purchase of computer time. The universities were advised to make adequate preparation for the installation of the computers as well as for appointing necessary technical staff and getting them trained by the suppliers of the system.

2.62 The Commission has so far accepted 28 proposals recommended by the Computer Development Committee for the installation of computers in the universities. A statement giving the present position of computer facilities available in the universities is at Annexure XVI.

2.63 While it is too early to assess the impact of assistance provided for the installation of computers, we would like to suggest some specific measures for better utilisation of the existing facilities: (a) Guidelines should be formulated for the universities in regard to the initial choice of the computer system, space requirements and ancillary services, off-line equipment facilities for users from other institutions, provision of staff, computer library needs and security and insurance of the computer centre and consultancy work by the technical staff; (b) The university system should assume responsibility for meeting the current demand for properly trained personnel for various computer centres at different levels; (c) It is also necessary to develop staffing patterns so that adequately qualified technical staff in the computer centres receives due recognition and status; and (d) Suitable methods should be devised to monitor performance of the computer centres as also the grants provided for purchase of computer time by those universities which do not have in-house computers or those with computers requiring, for their scientific research purposes, access to larger computers in the neighbourhood.

2.64 *Special Programmes*: A comparison of the grants paid to all the universities in the country under special programmes (faculty improvement, support for research, student welfare and academic and cultural programmes as detailed in paras 2.17 to 2.25) in the fourth plan and during the period 1974-75 to 1978-79 (Annexures XVII and XVIII) shows that the outlay on faculty improvement programmes increased from Rs. 223.09 lakhs to Rs. 779.14 lakhs: on support for research from Rs. 568.29 lakhs to Rs. 1,918.40 lakhs: on student welfare from Rs. 429.38 lakhs to Rs. 499.70 lakhs and on academic and cultural programmes from Rs. 647.48 lakhs to Rs. 1,044.35 lakhs. It is thus evident that while the expenditure on student welfare programmes increased marginally, there was a substantial increase of approximately 3.5 times in the expenditure on support for research and faculty improvement programmes. The total outlay on these schemes was Rs. 1,868.24 lakhs in the fourth plan. It increased to Rs. 4,241.59 lakhs during the period 1974-75 to 1978-79 an overall increase of 2.3 times.

2.65 Two of these special programmes viz. (a) centres of advanced study and departments of special assistance and (b) financial assistance to teachers for research have been taken up for indepth study by sub-committees of the Review Committee, besides the College Science Improvement Programme and the College Humanities and Social Sciences Improvement Programme which is included under college development. A review of the other programmes which have been looked into by the sub-committees is given below.

2.66 *Seminars, Summer Institutes and Workshops*: The Commission has been supporting the efforts of universities and colleges in providing opportunities for teachers and research workers to keep abreast of modern developments in their fields of study with provision of grants towards organisation of seminars, symposia, refresher courses, workshops, conferences etc. This is an important programme for faculty improvement and its objectives have been discussed in para 2.17.

2.67 The high priority attached by the Commission to this programme is reflected by the fact that as against 56 summer institutes for college teachers, 12 orientation courses, and two conferences supported by the Commission in 1969, the Commission provided grants for the organisation of 293 summer institutes, symposia, seminars and workshops during 1978-79.

2.68 Noting some of the limitations under which the summer institute programme was functioning, especially in relation to the inade-

quacy of preparatory measures and follow-up action, in 1977 the Commission appointed a committee to review the programme. The committee recommended that in order to have a more meaningful exchange of views by experts, the summer institutes, seminars etc., should be organised after adequate preparation is made and well documented papers become available. We fully endorse this recommendation and suggest that a time-bound programme should be worked out for college teachers so that all the teachers in a college can be covered under this programme over a period of time. The programme may also be linked with restructuring of courses, curricular reform and other innovations. The programme should be so planned that people in the younger age-group become more involved in it.

*2.69 Teacher Fellowships:* Teacher fellowships are meant for teachers from affiliated colleges offering instruction in humanities, social sciences, and science subjects. Teacher fellowships are specially meant to provide opportunities for teachers to work towards either an M.Phil. or a Ph.D. degree and as such may be of two types:

- (i) Short-term fellowship of one year's duration; and
- (ii) Long-term fellowship of a duration not exceeding three years.

*2.70* The Commission has been implementing the teacher fellowship scheme since 1975-76. So far more than 5,000 fellowships have been awarded of whom 3,000 teachers are in position. The Commission has recently decentralised the implementation of the scheme. Teacher fellowships have been assigned to 413 centres identified by the Commission with a provision of upto ten fellowships in each centre at any given time. All the eligible colleges receiving development grants from the Commission have also been advised to utilise at least 1/6th of the grant for faculty improvement including teacher fellowships. The scheme has made good impact and during the short period of its existence, it has succeeded in generating a climate of research even in colleges in far-flung areas. We, therefore, strongly recommend that efforts be made to meet the growing demand by identifying more departments so that teachers from all parts of the country can take advantage of the scheme in a big way during the current plan period.

*2.71 Scholarships and Fellowships:* The Commission has given high priority to the award of scholarships and fellowships for the development of research in the universities and colleges. The objective of the scheme is to enable academically bright students to carry on their research as an independent and full-time activity through adequate

support for their maintenance and for the purchase of books, journals, equipment etc. by them. In addition to the fellowships specially created for centres of advanced study and those provided for approved programmes of research and departments selected for special assistance, the University Grants Commission awards annually senior and junior research fellowships in science, humanities and social sciences and research fellowships in engineering and technology on an all-India basis.

2.72 In 1969-70, the Commission awarded 54 senior research fellowships and 179 junior research fellowships in the humanities, social sciences and science subjects and 47 research fellowships in engineering and technology. In view of the positive impact of this scheme on the promotion of research in the universities and colleges, the Commission increased the allocation for the purpose substantially. In 1977-78, the Commission allocated 100 senior research fellowships and 325 junior research fellowships in the humanities, social sciences and science subjects for being awarded centrally. This was in addition to 2,512 junior research fellowships assigned to the universities, 50 post-master fellowships in engineering and technology, 50 junior and 20 senior research fellowships for Scheduled Caste and Scheduled Tribe students, 60 research fellowships and 11 postgraduate scholarships for students of border hill areas, 20 scholarships in Arabic, Persian, Pali, Prakrit etc. and 50 scholarships for LL.M. students.

2.73 The scheme has already been taken up for an indepth study by the Commission. In the meanwhile, we would like to suggest (a) better correspondence between the total number of research fellowships and facilities for supervision, care being taken that no research supervisor should ordinarily have more than five research scholars working under his guidance, (b) provision for typing and binding of theses out of unassigned grants in respect of research scholars not getting any scholarship or fellowship, (c) reduction in the time lag between the submission of theses and the declaration of results through better monitoring, and (d) fixation of a ceiling on the number of research scholars by each department on the basis of well-defined criteria.

2.74 *Publication Programme:* The Commission has a scheme of assistance to universities for the publication of learned research works and doctoral theses. Learned research work to be assisted under the scheme, should be one that breaks new ground and is useful as reference material for honours and postgraduate students. Theses accepted for doctoral degree are considered for publication under the scheme only within a period of ten years after submission. On the basis of

the recommendations of a committee, the Commission has laid down comprehensive guidelines for the implementation of the scheme. The allocation made to a university was to be utilised on the basis of 2/3rd for doctoral theses and 1/3rd for other learned works.

2.75 The Commission has also agreed to provide assistance, upto a maximum of Rs. 5,000 per annum, towards the publication of quality journals. Assistance will be initially for three years and will be determined on the merits of each case. The journals are identified by the subject panels.

2.76 While we endorse the objectives of the scheme of publication of theses and learned works, it seems that these have not been achieved fully. It has come to our notice that a number of learned works remain unpublished although the grants at the disposal of the universities are not fully utilised. It would, therefore, be desirable for the Commission to allocate grants, keeping in view the extent of utilization by the different universities.

2.77 *Student Welfare Programmes:* It is our understanding that the various student welfare programmes viz. students aid fund, non-resident student centre, student home and book banks have not made a uniform impact in all the universities and colleges and there are certain gaps in implementation. However, there is an obvious need to continue these programmes as they are meant to help the needy and poor students. It may also be noted that in recent years considerable emphasis has been placed on cultural aspects as part of student welfare. The schemes should, therefore, be strengthened, if adequate resources are available for the purpose. We would also suggest that these schemes to be implemented by universities through their college development councils in order that there may be more effective monitoring and evaluation as also smooth and expeditious implementation.

2.78 *Correspondence Courses:* The objective of correspondence education is to provide a new stream of education to enable a large number of persons with necessary aptitude to acquire further knowledge and improve their professional competence. Correspondence courses are thus intended to cater to (a) students who had to discontinue their formal education owing to pecuniary and other circumstances, (b) students in geographically remote areas, (c) students who had to discontinue education because of lack of aptitude and motivation but who may later on become motivated, (d) students who cannot find a seat or do not wish to join a regular college or university depart-



ment, although they have the necessary qualifications to pursue higher education, and (e) individuals who look upon education as a life-time activity and may either like to refresh their knowledge in an existing discipline or to acquire knowledge in a new area.

2.79 In the beginning of the fifth plan, the Commission decided to have specific guidelines for the implementation of the scheme. A conference of directors of correspondence courses was held for the purpose at the University of Delhi in October, 1974. The guidelines were considered by the Standing Committee on Part-Time and Own-Time education and accepted by the Commission in March 1975.

2.80 The main focus in the guidelines is on maintenance and coordination of standards. The guidelines *inter-alia*, provide that:

(a) Ordinarily, correspondence courses at the undergraduate level should be introduced by only one university in a state except when a university proposes to introduce correspondence courses in a new faculty at the undergraduate level or when the university already offering correspondence courses reaches the optimum size (an enrolment of 10,000) or for other valid reasons.

(b) Correspondence courses should be started only by universities which have well-established teaching departments noted for their high standards for, in the absence of good teaching departments, standards are likely to suffer. The academic responsibility for the contents of the correspondence courses in any given subject, and its standards, must be taken by the corresponding subject department in the university.

(c) It should be compulsory for every student enrolled in correspondence courses to return a certain number of response sheets, say 20 every year suitably spread over various subjects.

(d) High priority should be given to the setting up of study centres in areas where there is a concentration of students.

(e) The provision of contact programmes should be an essential feature of correspondence courses in order that the mind of the student is exposed to the mind of the teacher through lectures, seminars and other forms of discussion.

(f) Grants for the introduction of correspondence courses at the undergraduate level should be earmarked for such programmes as contact programmes, study centres, writing of lessons, core staff and library facilities.

(g) Correspondence courses at the postgraduate level should be started only in those universities which have experience of running undergraduate correspondence courses properly for at least three years. The basis of the grants and assessment by visiting committees would

be the same as at the undergraduate level but the ceiling of UGC assistance will be Rs. one lakh per subject per annum for a period of five years. The grants should be for core staff, preparation of reading materials, contact programmes, provision of visiting lecturers, books and journals and postal library services.

2.81 The University of Delhi introduced correspondence courses in July 1962. Presently 21 universities and one institution deemed to be university are offering correspondence courses with assistance from UGC. These are: Allahabad, Andhra, Annamalai, Bhopal, Bombay, Delhi, Himachal Pradesh, Jammu, Kashmir, Kerala, Madurai Kamraj, Meerut, Mysore, Osmania, Punjab, Punjabi, Rajasthan, S.N.D.T. Women's, Sri Venkateswara, Udaipur, Utkal, Central Institute of English and Foreign Languages, Hyderabad.

2.82 While the Commission has taken a number of steps towards the maintenance and coordination of standards of correspondence education in the country and the formulation of the guidelines is an important step in this direction, we would also like to point out some of the problems being faced by the schools/institutes of correspondence courses. One of the main problems is that correspondence courses have not become sufficiently challenging. Against the fifth plan target of diverting 25% students into the stream of correspondence courses, we have about 1,15,000 students in correspondence courses, (excluding pre-university and intermediate classes) as compared to 2.6 million students in the regular courses. Account should, however, be taken of facilities for evening courses and private appearance at university examinations that have been augmented in recent years.

2.83 The reports of the review committees on some of the schools of correspondence courses indicate that there is a vast scope for improvement. Some experts are of the opinion that lessons in some subjects have been written in a hurry. It is also alleged that response sheets are not evaluated, corrected and returned to students in time. There are practically no study centres and personal contact programmes in many places have become perfunctory. Ironically, these inadequacies are not due to lack of funds. In fact most of the schools of correspondence courses accumulated large surpluses in the initial years.

2.84 It is suggested that the problems referred to above and other related problems may be considered in-depth by the UGC Standing Committee on part-time and own-time education. In this connection, we have noted that the Commission has already issued a detailed

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questionnaire to the schools/institutes of correspondence courses for collection of information on their working.

**2.85 Examination Reform:** The Commission has been emphasising the implementation of various measures of examination reform with a view to improving the reliability, validity and objectivity of evaluation and bringing about a closer integration of teaching, learning and evaluation.

**2.86** During the close of the fourth five year plan and in the current plan period, the Commission paid special attention to the implementation of various measures of examination reform. The main emphasis was on the following aspects of examination reforms:

(a) Continuous sessional evaluation as a supplement to the present final examination.

(b) The development of question banks in order to eliminate some of the shortcomings of setting examination papers and as a means for revision and modernization of courses of study.

(c) Introduction of grade system instead of the present marking system in order to increase reliability and bring about better comparability among different subjects.

(d) Introduction of the semester system in order to have greater flexibility.

**2.87** Earlier the programme of examination reforms was based on studies, research and investigations. In the fifth plan, the emphasis shifted to implementation and adoption of specific measures by the universities. The Commission has also been keen to have the fullest involvement of academics in evolving a plan of action.

**2.88** In 1974, the Commission convened four zonal workshops to discuss problems relating to examination reforms. The workshops were held between July and November, 1974 at Madurai, Ahmedabad, Chandigarh and Bhubaneswar. It was also decided to convene zonal workshops to discuss the objectives and mechanics of the grading system in all its ramifications. All these workshops broadly endorsed the UGC scheme of examination reform. The recommendations of the workshops on examination reform were brought out in the form of a brochure 'Examination Reform - A Plan of Action - 1976'. It was further desired that there should be a time-bound programme for the successful implementation of various measures of examination reforms in the universities/institutions.

**2.89** The Commission has constituted an Implementation Committee

to advise it on various measures for implementing the examination reform programme. Information collected from the universities from time to time regarding their progress in implementing the programmes of examination reform is also reviewed by the committee.

2.90 The Commission has also provided support to the universities towards the appointment of some core staff and organisation of seminars, workshops and other facilities within an overall ceiling of Rs. 5 lakhs for the plan period. The grants paid to the universities have enabled them to introduce specific measures of reform and to monitor the programme.

2.91 According to information available with the Commission as on 31st March, 1979, sessional evaluation at different levels has been introduced in 44 universities, 14 agricultural/technical universities and 7 institutions deemed to be universities. Question banks have been or are being developed in 21 universities. Grading system is in operation at 44 universities/institutions. Semester system has been adopted by 40 universities, 5 institutions deemed to be universities and all the agricultural and technical universities.

2.92 It is understood that some universities have gone back on some of the reforms introduced earlier. We are of the view that high priority should be given to the examination reform programme, as examination reform and curriculum reform are closely linked with each other. We would further suggest that the matter be analysed by the UGC Implementation Committee on Examination Reforms, with particular reference to the set-back and steps required for activating the programme. It would also be useful to call a series of regional or state level meetings of vice-chancellors, teachers and students of universities that have gone back in regard to examination reforms so that remedial steps may be taken in the light of their experience.

2.93 *Adult/Continuing Education:* The Commission is encouraging and actively supporting universities to implement the scheme of adult education. The objective of the scheme is to bring universities closer to the community through a variety of programmes. In order to discharge its responsibility to the education system and to the society as a whole, the university must assume adult education and extension as an important responsibility and give it the same status as teaching and research. These should be made an integral part of the objectives and functions of the university/college.

The Commission appointed a working group to formulate the guide-

lines for the implementation of the adult education and extension programmes by the universities and colleges. As recommended by the working group, the programme has three components, viz. adult education (with functional literacy as an essential component), community extension service and educational extension.

2.94 The scheme of continuing education is also being implemented in 18 universities and two institutions deemed to be universities on the basis of guidelines formulated for the purpose. Universities have been requested to bring within the purview of the programme schemes relating to the education of people in rural/tribal and backward areas and the other weaker sections of the community.

2.95 We have not offered any comments on the above schemes as these are under review by the Government of India.

2.96 *Cultural Exchange Programmes*: The Commission implements such of the cultural exchange agreements entered into by the Government of India with foreign governments as are assigned to it. These programmes involve exchange of teachers/scholars for lecture-cum-study, exchange of views, scholarships and fellowships, development of bilateral academic links, organisation of joint seminars and training (both for short, and long periods) and provision of foreign language teachers in the universities.

2.97 The cultural exchange programmes, for quite some time, were largely confined to general exchange of visits by academics from both sides. These exchanges had, to a certain extent, helped in initiating preliminary dialogue between the academics of the two countries. However, the Commission's emphasis in implementing these programmes has now shifted to development of bilateral academic links in identified fields. The Commission is not in favour of developing comprehensive links between universities in India and those in foreign countries as it considers this type of collaboration to be expensive and of doubtful academic value. The Commission prefers a discipline to discipline link between universities in India and those in foreign countries. We commend this shift in emphasis and approach.

2.98 *Area Studies*: The area studies programme aims at producing a group of scholars who would be continuously engaged in the study, examination and assessment of the principal contemporary developments in specified areas specially the neighbouring countries with whom India has had strong historical and cultural links. The thrust

of the programme is on academic studies but the centres of area studies could also take up research on contemporary problems. The Commission has emphasised that the programme should be inter-disciplinary in nature and language teaching an integral part of it. It is hoped that in years to come, the programme will become broadbased and its scope extended to cover other important areas as well.

*2.99 Unassigned Grants:* Unassigned grants are allocated to the universities every year for meeting the expenditure on (a) travel grants to teachers and scientific/technical staff for participation in international conferences, (b) travel grants to teachers, research scholars and technicians for visiting centres of research or to participate in academic conferences within the country and (c) for exchange of teachers.

*2.100* While the objectives of the programme are good, these have not been achieved in some cases owing to the inadequacy of grants placed at the disposal of universities. It is important, therefore, that the states also assume some responsibility in this regard.

*2.101* We would also suggest that unassigned grants for universities be fixed in the same manner as the ceiling for a plan period. In other words, the allocation of unassigned grants to the universities should be made for the entire plan period instead of being made every year.

### III

#### Impact of Commission's Programmes on Universities and Colleges

3.01 In this section, we have made an attempt to assess the impact of UGC programmes on the standards of teaching, research and examinations in the universities and colleges, with particular reference to the impact of developmental assistance provided by the Commission during a ten-year period; 1969-70 to 1973-74, and 1974-75 to 1978-79.

3.02 The objectives for which the Commission pays development grants to the universities, items of assistance and the manner of determining the quantum of assistance are detailed in para 2.02-2.05.

3.03 A statement of development grants paid by the Commission to all the universities during the period 1969-70 to 1973-74 and 1974-75 to 1978-79 is at Annexures XIX and XX. A comparison of the total expenditure during the two periods under reference shows that the expenditure on equipment increased by 2.2 times and the expenditure on books and journals by 2.5 times. But the expenditure on staff, buildings and infrastructural facilities declined, even in absolute terms. As a proportion of the total expenditure, the expenditure on staff declined from 20 to 13 per cent during the periods under reference. The reasons for this are given in para 2.33 of the report. The expenditure on buildings and infrastructural facilities declined from 49 to 30 per cent while the expenditure on equipment increased from 20 to 34 per cent and the expenditure on books and journals from 11 to 34 per cent. *Thus, the order of priority has substantially changed in favour of equipment, books and journals during the period 1974-75 to 1978-79 as part of the development strategy proposed by the Planning Group in the beginning of the fifth plan period.*

3.04 As already stated in para 1.08, three universities were selected from each of the four zones viz., North, South, West and East in such a manner that the selected institutions represented different stages of development and sub-committees were asked to visit these universities and submit reports on the impact of the development grants paid by the Commission to them during the last ten years. A conspectus of the universities visited by the sub-committees is given in Annexure XXI (Tables 1 to 12).

3.05 It is not easy to measure standards or to judge the impact of UGC programmes on the university system, keeping in view its size and complexities, the time-scale of growth of different universities, resources available at a given point of time, the entrepreneurship of the institu-

tion concerned and the number of agencies involved. However, an attempt has been made to measure the impact as objectively as possible on the basis of the parameters evolved by us and the data collected from the universities and other sources.

3.06 In so far as performance in terms of the parameters evolved by us is concerned, one of the sub-committees viz. the Western Zone Sub-Committee has attempted quantification of targets in relation to the impact of UGC development programmes. The sub-committee has come to the conclusion that the overall performance is around 60% of the expected target. This is essentially a subjective valuation and other sub-committees have not made a similar exercise. However, it would be fair enough to state that the position regarding the maintenance of standards and overall performance is uneven and, broadly speaking, less progress has been made by the state universities in the Eastern and Northern Zones, as compared to those in the Western and Southern Zones. This would require an indepth study in order that remedial measures may be undertaken.

3.07 From our point of view, it is not the location of the university which is important but its stage of development. As already stated, the universities were selected for visit by sub-committees on a sampling basis so as to represent different stages of development. It is seen that the performance of universities in the 'developed' and 'developing' categories is superior to that of universities in the 'less developed category' in respect of all the parameters, with a few exceptions here and there. This is particularly so in regard to restructuring of courses, proportion of Ph.D. degrees awarded to research scholars enrolled, contribution of teachers to research, proportion of senior teachers and collaboration with national laboratories, agencies and organisations of national importance. Some universities in the 'less developed' category have done rather well in regard to out-turn of Ph.Ds., publications by teachers, and in the matter of collaboration with national laboratories and other agencies. There is no uniformity in teacher-pupil ratios.

3.08 We have made a detailed analysis of the percentage utilisation of developmental assistance by the 12 selected universities on books, equipment and buildings and percentage of staff positions filled during the fourth plan and 1974-75 to 1978-79 (Annexure XXI-A). This analysis based on the data sheets of individual universities does not suggest that there is any perceptible distinction between the developed and developing universities in their capacity to absorb the developmental support provided by the Commission during the period under reference.



It, however, does indicate that a part of the university system suffers from a certain degree of disability in absorbing the inputs provided to it.

3.09 There is an obvious need to rationalise the methods for providing developmental support to the universities. Data similar to those collected from selected universities for study in our report should form an integral part of the development proposals of the universities. This data should be analysed and specific issues identified for close examination by visiting committees. Specific guidelines in the form of a checklist should also be formulated for the guidance of the visiting committees. Universities should be asked to furnish a detailed note on their present status in terms of physical facilities, their utilisation, and additional requirements in terms of precise objectives and critical needs. Universities should also prepare a flow chart of yearwise utilisation of facilities approved by the Commission during a plan period in order that the programmes may be monitored and evaluated regularly.

3.10 If all the universities are grouped together, it is seen that the best performance has been achieved by the oldest of the universities which is located in a centre with a tradition of learning, and the poorest by a university in a comparatively backward part of an under-developed state. Performance is also better in universities which provide for participation by teachers and students in the processes of academic decision-making at all levels. It is also observed that universities which have been relatively free from student agitations and politicalization of teachers have performed better than those which had polarisation in one form or another. Similarly, universities with an effective planning machinery and mechanism for joint consultations have also been able to bring about necessary changes in their courses, syllabi, methods of examinations etc. and thus maintain standards at a reasonably good level. The factors that have affected performance adversely in some universities are (a) initial resistance by the academic community to the innovative ideas regarding organisation of courses, examination reforms, autonomous colleges, inter-disciplinary programmes, social relevance, practical orientation etc., (b) a certain degree of inertia in the universities for developing and utilising mechanisms for inter-institutional cooperation (c) lack of adequate realisation by the teaching community of their role in adult education, community service and extension programmes, and (d) absence of full involvement of some of the state governments in the development process.

3.11 One of the parameters on which specific information is available in the reports of the sub-committees is regarding the restructuring of courses by the universities during the period 1969-70 to 1978-79. A state-

ment outlining the steps taken by the universities in this regard is at Annexure XXII. Changes that have taken place relate to the introduction of (a) new areas of specialisation, (b) applied projects, field work etc., (c) greater flexibility through semesterization and course units and (d) short-term diploma courses to prepare students for specific jobs or careers. A beginning has also been made regarding inter-disciplinary programmes and borderline subjects. On the whole, universities have been more active and innovative during the period 1974-75 to 1978-79 than in the earlier period 1969-70 to 1973-74. This shows that efforts made during the sixties and the climate generated through the reports of the review committees in different disciplines, report of the Education Commission (1964-66), report on Standards of University Education, Examination Reforms etc. started bearing fruit in the subsequent period. Similarly, it would be legitimate to expect that the new concepts being put forward now in such areas as educational extension, community service, adult education, social relevance, rural development and updated syllabi would have their full impact in the next and subsequent plan periods.

3.12 While it is not possible for us to go into the question of evaluating the standards of research over a period of time, it is a matter of satisfaction that the research output of our universities as judged by quantitative indicators has gone up significantly. It will be seen from Annexure XXIII that during the period 1969-70 to 1977-78 there was an increase in the number of research scholars in the universities included in this sample. The number of research scholars increased from 3,720 in 1969-70 to 6,162 in 1974-75 and 6,420 in 1977-78. The number of Ph.D. degrees awarded was 662 in 1969-70; it increased to 787 in 1974-75 and 1,030 in 1977-78. The average ratio of Ph.Ds awarded to research enrolment was 16 per cent in 1977-78 which can be regarded as satisfactory considering that the average time taken by a scholar is three to four years and the award of Ph.D. degree is a function of enrolment in previous years and not during that particular year. The out-turn is particularly good in well-established universities and universities in the developing stage. Universities that have rather poor out-turn are those with a large number of college teachers enrolled as research scholars. These teacher - scholars generally work on part-time basis and are not in a position to receive effective guidance from their research supervisors. We recommend that the UGC should undertake a depth study of the problem of stagnation and wastage at the research level.

3.13 The contribution of teachers by way of publication of books, monographs, brochures etc. in their areas of specialisation has also gone

up significantly. The figures from universities which have given specific information in this regard will illustrate the point. A caveat is, however, necessary at this stage. The figures relating to publications by teachers show that the number has gone up, but for obvious reasons one is not able to take into account the quality of the papers and whether these have been published in journals of repute. From this point of view, while comparisons over a period of time are valid, those between one university and another are not. A comparison of number of research papers and books for the years 1969-70 and 1977-78 in Sri Venkateswara and Poona Universities shows that the number of research papers increased from 305 to 942 in Sri Venkateswara University and from 83 to 168 in the University of Poona. The number of books written went up from 49 to 148 in Sri Venkateswara University and from 10 to 17 in the University of Poona. University of Delhi had 917 research publications in one year viz. 1976-77. Teachers in the Gorakhpur University brought out 1,815 research papers and 130 books during the period 1969-70 to 1977-78. The Jabalpur University produced 140 research papers and books during the same period. The number of university publications went up in Madras University from 31 in 1969-70 to 160 during the period 1974-78 or 40 per annum.

3.14 The University Grants Commission has been supporting the efforts of universities and colleges in providing opportunities for teachers and research workers to keep abreast of modern developments in their field of study with grants for organisation of seminars, symposia, refresher courses, workshops, conferences etc. The only means for improving the competence of the existing teachers, many of whom are outdated, is to bring them together with their peers and expose them to the new and significant advances being made in different areas.

3.15 It has been observed that the number of conferences, seminars etc. organised by the universities visited by the sub-committees went up considerably during the period 1969-70 to 1977-78. In seven universities for which specific information is available in this regard, the number of seminars, conferences and workshops organised by the universities went up from 23 in 1969-70 to 60 in 1977-78. The number of teachers participating in these academic meetings has also gone up correspondingly. The important point to be noted in a programme like this is the multiplier effect in so far as the standards of teaching are concerned. Teachers trained in these summer institutes go back to their institutions and are in a better position to help their colleagues in the new techniques of teaching and also to acquaint them with the new and emerging areas in the subjects concerned.

3.16 It will be seen from Annexure XXIV that during the period 1969-70 to 1977-78, the overall teacher-pupil ratio for all the 12 universities visited by the sub-committees improved from 1:18 in 1969-70 to 1:15 in 1977-78 in spite of an increase of over 20 per cent in enrolment during the period. This compares well with the generally accepted norm of 1:10 at the postgraduate level and in some of the professional courses and 1:20 at the undergraduate level. Universities where substantial improvements have taken place in teacher-pupil ratio are Calcutta, Panjab, Gauhati and Poona. The teacher-pupil ratio is not so satisfactory as compared to the national average\* in Calcutta, Delhi, Gorakhpur, Jabalpur and Ranchi. It may, however, be mentioned that the ratio is invariably unfavourable in the departments/faculties of law. In the University of Calcutta, law enrolment constitutes more than 90% of the enrolment at the undergraduate level. If figures of law enrolment are excluded, the teacher-pupil ratio will be much more satisfactory.\*\*

3.17 The total enrolment at the postgraduate level in the universities visited by the sub-committees increased from 20,777 in 1969-70 to 24,641 in 1977-78, thus registering an increase of 18.6 per cent. This is somewhat lower as compared to an increase of 20 per cent in enrolment at all levels (combined) during the period under reference. While manpower planning is important at the postgraduate level, and it is possible to determine the needs in some of the professional areas and keep enrolments pegged down to that level, this can be carried out by developing appropriate tools and techniques on the one hand and through effective collaboration among a number of central agencies on the other. In this context, it may be stated that a relatively greater increase in postgraduate enrolment is significant from the point of view of standards as well as utilisation of the resources available to university departments. This is particularly so keeping in view the fact that during the period under reference, the teacher-pupil ratio has improved and so has the proportion of senior teachers viz. professors and readers.

3.18 In so far as the calibre of students over a period of time is concerned, no definite pattern has emerged. However, on the basis of the observations of the sub-committee to universities in the Western Zone, it may be stated that the quality of students admitted to general and

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\*The teacher-pupil ratio for all the universities in the country improved from 1 : 15 in 1969-70 to 1 : 12 in 1977-78.

\*\*For example, in Calcutta University, if law enrolment at the undergraduate level is excluded from total enrolment, the teacher-pupil ratio (1977-78) would improve from 1:26 to 1:13. Similarly, in Panjab University, teacher-pupil ratio would improve from 1:9 to 1:7 by excluding law enrolment.

professional courses has been fairly stable with marginal improvement in respect of those admitted to science and commerce courses. The contents of courses and the pertinent areas of knowledge as well as the general awareness of students are far more enriched today than about two decades ago. About ten per cent of the top strata of the students today is better in quality than about a decade ago but the need of the hour is that our system of education adapts itself to the varying needs of students from different socio-economic backgrounds and ensures that the students are able to learn at their own pace.

3.19 A number of universities have been collaborating with national laboratories, agencies and organisations of national importance as also with agricultural universities, medical colleges etc. in their neighbourhood. Particular mention in this connection may be made of Calcutta, Delhi, Ranchi, Jabalpur, Punjab, Madras and Poona Universities. The agencies with which these universities have collaborated are: BARC, TIFR, Indian Institute of Science, Bangalore, Indian Association for the Cultivation of Sciences, IITs, NPL, CSIR etc. Several universities have arrangements for joint supervision of Ph.D. and M.Phil. scholars. One of the supervisors may be from a related field or an institution outside the university system.

3.20 In conclusion, it may be stated that the impact of developmental assistance of the Commission to the twelve universities visited by sub-committees during the last ten years or so on the standards of teaching and research has been fairly satisfactory but not to an extent one would have desired under ideal conditions. The impact would have been much greater but for the fact that the University system has been working under a number of constraints, as well as some stresses and strains. There are constant pressures for admitting more and more students without a commensurate effort to provide adequate facilities. This expansion of the base of the system of higher education would be in keeping with our social objectives if simultaneously we were able to ensure that those who are admitted to a university or college have the aptitude and ability to benefit from university level courses. If, on the other hand, we throw our doors open to bad and indifferent students, who are not interested in pursuing their studies with earnestness of purpose, they become a drag on the system. There has also taken place an unplanned proliferation of educational institutions during the last two decades or so, with the result that the number of sub-viable colleges has gone up, and little or no attention has subsequently been paid to the consolidation of facilities in the existing institutions. One may also refer to persistent student agitations and

other extraneous circumstances like the growing spectre of educated unemployment. Universities also encounter difficulties in securing matching contributions or to take over responsibility for continuing the programme at the end of a plan period. Many of these factors are beyond the control of the universities, but within the university system itself, there is a lack of a planning mechanism and inadequate participation by teachers and students at appropriate levels of academic decision-making. The managerial ability of a university is also an important factor in the maintenance and upgradation of standards. The idea is not to find an alibi for our failures but to evaluate the achievements and shortcomings in the broad perspective of socio-economic conditions within which the university system operates and to offer suggestions for the optimization of benefits in the future.

3.21 Impact on Colleges: Affiliated colleges occupy a pivotal position in any scheme for the improvement of standards. The colleges cater to 88 per cent of the total enrolment of students at the undergraduate level, 53.9 per cent at the postgraduate level and 14.4 per cent at the research level. The question of assessing the impact of UGC programmes on colleges has, therefore, special importance in relation to the maintenance and coordination of standards of university education.

3.22 During the period 1969-74, the Commission paid grants totalling Rs. 1,882.82 lakhs for the development of colleges; Rs. 1,583.74 lakhs under Rs. three lakh scheme, Rs. 181.81 under COSIP and COHSSIP, Rs. 83.28 lakhs for the development of postgraduate studies in science and Rs. 33.99 lakhs for the development of postgraduate studies in the humanities and social sciences. Grants paid to the colleges for the above purposes amounted to Rs. 3,010.43 lakhs during the period 1974-75 to 1978-79, thus registering an increase of 66 per cent over the amount spent in the fourth plan period. The maximum increase has been in expenditure on the development of postgraduate studies in the humanities and COSIP/COHSSIP followed by the development of postgraduate studies in science. Details are given in Annexure XXV.

3.23 The Commission's policy in regard to the development of colleges is governed mainly by the twin objectives of removal of disparities and regional imbalances and the improvement of standards. This is sought to be achieved by a system of liberalised grant-in-aid for colleges located in rural or backward areas on the one hand and selecting colleges noted for their high standards as essential growth points, on the other. It is not easy to reach these challenging goals and the task becomes more difficult when account is taken of the limited resources available for the development of colleges.

3.24 While we acknowledge the support provided by the state governments towards the development of colleges, it is a matter of regret that some of the state governments do not accept the development of colleges as their primary responsibility. But for UGC assistance, many worthwhile developments would not have taken place in the college sector in these regions in the last two decades or so. If the Commission has provided support to the colleges (even though marginal), in spite of its funds being severely limited, it is because it has rightly taken the stand that it is not possible to delink the development needs of postgraduate and undergraduate education.

3.25 It is not easy to measure the impact of UGC grants on the college system, partly because in so far as the colleges are concerned, UGC is one of the partners and that too with a very limited share, and partly because the colleges (except those which have been granted autonomous status) do not have the necessary degree of freedom and flexibility to restructure their courses or to bring about improvements in methods of teaching, evaluation etc. Nevertheless, some positive achievements have been accomplished by the colleges visited by the sub-committees<sup>o</sup>, as highlighted in Annexure XXVI.

3.26 It would be seen from the account presented in the annexure that as in the case of universities, the impact of UGC programmes on colleges has not been uniform in all the zones. Analysis also shows that even within the framework of the syllabus, examples of restructuring of courses and improvements in methods of teaching and evaluation are generally confined to colleges with resources of their own or those provided with special assistance by the Commission under quality programmes. Colleges selected under COSIP and COHSSIP have been particularly active in initiating projects and field work by students, introduction of tutorials and seminar work, development of question banks and fabrication of equipment and teaching aids.

3.27 The strategy of the Commission for the development of colleges has to take into consideration a number of important factors which have a direct bearing on the improvement of standards. Firstly, it may sound platitudinous but it needs to be stated clearly that it is not possible to raise the standards of higher education in the country without raising them in respect of the affiliated colleges. In this context it has to be noted that the affiliated colleges enrol more than

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\*A conspectus of the colleges visited by the sub-committees is at Annexure XXVII (Tables 1 to 12).

50 per cent of the postgraduate students and serve as a feeder in regard to the postgraduate departments of the university. Secondly, the assistance so far provided by the UGC for the development of colleges has been inadequate and the position might worsen during the current plan period. In this context, one has to take into account the spill-over and commitments entered in the earlier plans and the developmental needs of the universities and the amount required for the implementation of the special programmes sponsored by the UGC. Thus the amount that can be earmarked for the development of colleges is going to be abysmally low. Thirdly, while standards depend, to a certain extent, on the availability of resources, it does not mean that nothing can be achieved unless resources are provided at a higher level. It should be possible to plan the development of colleges, keeping in view the availability of resources. In this context, we would like to offer the following suggestions:

(a) The present system of matching contributions under which the Commission provides assistance to colleges on cent per cent basis towards a number of items like core grants for books and equipment, faculty improvement, introduction of remedial courses, restructuring of courses, autonomous colleges, COSIP/COHSSIP etc. is not compatible with the existing division of resources between the centre and the states. It may, therefore, be examined if all the existing programmes could still be continued by raising the share of the state governments in respect of the different items of assistance.

(b) Alternatively, the Commission should concentrate the available resources on selected growth points and those with potentiality for development and not to scatter these over too wide an area or too thinly. An effort could be made to select about 750 colleges which have the necessary infrastructure to provide good quality education linked with community needs, and critical inputs should be provided to these colleges to enable them to carry on high quality teaching and programmes of research. In addition to the selection of well-established colleges noted for their standards, it would be necessary to select about 250 colleges in rural or backward or tribal areas for intensive development. In the case of these colleges, the norms will have to be relaxed and the scale of UGC assistance will have to be much higher.

(c) A third approach would be to continue the special programmes for the development of colleges viz. COSIP/COHSSIP, autonomous colleges, faculty improvement, development of post-graduate studies, restructuring of courses for rural development and take up the general development of colleges at the undergraduate level (Rs. 3/5 lakh scheme) only if resources are available for the purpose.



(d) We have considered at length the merits of the suggestions made at (a), (b) and (c) and come to the conclusion that the UGC should choose between (a) and (b) and select the colleges in such a manner that one is able to avoid any feeling of discrimination on the part of the weaker colleges. This should be supplemented by those quality schemes e.g. autonomous colleges, COSIP, COHSSIP etc., which do not require large-scale investment but can have a significant bearing on standards.

(e) Bearing in mind the infrastructural facilities already created and the existence of a large number of colleges with inadequate enrolments and the decline in the rate of growth of enrolment during the past few years, there should be a moratorium on the establishment of colleges during the current plan period.

(f) The reports of sub-committees which visited colleges for purposes of the review show that there is a vast disparity in the conditions prevailing in the good and well-established colleges on the one hand and the weak colleges in the backward areas on the other. We suggest that the UGC should make a detailed study of the terms and conditions for affiliation of colleges and formulate suitable guidelines for implementation by universities and state governments on a uniform basis.

(g) We would also suggest that the Commission should have a position paper on access to higher education and equality of opportunity and its implications for policy and planning in the current plan period. The paper may suggest some criteria, on the basis of which universities may be asked to carry out detailed surveys to determine the needs of educational development at different levels and in respect of different courses. In this connection, we have noted that as far back as September, 1978 the Commission requested the universities to take up in collaboration with the state governments districtwise surveys of the existing institutions of higher education with regard to their location, infrastructural facilities, student enrolment and staff strength and the feeder group of schools in the district. It should be possible to link Commission's developmental assistance to the colleges with the results of these districtwise surveys, especially in relation to the development of postgraduate studies in the colleges.

(h) There is only marginal academic guidance from the universities to the colleges and this applies even to those universities which have established college development councils\*. Universities should recognise the fact that their business is not confined merely to granting of affiliation or conduct of examinations but to a commitment to

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\*38 universities have so far set up college development councils.

the improvement of standards in the colleges through programmes of orientation of college faculty, exchange of teachers and other forms of academic guidance and supervision as a continuing activity.

(i) The university can also play an important role in bridging communication gaps, wherever they exist, between the Commission and the individual colleges in regard to the various development schemes of the Commission, pattern of assistance, guidelines etc.

(j) The Commission should also set up a machinery through which the approved programmes in the colleges are regularly monitored and there is periodical evaluation of the approved schemes. There should be at least a mid-term appraisal of the programmes in each institution.

## IV

### Centres of Advanced Study/Departments of Special Assistance

4.01 The scheme of providing assistance to centres of advanced study/departments of special assistance for developing a limited number of university departments for postgraduate teaching and research in certain areas of specialization is one of the important and major programmes taken up by us for an indepth study with the help of a committee. The committee (Annexure XXVIII) had Professor C.V. Subramaniam as its convenor. It finalised its recommendations at its meeting held on the 29th of June, 1979 in New Delhi. A brief note on the objectives and impact of the programme and the observations and recommendations of the committee (as accepted by us) follow.

4.02 *Objectives of the Scheme:* The scheme of recognising certain departments as centres of advanced study was initiated by the Commission in 1963-64 with the object of strengthening postgraduate teaching and research and channelling available resources effectively for the purpose. The scheme is intended to encourage the pursuit of 'excellence' and team work in study and research and to accelerate the realisation of 'international standards' in specific fields. With this end in view, the Commission decided to give active support and substantial assistance to promising departments in the universities so that efforts and resources are concentrated on certain growth points instead of being scattered thinly over a wide area.

4.03 It was envisaged that each centre of advanced study in order to be viable would exceed a certain 'critical' size as regards its staff. The department concerned would have a fairly large staff of professors, readers and research associates or fellows of outstanding ability and qualifications who are actively engaged in advanced training and research. A substantial proportion of the team would be a kind of 'floating staff' coming to these centres for long or short period on deputation from their universities or institutions.

4.04 It was also visualised that the centres would function on an all-India level by attracting teachers and scholars from all over the country and help in promoting academic mobility in the country. Another additional advantage accruing from the scheme could be that the personnel trained at the centres would in course of time be available for strengthening the staff of other university departments – thus helping to meet to some extent the difficulties experienced by the universities in securing the services of competent teachers in specialised areas.

4.05 The scheme of providing special assistance to a limited number of selected departments (DSA) was initiated in 1972-73 with the object of enabling these departments to develop their existing potentialities and become active centres of teaching and research in selected areas and also attain the level of centres of advanced study in course of time.

4.06 *Present position:* The Commission, on the advice of a Standing Committee, specially constituted for the purpose, initially selected 26 departments (15 in science and 11 in humanities and social sciences) as centres of advanced study. Assistance to these departments was made available for a period of ten years. Subsequently in 1967-68 four more departments (two in science and two in humanities and social sciences) were added to this programme. The work of the 26 centres of advanced study functioning since 1963-64 was assessed by evaluation committees. Based on the recommendations of these committees and on the advice of the Standing Committee, it was decided that seven centres of advanced study be excluded from the programme with effect from April 1, 1974. A list of the 23 centres (14 in science and 9 in humanities and social sciences) functioning presently is at Annexures XXIX and XXX.

4.07 Initially, 26 departments (20 in science and 6 in humanities and social sciences) were selected under the programme of departments of special assistance. Assistance to these departments was for five years from April, 1972 but was continued upto March 31, 1979. The work of these departments was also assessed with the help of assessment committees. Subsequently, more departments were brought under the category of special assistance. A list of 33 departments in science subjects and 20 departments in the humanities and social sciences to which assistance is being provided presently under the scheme is at Annexures XXXI and XXXII.

4.08 *Identification of Departments:* As already stated, the initial selection of departments as centres of advanced study was done on the advice of a Standing Committee. In selecting departments, consideration was given to the quality and extent of work already done by them, their reputation and contribution to research, concentration of efforts by them in certain areas of specialisation and their potentiality for further development. However, in the fifth plan a decision was taken by the Commission that no department would be directly selected as a centre of advanced study. Only after performance as a special assistance department over a period of five years, could the department be considered for being recognised as a centre of advanced

study and that too on the basis of evaluation report by an assessment committee.

4.09 The selection of departments for participation in the scheme of DSA is made in consultation with the concerned subject panels. Information regarding the facilities and contributions made by the departments is considered by the panels and recommendations made on the basis of comparative evaluation. The recommendations of the subject panels are considered by the Standing Committee and then referred to the Commission. After approval of the Commission, expert committees visit these departments and submit their reports.

4.10 *Monitoring, Assessment and Review:* The performance of a department participating in the scheme of centres of advanced study and departments of special assistance is continuously reviewed. Even before the selection of a department for special assistance, its achievements are reviewed by an expert committee and again by an assessment committee before it is brought under the category of centres of advanced study. The performance of departments which were directly selected as centres of advanced study was also evaluated with the help of evaluation committees appointed for the purpose.

4.11 The Standing Committee reviews the entire programme in relation to the realisation of the objectives and the impact of the scheme. Every centre of advanced study has also to constitute an advisory committee which includes the vice-chancellor, all professors, two representatives of other teachers and two outside experts. The committee is expected to meet at least once every year to scrutinise the annual report and future programme of the centre.

4.12 *Future assistance to existing CAS/DSA:* The Commission reviewed its policy and pattern of assistance to the departments participating in the programme of centres of advanced study and special assistance in December, 1978. It was agreed that in the case of centres of advanced study which would have been assisted for a period of 15 years, ending March, 1979 the type of assistance to be given for future activities may be related to specific well-formulated projects which can be considered on merit and keeping in view the suggestions made by the evaluation committees for such centres of advanced study. However, adequate funding should continue in the form of basic grants for equipment and library. The question of providing non-plan assistance to these departments after the Commission's plan assistance ceases could also be explored.

4.13 In the case of other centres of advanced study which completed their initial ten-year period in March, 1979 and whose work would be evaluated by assessment committees, the nature and extent of assistance that may be given could be suggested by the committees and such assistance may be given as in other cases in the past for a further five-year period.

4.14 *Observations and Recommendations:* We have carefully examined the centres of advanced study (CAS) and the departments of special assistance (DSA) programmes of the Commission. In our opinion, the scheme has strengthened research and teaching in specific areas and its impact and importance have been recognised not only in India but by several foreign scientists and scholars and international organisations like the UNESCO. The Commission has sanctioned grants to the centres for improving their library facilities and laboratories as also to appoint necessary academic and non-academic staff. These have enabled the centres to make an important contribution to the advancement of knowledge and influence to a large extent the standards of research and teaching at the postgraduate and undergraduate levels in other universities.

4.15 The additional teaching staff has helped the centres to strengthen their teaching and research activities and to initiate new programmes of training and research. Scholarships and fellowships have encouraged students and teachers from other universities to receive advanced training and research in the centres though not to the desired extent. The provision of funds for visiting fellows has been utilised by the centres to invite scientists and scholars of repute from India and abroad. A number of publications have resulted from the research activities, seminars and symposia etc. organised by the centres.

4.16 Some centres of advanced study (e.g. CAS in Mathematics at the Universities of Bombay, Madras and Calcutta and CAS in Education, M.S. University of Baroda) invited selected teachers from the affiliated colleges to spend a full academic year at the centre to improve their subject-matter competence, participate in the new teaching methods, as well as get initiated into research so that on return to their respective colleges, such teachers could act as focal points for improving the standards of instruction.

4.17 The centres also organised seminars and symposia at the national as well as the international level. These symposia attracted scientists from India and abroad, several of them outstanding specialists in their

disciplines. A number of scientists and scholars from USSR, UK, USA and other countries were associated for short and long-term with academic programmes at several centres. Some centres also received assistance through UNESCO and the British Council for availing of the services of foreign scholars and scientists from the Academy of Sciences, USSR and the British universities. Assistance was also provided for sophisticated equipment required by the centres.

4.18 It is a matter of importance for developing countries to create facilities in their own universities in major subjects for first class higher degree work, so that normally the student takes his higher degree in his own country. This objective has been largely met through the programme of centres of advanced study.

4.19 Consequent upon the successful implementation of the programme of UNESCO/UNDP assistance to the centres of advanced study from 1964-65 to 1973-74 and evaluation of the benefits accruing from it in the development of the scientific research potential in the country, the UNESCO/UNDP approved from October, 1975 another programme of assistance to selected university departments spread over a period of 18 months at a total cost of \$ 7,71,900 to help in the development of the R & D potential of nine selected university departments.

4.20 During November-December, 1977 a UNESCO evaluation mission visited these departments to evaluate the work done under the programme and to recommend further assistance for the second phase of the programme. The mission recommended a second-phase assistance of \$ 24,85,475 spread over a period of three years beginning from October, 1978. On the basis of experience gained during the period CAS/DSA schemes have been under operation and our assessment of the realisation of the objectives, we would like to make the following recommendations regarding the scope and character of the programme, criteria to be used for identification of departments, extent of funding, review of work etc.

4.21 We are in agreement with the basic philosophy of the scheme of centres of advanced study/departments of special assistance, which is to concentrate the available resources and expertise on building peaks of excellence on a selective basis. Nevertheless, it would be useful to analyse the problems that have stood in the way of realisation of the objectives of these programmes.

4.22 It is sometimes felt that owing to difficulties at the university

level or at the level of leadership in the centre/department concerned, some centres have not been functioning as national centres. This is reflected in the recruitment of teachers and in the selection of students from generally within the region. The UGC has already made a provision that at least 50 per cent of the fellowships available to a centre should be awarded to candidates outside the university. It is hoped that this would bring about greater mobility. In so far as the teaching staff is concerned, it is suggested that the UGC should, through the Standing Committee on Centres of Advanced Study, lay down the necessary guidelines in the matter. The Commission should also provide adequate support to the centres/departments to enable them to have interaction with each other on discipline to discipline basis either at the national or regional level.

4.23 It would be useful if the head of the CAS and DSA programmes is identified. This has become essential in view of the new development of rotating headship of departments in many universities. It is also necessary that the programme be assigned to an active and viable group in one or more specified fields of specialisation. This would ensure that the programme does not receive a set-back in case the head of the centre goes away from the university.

4.24 The head of CAS/DSA may be designated as 'Programme Coordinator' or just 'Coordinator'. It would be appropriate for the university to have prior consultation with the Commission in case it becomes necessary to change the coordinator of the programme.

4.25 We would also suggest the appointment of an internal committee to advise the coordinator in the day-to-day functioning of the CAS/DSA and utilisation of recurring and non-recurring funds approved for the centre by various agencies.

4.26 We have noted the recent decision of the Commission to provide assistance for the development of a university department for post-graduate teaching and research at three different levels viz. (a) centre of advanced study; (b) department of special assistance; and (c) departmental support. We support this multi-stage approach as also the decision that a department should, to begin with, function in the special assistance category for at least five years and only at the end of this period could it be upgraded as a centre of advanced study or assistance continued/discontinued to it in the special assistance category depending on its performance and viability as assessed by an expert committee. We have also noted in this connection that no department



would be recognised directly as a centre of advanced study without undergoing the five-year 'probationary period'.

4.27 It must be ensured that a department being considered under DSA has an active group of research workers and teachers who could continue the approved programmes even if the coordinator retires or leaves the university. In this connection advantage could be taken of the departmental profiles being prepared by various subject panels.

4.28 While considering a department for recognition as DSA, the expert committee should also examine whether the department has any active programme of collaboration with allied departments in and outside the country and if so, in which field and with what results.

4.29 While identifying a department for recognition as DSA, thrust areas may be clearly indicated and proper balance be kept between various regions and disciplines, as well as, between humanities and social sciences on the one hand and science subjects on the other.

4.30 The recommendations of different subject panels should go to the Standing Committee in the humanities and social sciences and science subjects and thereafter to the Commission, which should make the final choice on the basis of comparative evaluation so that assistance is given not merely on the basis of excellence in one particular field, but on the relative merits of all cases under consideration, the idea being that the final choice will bring out or identify schools of excellence in science and humanities taken as a whole.

4.31 *Assessments:* The work of a centre of advanced study or department of special assistance should, in our opinion, be evaluated carefully and thoroughly after every five years with a view to ascertaining whether the objectives are being met and if so, to what extent. This should be done objectively by visiting committees of specialists in the subject fields taking the following into consideration:-

- (a) Assessment of research and teaching of each particular faculty member;
- (b) Quality and quantum of publication;
- (c) General Standards of research students and Ph.D. theses  
Student inputs/outputs;
- (d) Nature and extent of interaction between faculty and students (seminars, discussions etc.);
- (e) Interaction with other scientists and institutions in the country and outside as judged by participation in conferences or collaborative research;

- (f) Proper utilisation of funds allotted for books, equipment, etc.
- (g) Innovative teaching programmes;
- (h) Identification of difficulties which have impeded progress;
- (i) Extent of distribution of fellowships to students from other universities and from other parts of the country;
- (j) Extent of utilisation of trained personnel by universities, industry, etc. and
- (k) Organisation of seminars/symposia at the national and international level.

4.32 Since the main objective of the scheme is to enable the department concerned to raise standards of postgraduate teaching and research to the highest level, it would be important for the assessment committee to use the standard attained by the department as the principal yardstick. Another important factor would be the ability of the department to draw its talent from all over the country. The assessment committee should also examine whether the department has really developed as a national centre and the extent to which it has helped the other departments in the region/area in promoting standards of teaching and research with the expertise and resources available to it.

4.33 Contribution made by the centre/department to develop the study of the subject in allied departments in the same university and other departments in the region should also be taken into account.

4.34 We also suggest that the assessment committee should carefully examine the impact of the programme and whether the infrastructure made available to the department/centre by the UGC is being used to the optimum level and whether it has helped the department to formulate research and other schemes and get support from other agencies in the country or abroad.

4.35 Another important criteria, in our opinion, is the orientation of the department and the relevance of its programmes. From this point of view, we suggest that the assessment committee should see whether the area in which the department had earlier been recognised for work is still relevant or has outlived its utility. In case the committee feels that the specialisation is not so relevant as at the time of recognition, it may clearly indicate the new area in which the department should be assisted to work if it recommends continued assistance under the scheme.

4.36 In the case of existing DSA where the special field has not been

identified, the committees should do so and also identify the group on the basis of academic competence and leadership. Where two or more areas have been identified, the committee should ascertain if these areas have developed in a balanced manner, and if not, why? Each group should concentrate on work pertaining to the special field identified in a broad way and should not dissipate its energy or funds in other areas and shift the interest from the special field identified.

4.37 The plan visiting committees should ensure that the assistance recommended by them by way of additional staff, equipment, books & journals is earmarked for areas other than those in which the centre of advanced study/department of special assistance is specialising in order to bring about an even pace of development.

4.38 The assessment committees should, in addition to assessment of the work of the centre, also see that the utilisation of funds results in a balanced development of two or more specialities that are often the concern of the centres and for which funds are provided. It is necessary to emphasise this if only for the fact that such balanced utilisation of funds has for one reason or the other not taken place in some centres.

4.39 It should also be understood that the funds sanctioned under this programme are specifically meant for the programme as such, and not for the general development of the department for which plan development grants would be available. This applies to both CAS and DSA.

4.40 As already stated, seven centres were taken out from the scheme of centres of advanced study with effect from the 1st of April, 1974, as the performance of these centres was not found to be of the highest standard to deserve continuing support from the Commission. In our opinion, this was a step in the right direction and an instance in which the Commission took a bold stand for the maintenance of standards and the realisation of objectives. We would, however, suggest that in future the basis for deleting a centre or a department from the scheme should be suitably defined so that the Commission can take a decision in the matter in as authentic a manner as possible.

4.41 The role of the advisory committees as envisaged for each centre/department needs to be clearly formulated. The work of these committees also needs to be activated. They should meet regularly to evaluate the work being done at the centres and tender advice for improving the functioning of various programmes at the centres.

4.42 *Funding*: The basis and pattern of future assistance for the scheme of CAS/DSA has already been described by us in paras 4.12 and 4.13. The question of providing increased financial assistance for this programme depends on total resources which are made available to the University Grants Commission during the sixth plan period. However, in our opinion, high priority should be given to this programme in view of its likely impact on the standards of teaching and research.

4.43 We have noted that for the programmes of CAS, DSA and departmental support, there is an upper limit of Rs. 20, 15 and 10 lakhs respectively by way of assistance from the Commission. We suggest that the limits in monetary terms should be kept flexible enough, keeping in view the nature of the programme and the assessment of likely needs and requirements.

4.44 We also suggest that the period of UGC assistance for these quality programmes should be kept flexible. There need not be any rigidity regarding assistance to a department/centre for a maximum period of 15 years. It would be more appropriate if instead of this upper limit, the optimum level of assistance specially in terms of staff to a particular department/centre is determined upto which it may be assisted depending upon its performance and programmes. It would be difficult to lay down any common optimum level for all the disciplines/specialisations. This will have to be determined by expert groups keeping in view the needs of the area/specialisation in which the centre/department has been recognised.

4.45 It is expected that in a CAS which has functioned for 15 years, there will be an active group qualifying for further grants. The work of these centres should, therefore, be supported by way of major projects to be given to active groups in these special fields in these departments on the recommendations of panels. Where such active groups cannot be identified, the Commission may discontinue funding.

4.46 It is understood that the plan visiting committees generally do not take into account the earlier input at the centre/department while considering the requirements for a plan period. This needs to be done. The visiting committees may assess the needs of a department/centre keeping in view the optimum level fixed for the centre/department which may be reached in phases.

4.47 Since the Department of Science and Technology and other

central agencies are also providing assistance to the university departments for developing specific areas of study, cooperation and coordination between UGC and DST and other central agencies is necessary for funding and developing the various centres/departments.

4.48 In the UGC Act, provision has been made to enable the UGC to fund certain programmes even in state universities on a recurring basis under non-plan projects. The Commission may explore the possibility of including the recurring expenditure of the CAS/DSA as part of the non-plan expenditure by approaching the Government of India for allocation of funds for the purpose.

## V

### College Science Improvement Programme/College Humanities and Social Sciences Improvement Programme

5.01 The schemes of providing assistance under college science improvement programme (COSIP) and college humanities and social sciences improvement programme (COHSSIP) were initiated by the Commission in order to bring about qualitative improvements in teaching at the undergraduate level. In view of the importance of the scheme, we took it up for an indepth study and referred it to a committee (Annexure XXXIII) with Professor B.M. Udgaonkar as its con-venor. The committee made its interim recommendations after meet-ings held on May 17 and July 7, 1979 in New Delhi. After that the committee members visited selected ULP departments and COSIP/COHSSIP colleges, as detailed below in order to have a first-hand assessment of the impact of these programmes.

<i>Members of the committee</i>	<i>Departments/Insti- tutions visited</i>	<i>Date of visit</i>
1.	2.	3.
1. Professor S. Krishna- swami, Director, School of Biological Sciences, Madurai University, Madurai.	1. Departments of Botany, Chemistry and Zoology, Madras University, Madras.	} 20th, 21st and 22nd August, 1979.
2. Dr. (Mrs) R. Devadas, Principal, Avinashilingam Home Science College for Women, Coimbatore.	2. Madras Christian College, Tambaram, Pachaiyappa's College, Madras.	
3. Shri I.C. Menon, Joint Secretary, University Grants Commission, New Delhi.	3. St. Joseph College, Tiruchirappalli.	
	4. Seetha Lakshmi Ramaswami College, Tiruehirappalli.	

<i>Members of the committee</i>	<i>Departments/Institutions visited</i>	<i>Date of visit.</i>
1.	2.	3.
1. Professor R.C. Paul, Vice-Chancellor, Punjab University, Chandigarh.	1. Departments of Physics, Mathematics and Botany, Meerut University, Meerut.	} <b>1st and 2nd August, 1979.</b>
2. Fr. L. Pereira, Principal, St. Xavier's College, Bombay.	2. Meerut College, Meerut.	
3. Shri K.N. Bhatnagar, Education Officer, University Grants Commission, New Delhi.	3. Raghunath Girls' College, Meerut.	
	4. Multani Mal Modi College, Modinagar.	
1. Professor D.P. Nayar, Visiting Professor, Punjab University, Chandigarh.	1. Departments of Life Sciences and Chemistry Gujarat University, Ahmedabad.	} <b>16th and 17th August, 1979.</b>
2. Professor Shanti Swarup, Department of Political Science, Punjab University, Chandigarh.	2. H.K. Arts College, Ahmedabad.	
3. Dr. T.N. Hajela, Deputy Secretary, University Grants Commission, New Delhi.	3. St. Xavier's College, Ahmedabad.	

<i>Members of the committee.</i>	<i>Departments/Institutions visited</i>	<i>Date of visit</i>
1.	2.	3.
1. Professor Mrinal Miri, Department of Philosophy, North Eastern Hill University, Shillong.	1. Department of Physics, Ranchi University, Ranchi.	} 20th to 23rd August, 1979.
2. Dr. S.P. Tewarson, Principal, Lucknow Christian College, Lucknow.	2. Vidyasagar College, Calcutta.	
3. Dr. T.N. Hajela, Deputy Secretary, University Grants Commission, New Delhi.	3. Ravenshaw College, Cuttack.	
	4. S.C.S. College, Puri.	

The objectives and impact of the programme and the observations and recommendations of the committee (as accepted by us) follow.

*5.02 Objectives of the Scheme:* The college science improvement programme was initiated by the Commission in 1970-71 in order to bring about qualitative improvements in the teaching of science at the undergraduate level. The purpose of the programme is to accelerate the development of the science capabilities of undergraduate students and to initiate a process of continuous self-renewal. This is brought about through an integrated approach and simultaneous improvements in the subject-matter, methods of instruction, syllabi, curricula, laboratory exercises, workshops, library and teaching material.

*5.03* Encouraged by the success of COSIP, the Commission in 1974-75, decided to extend the programme to the humanities and social sciences. The college humanities and social sciences improvement programme (COHSSIP) aims at bringing about improvements in the teaching of humanities and social sciences at the undergraduate level



with particular reference to (a) adoption of new teaching methods, e.g. preparation of synopsis of lectures and other teaching material, use of audio-visual and other teaching aids, tutorials and seminars etc., (b) extension of library services, (c) introduction of special courses, (d) inter-disciplinary programmes, (e) adoption of various measures of examination reforms, (f) remedial teaching and (g) field/project work etc. If both programmes exist in one college, they are expected to be coordinated so that each may benefit from the experience of the other.

**5.04** The college science improvement programme and the college humanities and social sciences improvement programme were taken up at two levels (a) in selected colleges to include the entire faculty and (b) in one subject in all the colleges affiliated to a university (university leadership project).

**5.05 Present Position:** The first selection of colleges and university departments under COSIP and ULP respectively was made by the Standing Committee and initially 118 colleges and 15 university departments were selected for participating in this programme. Presently (at the end of a ten-year period) 177 colleges and 40 departments are being assisted under COSIP.

**5.06** In the case of colleges under COHSSIP, it was agreed that in the first phase proposals received from only the COSIP colleges may be processed. Accordingly, 42 COSIP colleges which secured 15 or more points on a defined scale were asked to formulate their proposals under COHSSIP also. Rating was done by giving points on a 5-point scale for the quality of staff, number of books and journals, staff-student ratio, examination results at the undergraduate level and quality of programmes. A conference of principals of selected colleges was also held to identify the general principles which should guide the implementation of this programme. 126 colleges have so far been selected for participation in COHSSIP, besides 15 departments under ULP.

**5.07 Monitoring and Review:** COSIP and COHSSIP are implemented in consultation with the standing committees constituted by the Commission for this purpose. The committees meet regularly and advise the Commission regarding different policy matters.

**5.08** In 1977, four regional conferences were organised to review the programmes under COSIP and also to discuss the future plan for implementation of this scheme. The coordinators of ULPs, COSIP

colleges and some other colleges in the respective regions participated in these conferences. Alongwith these conferences, subjectwise ULP coordinators' meetings were also arranged.

5.09 Under COHSSIP five regional conferences were organised between December, 1977 and March, 1978. These conferences not only created a greater awareness among the participants about the underlying objectives of the programme but also made useful suggestions about the future course of action. A consolidated report on these conferences has been prepared and circulated to all the COHSSIP colleges. No such consolidated report on the COSIP conferences is yet available.

#### 5.10 *Observations and Recommendations:*

(a) We are in general agreement with the objectives of COSIP and COHSSIP and consider these to be major quality programmes for the improvement of teaching and learning at the undergraduate level through appropriate changes in the subject-matter, methods of teaching, evaluation, syllabi, curricula, laboratory exercise, workshop, library and generation of teaching materials. Of course, one has to examine the extent to which these objectives have been realised.

(b) We have tried to assess the impact of the programme on the basis of the reports of the sub-committees that visited ULP departments and COSIP/COHSSIP colleges, as also the report of the Western Region Committee which visited a few colleges in Bombay, Poona and other places to assess the first phase of the programme, as also our own knowledge and experience.

The positive impact of COSIP/COHSSIP has been noted in the matter of preparation and production of text books, laboratory manuals and other educational materials. A number of new laboratory experiments have been introduced, especially under ULP, and the participating college teachers have been trained in conducting the experiments and demonstrating the same to students, thus facilitating the colleges to provide such experiments for students to perform. Specialised institutes-cum-short-term courses have been organised in different branches to acquaint the college teachers with the latest developments with particular reference to curricula reform and instruction at the undergraduate level. Undergraduate teaching has also been strengthened through the supply of equipment, models, slides, charts etc. to the colleges.

Colleges have also taken good advantage of the assistance provided by the Commission under these schemes. Some colleges have adopted

internal assessment and designed question banks. Assistance of the Commission under COSIP has been utilised by some colleges for the introduction of one or more of the following: workshop practice, photography, practical electronics, soil analysis, and other programmes aimed at development of practical skills. Students have been encouraged to undertake projects. Similarly under COHSSIP, field work and surveys have been undertaken to study topics like response to adult education, family planning etc. and students have been encouraged to write book reviews and do other practical work. In some colleges, attempts have been made to introduce job-oriented courses. A few colleges have also tried interdisciplinary programmes. The programmes have also helped in bringing about a change in the attitude of teachers and students towards restructuring of courses, examination reforms and other educational innovations, which is a very important gain from the long-term point of view.

Some of the programmes of developing laboratory experiments, have attracted national and international attention. In particular, multiple sets of equipment developed under ULP at Physics Department, Rajasthan University, have been ordered by UNESCO.

On the other side, the implementation of ULP has been adversely affected by (i) lack of fullest involvement on the part of students and teachers and (ii) lack of proper appreciation of the underlying objectives of the programme e.g. some ULP departments have implemented the programme without adequate consultation with the colleges, or involvement of college teachers. Similarly, the implementation of COSIP and COHSSIP in colleges has been affected by (i) administrative difficulties in coordination of programmes and (ii) lack of interaction between ULP departments, COSIP and COHSSIP colleges on the one hand and their counter-parts in other universities and colleges on the other. The prevalent unrest on the campus has also affected the programme.

It may be mentioned in this connection that the general impression of the committees that visited universities and discussed the impact of the programmes with the vice-chancellors is that these have made a meaningful and important contribution to the improvement of standards of undergraduate teaching.

The scheme is inherently sound and well-conceived, the proof of which is not only that the components – updating curricula and relating them to the extent possible to the local development needs, creative methods of teaching, training of teachers, connecting institutions of higher learning in mutually supporting roles to maximise resource utilisation, increasing the challenge of higher education to students and making the teaching-learning process more interesting to direct their

youthful energy into constructive channels etc. — are obviously priority items but also because their feasibility has been established in a number of institutions.

Though the performance has varied widely depending upon local leadership and the support lent by the administrative set up, a certain minimum, which is worthwhile, has been achieved almost everywhere. This is the awareness that a change for the better is possible and worth trying for.

It is our considered opinion that COSIP and COHSSIP should be continued and further strengthened in the current plan period, taking into account the suggestions for improvement made by us in the following paragraphs.

(c) As already stated, COSIP/COHSSIP colleges are expected to be laboratories of innovation, experimenting with teaching/learning/evaluation methods which when found successful could be adopted in the university as a whole. Experience over the years of operation of COSIP/COHSSIP clearly shows that for effective sustained efforts at innovation, a college needs to have autonomy in academic matters. Otherwise, there are severe limitations imposed by the affiliating system, with its prescribed syllabi, common conduct of examinations by the university and by the fact that teaching and learning, by and large, tend to be examination-oriented.

The idea of granting of autonomous status to colleges was mooted by the Education Commission as far back as in 1964-66 and UGC circulated guidelines in this regard in 1973. However, it was only in 1977-78 that some real progress was made and autonomous status was granted to 12 colleges affiliated to Madras and Madurai Kamraj Universities in addition to the Birla Institute of Technology, Mesra, which had been given such status earlier. We know that several colleges now aspire for autonomy, partly as a result of the COSIP/COHSSIP programme. Now that a modest beginning has been made in this regard, we strongly recommend that the programme of granting autonomy to colleges should be taken up more vigorously.

(d) As already stated, the Commission decided to extend the scheme to humanities and social sciences, in the first instance — only in those colleges which had successfully carried out the experiment in regard to science subjects. As a logical corollary of this, there should have been the fullest coordination between COSIP and COHSSIP activities within each college which, unfortunately, has not happened. As a first step, it is necessary that in the UGC Office itself adequate steps are taken to coordinate the COSIP and COHSSIP programmes by (i) drawing upon the experience of one programme for improving the other, and (ii) maintaining an integrated view of a college having both COSIP and

COHSSIP. Officers of the UGC who service the COSIP Standing Committee should attend the COHSSIP Standing Committee also, and *vice versa*. The two standing committees may also meet in a joint session from time to time. We would also suggest that in future the Commission should ask the colleges not only to send separate progress reports in regard to their activities under COSIP and COHSSIP but also indicate the steps taken by them to bring about coordination between COSIP and COHSSIP activities, and to indicate how innovative programmes tried in one department (whether in sciences or humanities and social sciences) have been found useful by the others.

(e) There is often a lack of adequate communication between COSIP/COHSSIP colleges and other colleges in the university or even among COSIP and COHSSIP colleges. We feel that proper feed-back and interaction among different colleges is important not only for sharing of experience but also for ensuring that changes in curriculum, methods of teaching, evaluation etc. are introduced simultaneously in all the colleges affiliated to a university for ensuring a spread effect. This is also necessary for achieving a satisfactory cost-benefit ratio. Bulletins and newsletters do exist but their functioning has to be strengthened. We expect that the state level advisory committees\* will play an important role in establishing an effective net-work of communication, which is vital for the success of the programme.

(f) Steps should be taken to encourage the participation of teachers in COSIP and COHSSIP activities on a much wider scale and to remove the present indifference on the part of a large number of college teachers towards COSIP/COHSSIP. The more eminent among the college teachers often do not participate in the programme because they are busy either with their publications or attending seminars and conferences. Similarly, teachers who engage themselves in private tuition do not have sufficient time to devote to these innovative programmes. However, there are some teachers who respond to the challenge and it is because of their interest that COSIP and COHSSIP activities are being sustained. We would suggest that in future the participation of teachers in COSIP and COHSSIP should be taken into consideration in calculating their workload and also given due weightage at the time of appointment to higher positions. Of course, the problem of extra work-load will not arise, once the college becomes autonomous.

(g) The interaction between the colleges and ULPs is not as wide or effective as envisaged under the scheme, nor is there enough consultation with the colleges by some of the university departments regarding

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\*There has been a delay in setting up these coordinating committees, which were recommended by regional workshops three years ago.

planning, programmes and activities. In one case, it was pointed out to the visiting committee that even in the matter of supply of equipment to colleges, the requirements of individual colleges were not taken into consideration. Though the situation varies from one university to another and from one department to another within the same university, it is important to ensure that ULP is formulated and implemented in consultation with all the participating colleges, and a sense of participation is created. The idea that the college affiliated to the university and the staff are only at the receiving end must be given up and *all* the teachers in the university departments as well as affiliated colleges should be involved in these programmes. We would also suggest (as was indeed recommended by the workshops three years ago) that the UGC should organise regular meetings between ULP departments and COSIP/COHSSIP colleges on a regional basis in order to provide an interaction between innovators in the two types of institutions and work out the details of the programmes to be implemented and steps necessary to achieve better coordination between the ULP departments and the colleges, and thus enrich the programme.

(h) It has also to be ensured that only such equipment are supplied to colleges as are actually needed by them. Routine purchases of books and equipment readily available from commercial sources should be avoided as far as possible.

(i) As already stated, many ULPs have been successful in the production of text books, laboratory manuals, reading and reference materials as well as equipment design and fabrication. We are of the view that efforts in this direction should continue and further that vigorous efforts are needed on the part of UGC to promote the spread of the new material generated under ULP. The first step would be to disseminate consolidated information. This was also recommended by the regional workshops three years ago. It is understood that information relating to such material has now been compiled by the UGC and will be disseminated shortly. This should be done expeditiously. The workshops had also recommended that material from all ULPs in a given subject should be available at each ULP, so that (i) it may thereby get known nationwide and (ii) it may become the basis for further development. This does not seem to have happened. The UGC may take steps to implement the above recommendation also.

(j) In view of the fact that at the undergraduate level, especially in sciences, the system is dominated by foreign books on the one hand and poor quality Indian books (with some notable exceptions) on the other, the UGC should consider the preparation and publication of a series of books at the undergraduate level in all subjects as a priority item with the time-bound aim of ridding the country of its dependence on

foreign text books within five years. The books should be brought out as a UGC series, so that they may command serious attention on a nation-wide basis. The experience of the ULP programme may be utilised and built upon for this purpose. We envisage that there can be and should be more than one series of books for each subject.

(k) Some ULP departments have been able to develop high quality teaching aids. This leads us to recommend that the UGC may give an additional dimension to teacher fellowships under the FIP,\* so that college teachers may be enabled to work for the M.Phil./Ph.D. by engaging themselves in innovative design and fabrication of new kits/instruments/equipment. This programme may be confined to a few selected ULP departments in the first instance, in order to ensure high quality of M.Phil./Ph.D.

(l) It would be useful for ULP departments to take initiative in imparting training to laboratory technicians in the colleges in order that the proper upkeep of equipment, instruments and audio-visual aids is ensured. Expenditure on TA/DA of the technicians could be met by the colleges out of the COSIP grant or development grants provided by the UGC, while the expenditure on organising the training programme could be met by the ULP department from its own funds. It would also be useful for the ULPs to train at least one teacher from each college in supervising and guiding the day-to-day work of the laboratory technicians.

(m) It would be useful to involve the state governments in COSIP/COHSSIP from the very inception i.e. when a department or college is included in the programme. Although the Commission provides cent per cent assistance under these programmes, such assistance can at best be for a limited period and the state government concerned will have to enter the picture to ensure that the activities are not discontinued due to lack of financial support, even though the continued support needed may be marginal.

This would imply that the state government would have to be requested by the UGC/Ministry of Education to include a provision in the grants-in-aid code for colleges under which colleges may be given specific additional grants for approved quality programmes on a selective basis.

(n) The involvement of the state governments would also bring about an integrated development of colleges under general development and quality programmes. The question of deputing teachers for special courses under COSIP/COHSSIP 'on duty' and other administrative matters may also become easy if the state governments are involved

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\*Faculty Improvement Programmes.

in the programme. State-level advisory committees could also help sort out some of these problems.

(o) A bench-mark survey, when launching the programme in a college/university, must be made to facilitate the assessment of improvements subsequently made under various items of the programme, as well as to prevent diversion of funds already being made available by the college/university/state government.

(p) Improvements and innovations are the result of fertile minds and a favourable general atmosphere. Therefore, these programmes should be started in the best colleges, which should be linked at the planning stage itself, clearly and definitely, with other colleges so that the responsibility of the selected colleges towards other colleges becomes a part of the programme from the very beginning.

(q) The teaching aids developed under COSIP and COHSSIP and the equipment designed and fabricated by ULPs should also be made available to all colleges including even those colleges which are not presently participating in COSIP and COHSSIP. We feel that time is ripe for the UGC/Ministry of Education to consider entrusting the task of producing, on a large scale, quality materials developed by ULPs to an autonomous teaching aids corporation. The UGC and Ministry of Education may examine the operational aspects of this proposal.

(r) It is understood that in a number of universities, teachers participating actively in COSIP and COHSSIP (including ULP), are not represented on the boards of studies and, therefore, they have little say directly in the formulation of syllabi and teaching programmes and the pattern of examination. We would suggest that the university should include at least a few representatives who have participated/are participating actively in these programmes in the concerned boards of studies as fullfledged members, or as coopted members, so that changes in curricula, examination reforms and other educational innovations can be considered by the boards of studies in the light of COSIP and COHSSIP experience. Conversely, the chairman of boards of studies should be associated with COSIP/COHSSIP in planning the programmes.

(s) In future, the UGC Office should be able to carry out a more thorough analysis and evaluation of the reports received from COSIP/COHSSIP colleges and ULP departments, to provide guidance to them, and to serve as an effective clearing house of information. In this context, we also recommend that the UGC should have a cell with adequate technical and administrative support for analysing the data and reports from COSIP/COHSSIP (including ULP), for continuous monitoring and evaluation of the programme, for helping colleges/universities to implement it more effectively, for playing a more persuasive and catalytic role with universities and colleges, for overall impact studies, and for



publicising the successful ideas/innovations/educational material arising from COSIP/COHSSIP.

The degree of success or failure depends upon a multiplicity of factors and each local situation will need individual attention and micro planning. This may necessitate a consultancy of two or three experts, continuously on the move to act as the eyes and ears of the UGC so that appropriate action can be taken at the appropriate level. ✓

(t) We feel that the COSIP/COHSSIP programme should be integrated more effectively with other programmes of the UGC. A college should in general make full use of the grants under general development for building its base (e.g. workshop, animal house or improvement of library and laboratories) before it makes special requests under COSIP/COHSSIP. This implies that UGC should maintain a profile of each college supported by it under the various schemes.

## VI

### **Financial Assistance to Teachers for Research Work**

6.01 The scheme of financial assistance to teachers for research work is one of the special programmes of the Commission under faculty improvement for providing support to the university and college teachers for advanced/major research projects and short-term/minor research projects in the humanities and social sciences and science subjects. The scheme of financial assistance to teachers towards short-term/minor research projects was taken up by us for indepth study with the help of a committee. The committee (Annexure XXXIV) had Professor A.R. Kidwai as its convenor. It finalised its recommendations at its meeting held on the 4th of May, 1979 in New Delhi. The recommendations of the committee, as accepted by us, follow.

6.02 *Objectives of the Scheme:* The scheme of financial assistance to university/college teachers for undertaking short-term/minor research projects in humanities, social sciences and science subjects was initiated by the Commission in 1963-64 with a view to enabling individual teachers and more specifically college lecturers and young lecturers in the universities to engage themselves in research work. The scheme is also intended to provide facilities which would help in the initiation of a research project and provide for minimal support by way of books, equipment, field work etc. to those members of the teaching community in the universities and colleges who have aptitude for research but do not have the resources to pursue research. Thus the main objective of the scheme is to promote a climate of research in the universities and colleges and thereby strengthen teaching as well.

6.03 We endorse the basic objectives of the scheme, keeping in view the following relevant considerations (i) Teaching and research must go together as these can flourish only when the two activities are properly integrated. This can be made possible by way of support to teachers depending on the level of their training and capability for research as well as institutional infrastructure and facilities available through other programmes; (ii) Universities have a crucial role not only in the preservation and transmission of knowledge but also in the advancement of knowledge and extension of the frontiers of knowledge, through research and enquiry; (iii) Research is crucial for national development and equally important is the role of university research in

the total spectrum of national research and development (R & D) effort; (iv) University and college teachers have made a significant contribution by way of publications in learned professional journals, fabrication of equipment etc. which in quality compares well with the national laboratories and other organisations outside the university system; (v) If one compares the inputs provided for university research and those for other R & D institutions, the cost effectiveness of university research is quite significant; (vi) Financial assistance to teachers for research work assumes added significance in the context of faculty improvement programme where during the past three years or so, a number of teachers have been encouraged to work for their M.Phil. or Ph.D. degrees. These teachers, on return to their respective colleges, would be in a position to undertake research work and where necessary to interact with specialists in their subject areas.

6.04 Based on a sample study of the annual reports received from teachers participating in this scheme and the resultant publications, it is our opinion that the objectives of the scheme has been adequately realised. This is further supported by the following facts and figures:

(a) Since the inception of the scheme in 1963-64, 8,938 teachers in science subjects and 4,177 teachers in the humanities and social sciences have been covered under the scheme upto 1978-79. Nearly 2/3rd of the total number of 13,115 teachers are college lecturers and 1/3rd young teachers from the university departments. The initiation of such a large number of young teachers into the techniques of research would enable and encourage other teachers to have first-hand encounter with research.

(b) The response of teachers to the scheme as judged by the number of applications received seems to be encouraging and during a period of 15 years the number of applications has gone up by approximately six times.

(c) It may be noted that the proportion between the number of awards and the number of applications during the period 1963-64 to 1978-79 has gone up from about 20-25 per cent to 40-50 per cent, which shows that the projects formulated by the teachers are better defined and, therefore, finding greater acceptance. This is an indication of how a climate of research has been gradually created in the universities and colleges during the operation of this scheme.

(d) The average expenditure per teacher under the scheme during the last three years comes to Rs. 4,069/- in science subjects and Rs. 2,737/- in the humanities and social sciences as shown in the following table. This shows that the scheme has been operating at the minimum cost.

**Financial assistance to university/college teachers for short-term/minor  
research work in humanities, social sciences and sciences  
(1963-64 to 1978-79)**

<i>Year of award</i>	<i>No. of awards</i>		<i>Total amount sanctioned/approved</i>	
	<i>Humanities and Social Sciences</i>	<i>Sciences</i>	<i>Humanities and Social Sciences (Rs)</i>	<i>Sciences (Rs)</i>
1	2	3	4	5
1963-64	16	65	33,500	1,03,000
1964-65	123	278	85,663	3,28,235
1965-66	235	344	1,34,774	3,47,450
1966-67	174	318	1,11,405	2,87,250
1967-68	175	303	1,25,464	3,55,000
1968-69	255	509	1,38,520	3,87,100
1969-70	180	429	1,65,918	4,10,300
1970-71	233	623	1,51,325	4,41,100
1971-72	213	444	1,60,725	4,08,650
1972-73	757	1,318	4,22,589	8,05,600
1973-74	277	435	2,26,455	5,57,800
1974-75	288	275	4,88,650	10,21,650
1975-76	297	660	7,59,767	21,23,121
1976-77	231	1,021	6,01,465	35,20,233
1977-78	312	1,102	8,56,300	42,50,974
1978-79	461	814	12,79,135	41,79,198

6.05 We analysed the distribution of awards over a period of time among different disciplines in the humanities, social sciences and science subjects as well as their spread between universities and colleges and find that, by and large, a proper balance and objectivity have been maintained in operating the scheme. We also had before us a statement showing the statewise picture of universities and colleges where more than three projects had been approved in a particular year. We are satisfied to find that all these institutions are well-established with a long tradition of research and fully deserve the support extended to them. Care has also been taken to select teachers from those institutions, which have the potentiality to develop with

marginal support available under the scheme. Thus, generally speaking, the merit of the project and the capacity of the teacher have been the main factors in the selection and awards.

6.06 It is our considered opinion that some guidance should be available to junior teachers from established research workers in their subject along with opportunities to visit other institutions, laboratories and libraries for short periods by using the contingent grant in the project. Support should also be provided through regional centres with specialised facilities of library and sophisticated equipment, and there should be an inbuilt device for monitoring and evaluation through proper infrastructure at the central level. Our suggestions in this regard are outlined below:

- (a) The UGC should bring out a directory of research facilities available in the country giving information about services, specialised equipment, source materials etc., so that the teachers can use such information in their research work;
- (b) A catalogue of current periodicals and journals subscribed to by different libraries should be prepared on a zonal basis;
- (c) The various schemes envisaged by the UGC such as computer centres, regional instrumentation centres, zonal libraries with facilities for reprography and Xerox could be made more functional with the help of user committees which should have fairly wide representation.
- (d) It should be impressed upon INSDOC that they should gear up their machinery to ensure that photostat copies of research papers are supplied within a maximum period of one month.
- (e) There should be better cooperation between the national laboratories and the universities in the use of equipment, library and research facilities for the promotion of research activities and exchange of knowledge and experience. This matter should be pursued at the highest level.
- (f) Specific provision should be made in the scheme for travel and field work to enable the awardees to seek guidance from eminent scholars and scientists in their fields and to visit other institutions, laboratories, libraries, museums, archives etc. for short periods during the tenure of the award. The application form may also be revised accordingly.
- (g) The possibility of bringing together awardees in a subject during summer or long holidays may be explored to facilitate exchange of views and discussions on the results of their study and investigation and guidance from subject experts and resource persons.

- (h) The committees which initially select the projects should be asked to evaluate the final report at the end of the project so that some evaluation of the results achieved becomes possible.
- (i) The present provision of Rs. 55 lakhs for the scheme of support for research should be enhanced to at least Rs. one crore per annum.
- (j) There should be a cell in the UGC office for monitoring and evaluation of the scheme on a continuing basis and provision made for such additional staff as may be necessary.

## VII

### General Observations and Recommendations

7.01 In the preceding sections, we have tried to evaluate the impact of Commission's programmes on universities and colleges in the light of the objectives and functioning of the UGC during the last two decades or so. Although it is not easy to define standards or to measure them with the help of objective tools, we have used ten parameters (para 1.12) which to some extent have enabled us to assess the impact of Commission's ongoing programmes on the standards of teaching and research in the universities and colleges. In view of the new concept of the role and functions of a university and the acceptance of extension as an equally important responsibility, standards of higher education will have to be judged in the future, not only on the basis of academic excellence but also in relation to the relevance of the courses and programmes, the social commitment of universities and their contribution to national development. Some of these programmes have been initiated by the Commission during the last four or five years and their impact would be felt only during the current or subsequent plan periods.

7.02 In this context, we would like to refer to two important documents finalised by the UGC towards the close of the year 1977-78 viz. 'Policy Frame for the Development of Higher Education in India' over the next 10-15 years and the 'Approach to Development' in the next plan period. These documents outline the basic philosophy and strategy for the development of universities and colleges, with special emphasis on the concept of extension, social change, equalisation of educational opportunities, regional balance, maintenance of standards and social relevance. We are in general agreement with the above objectives and would suggest that the implementation of these programmes be taken up after careful planning, necessary administrative support and structural changes, where necessary.

7.03 The picture that emerges from the reports of the various sub-committees which visited universities and colleges to assess the impact of UGC programmes is one of light and shade; of achievements as well as failures. The general impression is that the best students are as good as ever, if not better and that the contents of courses are generally of a high level. It is also a fact that outstanding work is being done by some of the university departments and a number of

teachers have been receiving recognition from well-known centres of learning. The out-turn of Ph.D's has gone up significantly and so has research output by way of publications. It is equally noteworthy that various schemes of national development have been implemented by personnel trained in our universities. On the other hand, instruction in some universities has not kept pace with modern developments. There is a resistance to change and innovations on the part of teacher and an atmosphere of growing violence and intimidation on the part of students, teachers and in some cases even employees. There is also a lack of trust between the students and teachers. It is not surprising that under the present conditions, the potentialities of the students are not fully utilised and developed by our universities and colleges. The prevailing situation is also considered unsatisfactory from the point of view of the growing expectations, the demands on the system being far greater as compared to the inputs and availability of resources.

7.04 It goes without saying that attempts will have to be made, on the basis of the highest priority, to improve the standards of teaching, research and examinations, which is a statutory responsibility of the Commission. Standards depend on the structure of education, extent and quality of essential inputs like teachers, methods of teaching, evaluation, equipment, books, maximum utilisation of available facilities and above all, mutual confidence between the teachers and students about common goals. These, in our opinion, will need considerable investment in men, materials and money. But, more importantly, they need motivated students and involvement and identification on the part of teachers.

7.05 The improvement of curricula and restructuring of courses should also receive high priority during the current plan period. We have noted that the Commission has already initiated steps in this regard through the reports of regional workshops, subject panels and expert committees but there has been some tardiness in giving effect to the various recommendations. In our opinion, revision and updating of courses should be a continuing process. There should also be an in-built device through which the courses can be updated without cumbersome procedures. Another point of significance in so far as undergraduate education is concerned is the principle of flexibility, which should enable students to break away from the traditional combinations of subjects and to offer new combinations, thus bringing a new approach to study and learning. This is possible if courses are divided into smaller units, care being taken to ensure that only those course units are taught for which there is a sufficient demand. The courses should



also be diversified, especially to include newly emergent and interdisciplinary areas and borderline subjects.

7.06 We further suggest that the courses at the first degree level be made more relevant to the rural or urban environment and to the development needs of the community. This implies reorientation of traditional subjects to the needs of the rural community and the introduction of some relevant applied discipline which may be related to basic subjects or subject groups. The first degree courses should also be linked with work/practical/field experience. This would imply the participation of university and college students, as part of their field and project work, in various institutional activities, with emphasis on rural reorientation.

7.07 There is an imperative need to look at the structure, management and staffing pattern in the universities. In this connection, we welcome the decision of the Commission to have this problem examined in depth with the help of management experts and would like to refer to the report on the University of Bradford in the UK on costs and potential economies in higher education. This report by OECD examines a number of important questions such as the effects of changing the structure of courses, varying the mix of teaching and research, use of buildings, savings in building costs etc. It would be useful to have a similar exercise done for some of our universities on a representative basis.

7.08 There is also an urgent need to bring about a substantial decentralisation as well as diversification of educational programme, so that individual universities, their departments and the colleges may experiment with new ideas rather than follow a stereotyped pattern. This implies considerable autonomy and academic freedom to be given to the constituent departments of a university. Vigorous efforts have to be made to grant autonomous status to as many colleges as possible during the current plan period to enable them to restructure their courses and to try out new methods of teaching and evaluation.

7.09 It is important to consider the need for expansion of the educational system, keeping in view the demand for higher education from different sections of our society specially the weaker sections and the first 'generation of learners'. At the same time, it is not possible to ignore certain aspects of the present situation such as the inability of our economy to absorb the products of the university system and lack of resources which often make expansion difficult. We, therefore, suggest

that facilities should be provided for the expansion of higher education through non-formal methods such as correspondence courses, private appearance at university examinations, evening colleges etc. but in the regular full-time courses universities and colleges should resist the pressures that are exercised from time to time. Steps should be taken for the maintenance of high standards in correspondence courses and to make such courses as challenging as possible. We should also ensure that the unplanned proliferation of institutions which has been going on for a long time should be checked and available resources utilised for the consolidation and strengthening of facilities in the existing institutions.

7.10 The UGC has taken a number of important measures for the maintenance and coordination of standards viz. training and orientation of teachers through programmes of summer institutes, faculty development, university service and instrumentation centres, preparation of university level books, publication of learned works, etc., all of which have a direct and significant bearing on standards. We would suggest that these programmes should now receive much greater attention in the scheme of things, and years to come.

7.11 There is an urgent social need to extend the benefits of knowledge and skills in the universities to the community at large through programmes of adult education and extension. In this connection, we have noted the guidelines formulated by the Commission and the fact that the programme is being implemented through 5,190 centres in 44 universities and 412 colleges. In our opinion, it would be highly desirable to link adult education and extension work with curriculum, otherwise it will tend to be an intermittent and fragmented kind of activity, which may have little impact on the country's development strategy and realisation of the social objectives of the universities/colleges.

7.12 The very size and complexity of the system of higher education in India indicates that improvements can be brought about only with the active collaboration of the universities and the state governments concerned. Such a collaborative effort is crucial for the implementation of various developmental activities and maintenance of standards. It is suggested that each state government may set up a coordination committee consisting of vice-chancellors of all the universities in the state and one or two representatives of colleges and a representative of the UGC.

7.13 There seems to be a lack of planning consciousness as well as adequate machinery at the university level with a few notable excep-

tions. The universities need a new vision of perspective planning spread over 15-20 years with well-defined goals and objectives. The planning process should also have the fullest participation of teachers, students, administrators and citizens of the area.

7.14 At the university level, there is often a lack of inter-departmental cooperation and inter-disciplinary programmes. There is some evidence of common discussion on the development schemes of the UGC amongst the staff in a department, departmental heads and university authorities but not to the extent of this being a regular feature or a continuing activity. The university system has also not become fully responsive to the needs of the community around it. There is also a need to strengthen the process of monitoring, review and evaluation within the university system itself.

7.15 Each university must define its own perspective in the light of the needs of the region which should aim at the goals of excellence, relevance, social justice and development. The university should also play a role in the planning and execution of development projects in the region.

7.16 We also recommend that there should be a strong planning machinery at the state level supported by investigations into the needs of higher education in the region in order to bring about coordinated development of universities, colleges etc. and to help the policy regarding the establishment of new institutions or the starting of new courses and the development of areas of specialisation.

7.17 Similarly, there should be a strong planning machinery in the colleges. It has been reported that in formulating proposals for development, the members of faculty in the colleges are not consulted. It is of the utmost importance that students, teachers and college authorities become fully involved in the processes of planning within each college. Colleges should also formulate plans of development keeping in view the objectives of academic excellence and social relevance.

7.18 *Plan Visiting Committees:* The objective of sending out visiting committees to the universities is to have a comprehensive and integrated picture of development during the last plan period and to provide general direction and a perspective for future development, in relation to the needs and requirements of the university as a whole, as well as, the individual departments and faculties. In this connection, we would like to make the following suggestions.

(a) The present procedure of asking universities to formulate their

development proposals in priorities on the basis of mutual consultations at the departmental level may continue.

(b) The association of a representative of the state government with the work of the visiting committees in the fifth plan was not found to be adequate. It is therefore suggested that the representative concerned should be a senior officer, at least of the rank of a joint secretary, so that programmes can be implemented without delay, once they are accepted at different levels.

(c) The procedure of sending out one/or more common visiting committees to the universities in a state in order to facilitate a coordinated view of development efforts, planning, priorities and utilisation of resources may continue.

(d) The practice of having one single committee for smaller states and two or even three for the bigger states as in the fifth plan period would have advantages in assessing the overall development proposals of the universities. The committee should, however, be sufficiently large and could divide itself into groups where necessary. The visit may, however, be undertaken at one given time.

(e) A financial ceiling for a university should also be indicated with some suggested limit for (i) humanities and social sciences, (ii) science subjects and (iii) general development including student amenities, common facilities, non-academic buildings etc.

*7.19 Distribution of Grants:* A major weakness that we have noted in the implementation of programmes is regarding the somewhat uneven pattern of distribution of grants between central and state universities on the one hand and universities and colleges on the other. We have examined this question in all its aspects and find that the imbalance between central and state universities is due to historical reasons, while the inadequate provision for the development of colleges mainly reflects the inadequacy of the total resources available to the Commission.

*7.20* The higher level of UGC grants to central universities is mainly due to the existing provision regarding maintenance grants, as explained below:

(a) The maintenance grants are paid to the central universities in terms of the statutory provision under section 12(b) of the UGC Act. This includes the deficit on approved items, expenditure on institutions of professional education and maintenance of the hospitals attached to the medical colleges of these universities.

(b) In pursuance of Section 12(c) of the UGC Act, and at the instance of the Ministry of Education, the Commission also pays grants to certain institutions deemed to be universities.

(c) Whereas in the case of state universities the additional expenditure on revision of scales of pay is shared between the central government and the state government, in the case of the central universities, the entire expenditure is met out of the non-plan funds placed at the disposal of the Commission.

(d) The staff of the central universities is also entitled to allowances e.g. dearness allowance, H.R.A. C.C.A., etc. on the same basis as for corresponding government servants located at the headquarters of the universities. The expenditure on this account is met out of the non-plan funds placed at the disposal of the Commission for central universities and institutions deemed to be universities.

(e) It may also be mentioned that the Commission pays grants for the maintenance of schools which form an integral part of Aligarh Muslim University, Banaras Hindu University and Visva Bharati.

(f) The Commission also pays grants for campus development in the central universities i.e. roads, water, electricity etc.

(g) The recurring expenditure at the end of the plan period is treated as committed expenditure by the state government concerned in the case of state universities. In the case of the central universities and institutions deemed to be universities, it is merged into non-plan expenditure paid to them through the UGC.

(h) The Commission bears 100% expenditure for development schemes of central universities and institutions deemed to be universities which receive maintenance grants from the UGC. The lower incidence of utilisation of grants by state institutions is due to non-availability of matching share from state governments and managements. Funds provided for the development of higher education are in some cases diverted by the state governments for other purposes. Consequently, the maintenance grants to state universities and colleges continue to be low.

(i) The visiting committees appointed by the Commission to assess the development needs of state universities have invariably pointed out the inadequacy of resources provided by the state governments for the maintenance of buildings, libraries and laboratories, purchase of books and journals and equipments, appointment of additional staff and technical staff in the libraries and laboratories. In fact, some state governments cut down their maintenance grants in direct proportion to the developmental assistance provided by the UGC with the result that state universities continue to stagnate.

7.21 The reasons mentioned above regarding the existing disparity between the central and state universities may be cogent but the fact

remains that the disparities do exist and whether from the constitutional or the legal point of view, steps have to be taken to bridge this gulf.

7.22 The scope of maintenance grants needs to be redefined so that instead of bringing about disparities, it helps in maintaining proper regional balance. In this connection, we welcome the provision in the amended UGC Act enabling it to pay maintenance grants to state institutions for specific purposes. The decision of the Planning Commission to treat the expenditure on scholarships and fellowships as non-plan expenditure paid through the UGC is also a welcome step in this direction. Bringing more items within the ambit of non-plan, particularly those which ensure high standards of teaching and research, would help to reduce the existing disparities between central and state universities and also help central agencies to bring about a better coordination between plan and non-plan expenditure.

7.23 There is also an urgent need to look at plan and non-plan expenditure in the universities, in the central as well as state sector, in an integrated manner. In this connection, we have noted that the Commission has already requested the state governments to furnish comprehensive information regarding maintenance and development expenditure.

7.24 In so far as the development of colleges is concerned, the Commission started giving small assistance to selected colleges for libraries, laboratories and construction of hostels and staff quarters as far back as in 1952. It has since added many more schemes for the development of colleges. However, the fact remains that the level of assistance provided to a college is considered to be highly inadequate. The question is, however, one of the availability of resources and not merely one of laying down the priorities.

7.25 *Periodical Review:* It was for the first time that a comprehensive review had been attempted by the UGC through the present review committee. It is but proper that such a review is carried out periodically, say every five years.

7.26 We also feel that in the present case, the time spent by the sub-committees viz. two days in each university was rather inadequate. This was particularly so in respect of universities like Calcutta and Delhi. The reason was that the sub-committees had to function within a time-frame and other constraints. We suggest that more time be spent in each institution taken up for review at a future date to enable the committees to make real in-depth studies. A common form should also be evolved for submission of reports.

7.27 Some of the tools developed in the present study viz. the detailed questionnaire for eliciting information from the universities, the ten parameters evolved by us, the grading system adopted by the sub-committee for universities in the western zone and the objective data chart given by the sub-committee to universities in the northern zone are commended for future use.

7.28 *Peripheral Schemes*: Our terms of reference include an examination of the question of the continuance of some of the peripheral schemes of the Commission. We referred this question to a sub-committee (para 1.06) alongwith a detailed conspectus of the ongoing programmes of the Commission. As already stated (para 2.01) the programmes implemented by the Commission during this period may be put under the following heads: (a) development of universities; (b) development of colleges; (c) faculty improvement programmes; (d) support for research work; (e) student welfare programmes; and (f) academic and cultural programmes. In view of the fact that the above programmes have been developed with an integrated approach to produce a multiplier effect, it is difficult for us to say which of the above schemes may be considered as peripheral. Moreover, this question has to be examined from the point of view of the impact on standards rather than the resources put in by the Commission for implementing the particular scheme. Schemes listed at (a) to (e) are all major schemes of the Commission and even head (f) includes important schemes like correspondence courses, adult education, cultural exchange programmes, examination reforms, centres of advanced study and departments of special assistance, university centres for post-graduate studies, area studies, restructuring of courses, library buildings, staff quarters, teacher's hostels, student hostels, non-resident student centres etc. The above schemes account for about 99% of the expenditure incurred by the Commission during 1978-79 under the concerned head. We have, therefore, come to the conclusion that in the ongoing programmes of the Commission, there are no peripheral schemes as such. It may, however, be possible to regroup or reorient some of the existing schemes for proper administration and closer attention, as detailed below.

7.29 The Commission has a scheme for the utilisation of the services of retired teachers which is intended to help universities, colleges and approved institutions to avail of the services of teachers of outstanding merit who have crossed the age of superannuation but are still active in the field of research. Under the rules, the awardee is expected to devote his time to academic pursuits including contact work with the

students in the form of teaching, seminars, guiding research scholars etc. and work on an approved research project. In view of the fact that over the years greater emphasis has been laid on contribution to research, we suggest that the scheme of retired teachers be discontinued in its present form. The proposals may be considered under the scheme of support for research or book-writing or for undertaking educational innovations. However, in view of the value of contact with students, retired teachers selected under any of the above schemes should be required to devote some time to teaching. The modalities of the proposed scheme may be worked out by a committee.

7.30 The Commission's scheme of award of fellowships is intended to enable academically bright students to carry on research as an independent and full-time activity. It is understood that the scheme is being reviewed by a committee. The Commission has also been awarding twenty scholarships for postgraduate studies in Sanskrit/Pali/Prakrit/Ardhmagadhi and twenty scholarships in Arabic/Persian of the value of Rs. 250 per month. We suggest that these scholarships be transferred to the Ministry of Education and Culture in order that the Ministry may implement the scheme as part of its overall programme for the promotion of these languages.

7.31 The Commission has been providing assistance for improvement/development of play fields in order to encourage participation in games and sports of as large a number of students as possible. Without detracting from the value of the scheme, we suggest that this may be kept in abeyance until a clear picture emerges regarding the availability of funds during the current plan period.

7.32 It is understood that the Ministry of Education and Culture has transferred the scheme of national integration samitis and planning forums to the UGC. The objective of the scheme of national integration samitis is to build a climate for the emotional and cultural integration of the country and to create an opinion against divisiveness, disintegration and centrifugal tendencies. The main purpose of the scheme of planning forums is to create an awareness of the need for planned development of the country among educated youth in general and the student community in particular and to involve them in national development effort, right from the planning stage. While the scheme of national integration samitis and planning forums have well-defined national objectives and could constitute a useful activity for universities and colleges, we feel that the machinery for their implementation needs to be strengthened. In our opinion, it would be desir-



able to lay down comprehensive guidelines for the purpose. A suggestion that may be kept in view while formulating the guidelines is that the level of assistance should be raised to make the programmes meaningful. Assistance should also be linked with detailed and comprehensive programmes and plans formulated by the universities and colleges.

**7.33 Structure/Staffing:** It is not a part of our terms of reference to go into the question of the structure of the UGC or its staffing pattern or the requirements of its secretariat at different levels. Nevertheless, we have considered this question from the point of view of the impact of Commission's programmes and would like to make the following general suggestions in this regard:

(a) While the staff of the Commission has performed its functions adequately in so far as the preparation, supervision and implementation of the various development schemes are concerned, it seems that it is not well-equipped for monitoring, evaluation and follow-up activities. Although the evidence before us shows that the Commission has been monitoring and evaluating its programmes from time to time including periodical assessment by plan visiting committees, efforts have not been as vigorous and intensive as one would have desired. We have no doubt that the machinery for monitoring and evaluation needs to be strengthened with provision for adequate staff for the purpose. The staff should also be properly oriented to carry on these activities on a continuing basis.

(b) Another area which, in our opinion, needs to be strengthened is the information and communication role of the Commission, specially in relation to a large number of colleges and individual teachers in the universities and colleges. It should be our constant endeavour to promote awareness of the various programmes of the Commission, their objectives, pattern and quantum of assistance etc.

(c) We would also suggest that a mechanism be evolved to bring about greater dissemination of information on various aspects of higher education and its contribution to national development so that there is a better appreciation of the role of the university system as also of the UGC as an independent and statutory body.

## VIII

### Summary of Observations and Recommendations

8.01 *Appointment of the Committee:* The Review Committee was appointed in terms of the directive of the Central Government in the Ministry of Education (a) to undertake a comprehensive review of the various programmes being implemented by the UGC and the impact of these programmes on the determination and maintenance of standards of teaching, research and examinations in the universities, and (b) to identify schemes which are considered peripheral or which have not registered any impact on standards and to discontinue these.

8.02 Sub-committees, consisting of experts in the humanities, social sciences and science subjects were constituted to visit selected universities and colleges in order to assess the impact of UGC grants. Three universities and three colleges were selected in each of the four zones in a manner that the selected institutions represented different levels of development.

8.03 A sub-committee was also appointed to suggest schemes that may be taken up for an indepth study, keeping in view the financial inputs and the importance of the scheme. The sub-committee suggested a detailed study of the following schemes:- (a) centres of advanced study/departments of special assistance, (b) college science improvement programme/college humanities and social sciences improvement programme, (c) financial assistance to teachers for research and (d) scholarships and fellowships.\*

8.04 *Objectives and Functions of the Commission:* In view of the ground covered by the UGC Review Committee appointed by the Government of India, it was not considered necessary by the present committee to go into the structure of the UGC. Nevertheless, the committee has dealt with the objectives and functions of the UGC in order that its report and recommendations are understood in a broad perspective.

8.05 The significance of the establishment of the UGC as an autonomous and statutory body (since 1956) lies in the fact that it interacts

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\*The scheme of scholarships and fellowships is being reviewed separately by the Commission.

closely with a large number of scholars and scientists in the universities and colleges and formulates its programmes and policies keeping in view the national priorities as well as the need for the maintenance and coordination of standards.

8.06 The Jha Review Committee has already reviewed critically the functioning of the Commission during the period August, 1956 to March, 1975. Developments in the Commission since April, 1975 have been reviewed by the present committee (paras 1.26 to 1.31).

8.07 The committee particularly endorses the formulations in (i) *Policy Frame for the development of Higher Education in India* over the next 10-15 years and (ii) *Approach to Development* during the sixth plan period, with particular reference to the development of universities and colleges as detailed in paras 1.33 and 1.34.

8.08 The programmes implemented by the Commission during the period may be put under the following broad heads: (a) development of universities (b) development of colleges (c) faculty improvement programmes (d) support for research work (e) student welfare programmes and (f) academic and cultural programmes. The objectives of these programmes and the Commission's *modus operandi* in this regard are discussed in paras 2.02 to 2.25 of the report.

8.09 *Review of Commission's programmes and schemes – Additional Staff Positions:* These are sanctioned by the Commission on the recommendations of the plan and other visiting committees with a view to enabling the university departments to introduce new courses or areas of specialisation or to enable them to become fully viable. Evidence shows that utilisation of additional staff positions approved by the Commission has not been adequate. The main difficulty in filling the posts is that some of the state governments are hesitant to commit themselves to undertake concurrent or subsequent responsibility for funding. Selection procedures in some universities are also cumbersome.

8.10 It is of the utmost importance that remedial steps are taken to ensure that plan positions approved by the UGC are filled as expeditiously as possible. In order to ensure that non-plan posts are not kept vacant by the universities and the plan posts are utilised for the purpose for which these are created. The universities should be asked to supply annual statements regarding teachers in position, including information regarding the number of non-plan posts lying vacant, the

duration for which these posts remained vacant and justification for the same. The gaps in each case should be identified and the matter discussed with the state government/university concerned. The sanction of additional staff positions should invariably be linked with the utilisation of plan and non-plan posts already available to the university concerned.

8.11 In order to attract teachers of a high calibre and to retain their services, it may be necessary to make adequate provision for faculty housing. Attention will also have to be paid to provision of quarters for essential administrative staff. While in the sixth plan, the Commission may continue to give priority to academic building, in universities where the provision for academic buildings has reached a reasonable level, assistance may be provided for faculty housing and quarters for essential (administrative) staff. This is an important activity and as such the central and state governments should be approached to grant low-interest loans for the purpose either through the UGC or the state governments, as the UGC may not be able to find sufficient resources for the purpose.

8.12 *Buildings*: Buildings form an integral part of development as effective utilisation of grants for additional staff, equipment, books & journals cannot be ensured unless these are linked with the minimum building requirements. Buildings are also necessary in order to ensure the mobility of students and teachers. It may also be noted that, generally speaking, the infrastructure provided by a state at the time of establishment of a new university is rather inadequate.

8.13 The utilisation of grants placed at the disposal of universities for the construction of buildings went down from 83.2 per cent in the fourth plan to 52.4 per cent during the period 1974-75 to 1978-79. It would, therefore, be necessary to (a) further simplify the procedures regarding certification of rates and estimates, (b) coordinate building requirements on a faculty basis rather than a departmental basis, (c) link further grants for construction with the optimum utilisation of existing buildings and (d) consider how far the needs in priority areas like faculty housing can be met through low-interest loans by the central and state governments.

8.14 *Books and Journals*: The present level of expenditure on books and journals is far below the norms suggested by the Education Commission. The main problem concerning library resources is that the additional inputs provided by the Commission are not supplemented by other sources.

8.15 It would be desirable for the Commission to suggest to the states to treat expenditure on additional journals subscribed to during a plan period and text books or books prescribed as necessary reading as part of maintenance during the next plan period.

8.16 Steps should also be taken to avoid unnecessary duplication in the acquisition of books and costly journals and particularly foreign journals.

8.17 The Commission may also consider the need for making specific provision for support towards the appointment of technical staff in the university libraries.

8.18 More working hours and working days, easy accessibility to books, designing of library as a centre of community education and cultural activities, multiple copies of text-books which may be loaned to needy students, a better display of new reading material, organisation of book-clubs, exhibitions, paintings, tape-records of classical music, separate rooms for periodicals, reference books and research works, are some of the measures that should be taken in order to raise the standard of library service and utilisation of available resources.

8.19 *Equipment*: It is a matter of serious concern that even costly and sophisticated equipment are lying idle in some universities. There is a need for some central agency to oversee that equipment are serviced properly and remain functional over a long period of time.

8.20 The Commission should give high priority in the sixth plan to the provision of support for the appointment and training of laboratory technicians. State governments, which have primary responsibility in this regard should also pay adequate attention to these aspects which are vital for the proper functioning of laboratories.

8.21 A lump sum grant should also be placed at the disposal of each university for (a) maintenance of equipment and (b) training programme for technicians. In non-plan also adequate provision should be made for repair and maintenance of equipment.

8.22 *University Service and Instrumentation Centres (USICs)*: The Commission has so far approved proposals of 50 universities for setting up university service and instrumentation centres with the objective of assisting universities to maintain and repair equipment and also to pool together sophisticated equipment. Two regional instrumentation

centres have also been established, one at the Bombay University and the other at the Indian Institute of Science, Bangalore.

8.23 User committees with representatives from all other user departments should be constituted by the universities concerned in order that the common facility and equipment pooled in USICs are utilised to the maximum advantage.

8.24 *Computer Development*: The Commission has so far accepted 28 proposals recommended by the Computer Development Committee for the installation of computers in the universities. While it is too early to assess the impact of Commission's assistance for this purpose, it is suggested that guidelines should be formulated for the initial choice of the computer system, space requirements and ancillary services, off-line equipment facilities for users from other institutions, provision of staff, computer library needs and security and insurance of the computer centre and consultancy work by the technical staff.

8.25 The university should also assume responsibility for meeting the current demand for properly trained personnel for various computer centres at different levels.

8.26 It is also necessary to develop staffing patterns so that adequately qualified technical staff in the computer centres receives due recognition and status.

8.27 Suitable methods should be devised to monitor performance of the computer centres as also the grants provided for purchase of computer time by those universities which do not have in-house computers or those which have computers, but require access to larger computers in the neighbourhood for scientific research.

8.28 *Seminars, Summer Institutes and Workshops*: The Commission has been giving high priority to faculty improvement programmes and consequently the number of seminars, summer institutes and workshops has gone up considerably during the period under review.

8.29 It is suggested that summer institutes, seminars etc. should be organised after adequate preparation is made and well-documented papers become available. The programme may also be linked with restructuring of courses, curricular reform and other innovations.

8.30 There should also be a time-bound programme for college teach-

ers so that all the teachers in a college are covered under this programme over a period of time.

**8.31 *Teacher Fellowships:*** The Commission has been implementing the teacher fellowship scheme since 1975-76. So far more than 5,000 fellowships have been awarded of whom 3,000 teachers are in position. The Commission has recently decentralised the implementation of the scheme.

**8.32** The scheme has made good impact and during the short period of its existence it has succeeded in generating a climate of research even in colleges in remote and backward areas. It is, therefore, recommended that efforts be made to meet the growing demand by increasing the number of identified departments so that teachers from all parts of the country can take advantage of the scheme in a big way.

**8.33 *Scholarships and Fellowships:*** Scholarships and fellowships are awarded to enable academically bright students to carry on their research as an independent and full-time activity.

**8.34** The scheme has been taken up for an indepth study. In the meanwhile it is suggested that there should be (a) better correspondence between the total number of research fellowships and facilities for supervision, care being taken that no research supervisor should ordinarily have more than five research scholars working under his guidance, (b) some provision for typing and binding of theses out of unassigned grants in respect of research scholars not getting any scholarship or fellowship, (c) reduction in the time lag between the submission of theses and the declaration of results through better monitoring and (d) fixation of a ceiling on the number of research scholars by each department on the basis of well-defined criteria.

**8.35 *Publication Programme:*** The Commission has laid down comprehensive guidelines for the publication of learned research works and doctoral theses. It has also agreed to provide assistance for the publication of quality journals identified by the subject panels concerned.

**8.36** It seems that the objectives of this scheme have not been achieved fully and a number of learned works remain unpublished although adequate funds have been placed at the disposal of the universities. It would, therefore, be desirable for the Commission to allocate grants, keeping in view the extent of utilisation by the different universities.

8.37 *Student Welfare Programmes*: It is our understanding that the various student welfare programmes viz. student aid fund, non-resident student centre, student home and book banks have not made a uniform impact in all the universities and colleges and there are certain gaps in implementation. However, there is an obvious need to continue these programmes as they are meant to help the needy and poor students.

8.38 *Correspondence Courses*: 21 universities and one institution deemed to be university are presently offering correspondence courses for B.A., B.Com., B.Ed. and M.A. level courses. The total enrolment is 1,15,000.

8.39 The reports of the review committees on schools of correspondence courses indicate problems regarding the quality of lessons, evaluation of response sheets and conduct of contact programmes. It is suggested that these problems may be examined in depth by the UGC Standing Committee on Part-Time and Own-Time Education.

8.40 *Examination Reforms*: The Commission has been emphasising the implementation of various measures of examination reforms viz. continuous sessional evaluation, development of question banks, introduction of grade system and semesterization with a view to improving the reliability, validity and objectivity of examinations and bringing about a closer integration of teaching, learning and evaluation.

8.41 High priority should continue to be given to the programme. It is also suggested that the UGC Implementation Committee on examination reforms may go into the reasons for the setback during the last two years and indicate steps that may be taken to accelerate the programme. It would also be useful to call a series of regional or state meetings of vice-chancellors, teachers and students of universities that have gone back on some of the reforms so that remedial steps may be taken in the light of their experience.

8.42 *Adult Education and Extension Programmes*: While noting that the scheme of adult education and extension is being implemented by the Commission in accordance with the guidelines formulated by a working group and the Commission has already given high priority to this programme, no comments have been offered by the committee as the scheme is under review by the Government of India.

8.43 *Cultural Exchange Programme*: The Commission's emphasis in implementing the cultural exchange programme has shifted to deve-



lopment of bilateral academic links in identified fields instead of general exchange of visits by academics from both sides. This shift in emphasis and approach is commended.

**8.44 Area Studies:** In view of the well-defined objectives and positive impact of the programme of area studies, it is hoped that in years to come the Commission would make the programme broad-based and extend its scope to cover other important areas as well.

**8.45 Unassigned grants:** Unassigned grants are allocated to the universities every year for meeting the expenditure on (a) travel grants to teachers and scientific technical staff for participation in international conferences, (b) travel grants to teachers, research scholars and technicians for visiting centres of research or to participate in academic conferences within the country, and (c) for exchange of teachers.

**8.46** It is suggested that states should also assume some responsibility in regard to the items for which unassigned grants are provided by the Commission. The Commission should also fix unassigned grants to the universities in the same manner as the ceiling for a plan period i.e. for the entire plan period instead of being made every year.

**8.47 Impact of UGC Programmes on Universities and Colleges:** Although it is not easy to define standards or to measure them with the help of objective tools, the committee has with the help of certain parameters made an attempt to assess the impact of UGC programmes on universities and colleges with particular reference to the impact of developmental assistance provided by the Commission during a ten-year period: 1969-70 to 1978-79.

**8.48** The picture that emerges from the assessment made by the committee is one of light and shade; of achievements as well as failures. The general impression is that the best students are as good as ever, if not better and that the contents of courses are generally of a high level. It is also a fact that outstanding work is being done by some of the university departments and a number of teachers have been receiving recognition from well-known centres of learning. The out-turn of Ph.Ds has gone up significantly and so has research output by way of publications. It is equally noteworthy that various schemes of national development have been implemented by personnel trained in our universities. On the other hand, instruction in some universities has not kept pace with modern developments. There is a resistance

to change and innovations on the part of teachers and an atmosphere of growing violence and intimidation on the part of students, teachers and in some cases even employees. There is also a lack of trust between the students and teachers. It is not surprising that under the present conditions, the potentialities of the students are not fully utilised and developed by our universities and colleges. The prevailing situation is also considered unsatisfactory from the point of view of the growing expectations, the demand on the system being far greater as compared to the inputs and availability of resources.

8.49 In so far as performance in terms of the parameters evolved by the committee is concerned, one of the sub-committees viz. the Western Zone sub-committee has attempted quantification of targets in relation to the impact of UGC development programmes. The sub-committee has come to the conclusion that the overall performance is around 60 per cent of the expected target. This is essentially a subjective valuation and other sub-committees have not made a similar exercise. However, it would be fair enough to state that the position regarding the maintenance of standards and overall performance is uneven and, broadly speaking, less progress has been made by the state universities in the Eastern and Northern Zones, as compared to those in the Western and Southern Zones. This would require an indepth study.

8.50 The analysis of the percentage utilisation of developmental assistance by the 12 selected universities on books, equipment and buildings and percentage of staff positions filled during the fourth plan and 1974-75 to 1978-79 (Annexure XXI-A) does not suggest that there is any perceptible distinction between the developed and developing universities in their capacity to absorb the developmental support provided by the Commission during the period under reference. It, however, does indicate that a part of the university system suffers from a certain degree of disability in absorbing the inputs provided to it.

8.51 There is an obvious need to rationalise the methods for providing developmental support to the universities. Data similar to those collected from selected universities for study in our report should form an integral part of the development proposals of the universities. This data should be analysed and specific issues identified for close examination by visiting committees. Specific guidelines in the form of a checklist should also be formulated for the guidance of the visiting committees. The universities should be asked to furnish a detailed

note on their present status in terms of physical facilities, their utilisation, and additional requirements in terms of precise objectives and critical needs. Universities should also prepare a flow chart of year-wise utilisation of facilities approved by the Commission during a plan period in order that the programmes may be monitored and evaluated regularly.

8.52 If all the universities are grouped together, it is seen that the best performance has been achieved by the oldest of the universities which is located in a centre with a tradition of learning, and the poorest by a university in a comparatively backward part of an under-developed state. Performance is also better in universities which provide for participation by teachers and students in the processes of academic decision-making at all levels. It is also observed that universities which have been relatively free from student agitations and politicalisation of teachers have performed better than those which had polarisation in one form or another. Similarly, universities with an effective planning machinery and mechanism for joint consultations have also been able to bring about necessary changes in their courses, syllabi, methods of examinations etc. and thus maintain standards at a reasonably good level.

8.53 A comparison of the total expenditure during the period 1969-70 to 1973-74 and 1974-75 to 1978-79 show that the expenditure in equipment increased by 2.2 times and the expenditure on books and journals by 2.5 times. However, there was a decline in the expenditure on staff, buildings, and infrastructural facilities. The reasons for this are given in the report. The analysis of expenditure over the ten-year period shows that the order of priority has substantially changed in favour of equipment, books and journals during the year 1974-75 to 1978-79 as compared to the period 1969-70 to 1973-74 as part of the development strategy proposed by the planning group in the beginning of the fifth plan period.

8.54 The Commission's policy in regard to the development of colleges is governed mainly by the twin objectives of removal of disparities and regional imbalances and the improvement of standards. This is sought to be achieved by a system of liberalised grant-in-aid for colleges located in rural or backward areas on the one hand and selecting colleges noted for their high standards as essential growth points, on the other. It is not easy to reach these challenging goals and the task becomes more difficult when account is taken of the limited resources available for the development of colleges.

8.55 While the support provided by the state governments towards the development of colleges is well-acknowledged, it is a matter of regret that some of the state governments do not accept the development of colleges as their primary responsibility. But for UGC assistance, no worthwhile development would have taken place in the college sector in these regions in the last two decades or so. If the Commission has provided support to the colleges (even though marginal), in spite of its funds being severely limited, it is because it has rightly taken the stand that it is not possible to delink the development needs of post-graduate and under-graduate education.

8.56 It is not easy to measure the impact of UGC grants on the college system, partly because in so far as the colleges are concerned, UGC is one of the partners and that too with a very limited share, and partly because the colleges (except those which have been granted autonomous status) do not have the necessary degree of freedom and flexibility to restructure their courses or to bring about improvements in methods of teaching, evaluation etc. Nevertheless, some positive achievements have been accomplished by the colleges visited by the sub-committees (Annexure XXVI).

8.57 The committee has made the following suggestions for the development of colleges keeping in view the likely allocation of resources for the purpose during the current plan period:- (a) The system of matching contribution may be reviewed and the share of the state government increased keeping in view the existing division of resources between the centre and the states; (b) The Commission may concentrate its efforts and available resources on the development of about 750 well-established colleges on the one hand and about 250 colleges in rural or backward or tribal areas on the other; (c) Bearing in mind the infrastructural facilities already created and the existence of a large number of colleges with inadequate enrolments and the decline in the rate of growth of enrolment during the past few years, *there should be a moratorium on the establishment of colleges during the current plan period*; (d) The UGC should make a detailed study of the terms and conditions for the affiliation of colleges and formulate suitable guidelines for implementation by universities and state governments on a uniform basis; (e) The Commission may examine the feasibility of linking its developmental assistance to the colleges with the results of districtwise surveys regarding the need for expansion at different levels, specially in relation to the development of postgraduate studies in the colleges.

*8.58 Centres of Advanced Study/Departments of Special Assistance:*

The scheme of recognising certain departments as centres of advanced study was initiated by the Commission in 1963-64 with the object of strengthening postgraduate teaching and research and channelling available resources effectively for the purpose. The scheme is intended to encourage the pursuit of 'excellence' and team work in study and research and to accelerate the realisation of 'international standards' in specific fields. With this end in view, the Commission decided to give active support and substantial assistance to promising departments in the universities so that efforts and resources are concentrated on certain growth points instead of being scattered thinly over a wide area.

8.59 The scheme of providing special assistance to a limited number of selected departments (DSA) was initiated in 1972-73 with the object of enabling these departments to develop their existing potentialities and become active centres of teaching and research in selected areas and also attain the level of centres of advanced study in course of time.

8.60 23 centres of advanced study (14 in science and 9 in the humanities and social sciences) and 53 departments of special assistance (33 in science and 20 in the humanities and social sciences) are functioning at present.

8.61 The scheme has made the maximum impact and its importance has been recognised not only in India but also by several foreign scientists and scholars and international organisations like the UNESCO. Grants to the centres for improving their library facilities and laboratories and for academic and non-academic staff have enabled the centres to make important contribution to the advancement of knowledge and influence to a large extent the standards of research and teaching at the postgraduate and undergraduate levels in other universities. The additional teaching staff has helped the centres to strengthen their teaching and research activities and to initiate new programmes of training and research. Scholarships and fellowships have encouraged students and teachers from other universities to receive advanced training and research in the centres. The provision of funds for visiting fellows has been utilised by the centres to invite scientists and scholars of repute from India and abroad. A number of publications have resulted from the research activities, seminars and symposia etc. organised by the centres.

8.62 While expressing general agreement with the basic philosophy

of the scheme of centres of advanced study/departments of special assistance (which is to concentrate the available resources and expertise on building peaks of excellence on a selective basis) the committee has suggested a careful analysis of the problems that have stood in the way of realisation of these objectives.

8.63 It is sometimes felt that owing to difficulties at the university level or at the level of leadership in the centre/department concerned, some centres have not been functioning as national centres. This is reflected in the recruitment of teachers and in the selection of students from generally within the region. The UGC has already made a provision that at least 50 per cent of the fellowships available to a centre should be awarded to candidates outside the university. It is hoped that this would bring about greater mobility. In so far as the teaching staff is concerned, it is suggested that the UGC should, through the Standing Committee on Centres of Advanced Study, lay down the necessary guidelines in the matter. The Commission should also provide adequate support to the centres/departments to enable them to have interaction with each other on discipline to discipline basis either at the national or regional level.

8.64 It would be useful if the head of the CAS and DSA programmes is identified. This has become essential in view of the new development of rotating headship of departments in many universities. It is also necessary that the programme is assigned to an active and viable group in one or more specified fields of specialisation. This would ensure that the programme does not receive a setback in case the head of the centre goes away from the university. The head of CAS/DSA may be designated as 'Programme Coordinator' or just 'Coordinator'. It would be appropriate for the university to have prior consultation with the Commission in case it becomes necessary to change the coordinator of the programme.

8.65 It must be ensured that a department being considered under DSA has an active group of research workers and teachers who could continue the approved programmes even if the coordinator retires or leaves the university. In this connection advantage could be taken of the departmental profiles being prepared by various subject panels. While considering a department for recognition as DSA, the expert committee should also examine whether the department has any active programme of collaboration with allied departments in and outside the country and if so, in which field and with what results.

8.66 While identifying a department for recognition as DSA, thrust areas may be clearly indicated and proper balance kept between various regions and disciplines, as well as, between humanities and social sciences on the one hand and science subjects on the other.

8.67 The work of a centre of advanced study or department of special assistance should be evaluated carefully and thoroughly after every five years with a view to ascertaining whether the objectives are being met and if so, to what extent. This should be done objectively by visiting committees of specialists in the subject fields taking into consideration the various factors mentioned in part 4.31 of the report.

8.68 Seven centres were taken out from the scheme of centres of advanced study with effect from the 1st of April, 1974 as the performance of these centres was not found to be of the highest standard to deserve continuing support from the Commission. This was a step in the right direction and an instance in which the Commission took a bold stand for the maintenance of standards and the realisation of objectives. It is, however, suggested that in future the basis for deleting a centre or a department from the scheme should be suitably defined so that the Commission can take a decision in the matter in as authentic a manner as possible.

8.69 The role of the advisory committees as envisaged for each centre/department needs to be clearly formulated. The work of these committees also needs to be activated. They should meet regularly to evaluate the work being done at the centres and tender advice for improving the functioning of various programmes at the centres.

8.70 For the programmes of CAS, DSA and departmental support, there is an upper limit of Rs. 20, 15 and 10 lakhs respectively by way of assistance from the Commission. It is suggested that the limits in monetary terms should be kept flexible enough, keeping in view the nature of the programme and the assessment of likely needs and requirements.

8.71 The period of UGC assistance for these quality programmes should also be kept flexible. There need not be any rigidity regarding assistance to a department/centre for a maximum period of 15 years. It would be more appropriate if, instead of this upper limit, optimum level of assistance specially in terms of staff to a particular department/centre is determined upto which it may be assisted depending upon its performance and programmes. It would be difficult to lay down any common optimum level for all the disciplines/specialisations.

This will have to be determined by the expert groups keeping in view the needs of the area/specialisation in which the centre/department has been recognised.

8.72 In the UGC Act, provision has been made to enable the UGC to fund certain programmes even in state universities on a recurring basis under non-plan projects. The Commission may explore the possibility of including the recurring expenditure of the CAS/DSA as part of the non-plan expenditure by approaching the Government of India for allocation of funds for the purpose.

8.73 *College Science Improvement Programme (COSIP)/College Humanities and Social Sciences Improvement Programme (COHSSIP)*: The college science improvement programme was initiated by the Commission in 1970-71 in order to bring about qualitative improvements in the teaching of science at the undergraduate level. The purpose of the programme is to accelerate the development of the science capabilities of undergraduate students and to initiate a process of continuous self-renewal. This is brought about through an integrated approach and simultaneous improvements in the subject-matter, methods of instruction, syllabi, curricula, laboratory exercises, workshop, library and teaching material.

8.74 Encouraged by the success of COSIP, the Commission in 1974-75, decided to extend the programme to the humanities and social sciences. The college humanities and social science improvement programme (COHSSIP) aims at bringing about improvements in the teaching of humanities and social sciences at the undergraduate level with particular reference to (a) adoption of new teaching methods, e.g. preparation of synopsis, use of audio-visual and other teaching aids, tutorials and seminars etc., (b) extension of library services, (c) introduction of special courses, (d) inter-disciplinary programmes, (e) adoption of various measures of examination reforms, (f) remedial teaching and (g) field/project work etc.

8.75 The college science improvement programme and the college humanities and social sciences improvement programme were taken up at two levels (a) in selected colleges to include the entire faculty and (b) in one subject in all the colleges affiliated to a university (university leadership project).

8.76 Presently 177 colleges and 40 departments are being assisted under COSIP and 126 colleges and 15 departments under COHSSIP.



8.77 The committee has tried to assess the impact of the programme on the basis of the reports of the sub-committees that visited ULP departments and COSIP/COHSSIP colleges as also the report of the Western Region Committee which visited a few colleges in Bombay, Poona and other places to assess the first phase of the programme, as also their own knowledge and experience.

8.78 The general impression of the committees that visited universities and discussed the impact of the programmes with the vice-chancellors is that these have made a meaningful and important contribution to the improvement of standards of undergraduate teaching. Accordingly, it has been suggested that COSIP and COHSSIP should be continued and further strengthened in the current plan period, taking into account the suggestions for improvement made in the following paragraphs.

8.79 There should be the fullest coordination between COSIP and COHSSIP activities within each college. It is necessary that in the UGC Office itself adequate steps are taken to coordinate the COSIP and COHSSIP by drawing upon the programmes of one for improving the other and maintaining an integrated view of a college having both COSIP and COHSSIP.

8.80 Proper feedback and interaction among different colleges is important not only for sharing of experience but also for ensuring that changes in curriculum, methods of teaching, evaluation etc. are introduced simultaneously in all the colleges affiliated to a university for ensuring a spread effect. The state level advisory committees should play an important role in establishing an effective net-work of communication, which is vital for the success of the programme.

8.81 Steps should be taken to encourage the participation of teachers in COSIP and COHSSIP activities on a much wider scale to remove the present indifference on the part of a large number of college teachers towards COSIP and COHSSIP.

8.82 The interaction between the colleges and ULPs is not as wide as envisaged under the scheme nor is there enough consultation with the colleges by some of the university departments regarding planning the programmes and activities. The UGC should organise regular meetings between ULP departments and COSIP/COHSSIP colleges on a regional basis in order to work out the details of the programmes to be implemented and steps necessary to achieve better coordination between the ULP departments and the colleges.

8.83 It would be useful for ULP departments to take initiative in imparting training to laboratory technicians in the colleges in order that the proper upkeep of equipment, instruments and audio-visual aids is ensured.

8.84 It would be useful to involve the state governments in COSIP/COHSSIP from the very inception i.e. when a department or college is included in the programme.

8.85 The teaching aids developed under COSIP and COHSSIP and the equipment designed and fabricated by ULPs should be made available to all colleges including even those colleges which are not presently participating under COSIP and COHSSIP.

8.86 The UGC office should carry out a more thorough analysis and evaluation of the reports received from COSIP/COHSSIP colleges and ULP departments, to provide guidance to them, and to serve as an effective clearing house of information.

8.87 *Financial Assistance to Teachers for Research Work:* The scheme of financial assistance to university/college teachers for undertaking short-term/minor research projects in humanities, social sciences and science subjects was initiated by the Commission in 1963-64 with a view to enabling individual teachers and more specifically college lecturers and young lecturers in the universities to engage themselves in research work. The scheme is also intended to provide facilities which would help teachers in launching a research project and provide minimal support by way of books, equipment, field work etc. to those members of the teaching community in the universities and colleges who have an aptitude for research but do not have the resources to pursue it. Thus the main objective of the scheme is to promote a climate of research in the universities and colleges and thereby strengthen teaching as well.

8.88 It is seen from the annual reports received from teachers participating in this scheme and the resultant publications that the objectives of the scheme have been adequately realised. The average expenditure per teacher under the scheme during the last three years comes to Rs. 4,069 in science and Rs. 2,737 in the humanities and social sciences, which shows that the scheme has been operating at the minimum cost. The scheme should be continued and strengthened in the light of the following suggestions.

8.89 Some guidance should be available to junior teachers from established research workers in their subject; along with opportunities to visit other institutions, laboratories and libraries for short periods by using the contingent grant in the project. Support should also be provided through regional centres with specialised facilities of library and sophisticated equipment, and there should be an inbuilt device for monitoring and evaluation through proper infrastructure at the central level.

8.90 The UGC should bring out a directory of research facilities available in the country giving information about services, specialised equipment, source materials etc., so that the teachers can use such information in their research work.

8.91 A catalogue of current periodicals and journals subscribed to by different libraries should be prepared on a zonal basis.

8.92 The various schemes envisaged by the UGC such as computer centres, regional instrumentation centres, zonal libraries with facilities for reprography and xerox could be made more functional with the help of user committees which should have fairly wide representation.

8.93 There should be better cooperation between the national laboratories and the universities in the use of equipment, library and research facilities for the promotion of research activities and exchange of knowledge and experience. This matter should be pursued at the highest level.

8.94 Specific provision should be made in the scheme for travel and field work to enable the awardees to seek guidance from eminent scholars and scientists in their fields and to visit other institutions, laboratories, libraries, museums, archives etc. for short periods during the tenure of the award. The application form may also be revised accordingly.

8.95 The possibility of bringing together awardees in a subject during summer or long holidays may be explored to facilitate exchange of views and discussions on the results of their study and investigation and guidance from subject experts and resource persons.

8.96 The committees which initially select the projects should be asked to evaluate the final reports at the end so that a comparative evaluation of the results achieved is available.

8.97 *General Observations and Recommendations:* Attempts will have to be made, on the basis of the highest priority, to improve the standards of teaching, research and examinations, which is a statutory responsibility of the Commission. However, the various measures for improving standards will need considerable investment in men, materials and money. But more importantly, they need motivation on the part of students and involvement on the part of teachers.

8.98 The improvement of curricula and restructuring of courses should also receive high priority during the current plan period. The Commission has already initiated steps in this regard through the reports of regional workshops, subject panels and expert committees but there has been some tardiness in giving effect to the various recommendations. Revision and updating of courses.

8.99 The principle of flexibility is also important in order to enable students to break away from the traditional combinations of subjects and to offer new combinations, thus bringing a new approach to study and learning. This is possible if courses are divided into smaller units, care being taken to ensure that only those course units are taught for which there is a sufficient demand. The courses should also be diversified, especially to include newly emergent and interdisciplinary areas and borderline subjects.

8.100 It is also suggested that the courses at the first degree level be made more relevant to the rural or urban environment and to the development needs of the community.

8.101 There is an imperative need to look at the structure, management and staffing pattern in the universities.

8.102 Efforts should be made to bring about a substantial amount of decentralisation as well as diversification of educational programmes, so that individual universities, their departments and the colleges may experiment with new ideas rather than follow a stereotyped pattern.

8.103 The above implies considerable autonomy and academic freedom to be given to the constituent departments of a university. Vigorous efforts have also to be made to grant autonomous status to as many colleges as possible during the current plan period to enable them to restructure their courses and to try out new methods of teaching and evaluation.

**8.104** Facilities should be provided for the expansion of higher education through non-formal methods such as correspondence courses, evening colleges, and private appearance at university examinations, but in the regular full-time courses universities and colleges should resist the pressures that are exercised from time to time. Steps should be taken for the maintenance of high standards in correspondence courses and to make such courses as challenging as possible. It should also be ensured that the unplanned proliferation of institutions which has been going on the consolidation and strengthening of facilities in the existing institutions.

**8.105** There seems to be a lack of planning consciousness as well as adequate machinery at the university level with a few notable exceptions. The universities need a new vision of perspective planning spread over 15-20 years with well-defined goals and objectives. The planning process should also have the fullest participation of teachers, students, administrators and citizens of the area.

**8.106** At the university level, there is often a lack of inter-departmental cooperation and inter-disciplinary programmes. There is some evidence of common discussion on the development schemes of the UGC amongst the staff in a department, departmental heads and university authorities but not to the extent of this being a regular feature or a continuing activity. The university system has also not become fully responsive to the needs of the community around it. There is also a need to strengthen the process of monitoring, review and evaluation within the university system itself.

**8.107** There should be a strong planning machinery at the state level supported by investigations into the needs of higher education in the region in order to bring about coordinated development of universities, colleges etc. and to help the policy regarding the establishment of new institutions or the starting of new courses and the development of areas of specialisation.

**8.108** Similarly, there should be a strong planning machinery in the colleges. It has been reported that in formulating proposals for development, the members of the faculty in the colleges are not consulted. It is of the utmost importance that students, teachers and the college authorities become fully involved in the processes of planning within each college. The colleges should also formulate plans of development keeping in view the objectives of academic excellence and social relevance.

8.109 The very size and complexity of the system of higher education in India indicates that improvements can be brought about only with the active collaboration of the universities and the state governments concerned. Such a collaborative effort is crucial for the implementation of various developmental activities and maintenance of standards. It is suggested that each state government may set up a coordination committee consisting of vice-chancellors of all the universities in the state and one or two representatives of colleges and a representative of the UGC.

8.110 *Plan Visiting Committees:* The suggestions of the committee for streamlining the procedures of sending plan visiting committees to the universities are given in para 7.18 of the report. It has been suggested, *inter alia*, that the financial ceiling for a university should also be indicated with some suggested limit for (i) humanities and social sciences (ii) science subjects and (iii) general development.

8.111 *Distribution of Grants:* A major weakness in the implementation of the programmes is the somewhat uneven pattern of distribution of grants between the central and state universities on the one hand and universities and colleges on the other. The historical developments which have brought about this imbalance are given in paras 7.20 of the report.

8.112 The scope of maintenance grants needs to be redefined so that instead of bringing about disparities, they help in maintaining proper regional balance.

8.113 Bringing more items within the ambit of non-plan, particularly those which ensure high standards of teaching and research, would help to reduce the existing disparities between central and state universities and also help central agencies to bring about a better coordination between plan and non-plan expenditure. There is also an urgent need to look at plan and non-plan expenditure in the universities, in the central as well as state sector, in an integrated manner.

8.114 *Periodical Review:* It was for the first time that a comprehensive review had been attempted by the UGC through the present Review Committee. It is but proper that such a review is carried out periodically, say after every five years.

8.115 More time should be spent in each institution taken up for review at a future date to enable the committees to make real indepth

studies. A common form should also be evolved for submission of reports.

**8.116 *Peripheral Schemes:*** Although the committee has come to the conclusion that in the ongoing programmes of the Commission, there are no peripheral schemes as such, it has suggested regrouping or re-orientation of some of the existing schemes for proper administration and closer attention.

**8.117** In view of the fact that over the years, greater emphasis has been laid on contribution to research, under the scheme of retired teachers, it is suggested that the scheme be discontinued in its present form. The proposals may be considered under the scheme of support for research or book-writing or for undertaking educational innovations. However, in view of the value of contact with students, retired teachers selected under any of the above schemes should be required to devote some time to teaching. The modalities of the proposed scheme may be worked out by a committee.

**8.118** The Commission has been awarding twenty scholarships for postgraduate studies in Sanskrit/Pali/Prakrit/Ardhmagadhi and twenty scholarships in Arabic/Persian of the value of Rs. 250/- per month. It is suggested that these scholarships be transferred to the Ministry of Education and Culture in order that the Ministry may implement the scheme as part of its overall programme for the promotion of these languages.

**8.119** The Commission has been providing assistance for improvement/development of play fields in order to encourage participation in games and sports of as large a number of students as possible. Without detracting from the value of the scheme, it is suggested that this may be kept in abeyance until a clear picture emerges regarding the availability of funds during the current plan period.

**8.120** It would be desirable to lay down comprehensive guidelines for the schemes of (a) planning forums and (b) national integration samitis. A suggestion that may be kept in view while formulating the guidelines is that the level of assistance should be raised to make the programmes meaningful. Assistance should also be linked with detailed and comprehensive programmes and plans formulated by the universities and colleges.

## ANNEXURE—I

## Universities/Colleges visited by Sub-committees

## Universities visited by Sub-committees

Northern Zone	...	Delhi, Panjab, Gorakhpur.
Eastern Zone	...	Calcutta, Gauhati, Ranchi.
Western Zone	...	Poona, Jabalpur, Sardar Patel.
Southern Zone	...	Madras, Calicut, Sri Venkateswara.

## Colleges visited by Sub-committees

*Eastern Zone*

1. J.B. College,  
Jorhat  
(Dibrugarh University),
2. Bihar National College,  
Patna  
(Patna University).
3. Shailabala Women's College\*  
Cuttack  
(Utkal University).

*Western Zone*

1. Government College,  
Ajmer  
(Rajasthan University).
2. Kasturbagram Rural Institute,  
Indore  
(Indore University).
3. Sophia College for Women,  
Bombay  
(Bombay University)
4. Kanoria Mahila Mahavidyalaya,  
Jaipur  
(Rajasthan University).

*Southern Zone*

1. New Science College,  
Hyderabad,  
(Osmania University).
2. The American College,  
Madurai  
(Madurai Kamraj University).
3. Mount Carmel College,  
Bangalore  
(Bangalore University).

*Northern Zone*

1. Agra College,  
Agra  
(Agra University).
2. D.A.V. College,  
Jullundur City  
(Guru Nanak Dev University).
3. G.M. College,  
Srinagar  
(Kashmir University).

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\*This college could not be visited by the Sub-committee.



**ANNEXURE II(a)**  
**Sub-committees to Universities**

*Northern Zone*

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <ol style="list-style-type: none"> <li>1. Dr. Shiv Mangal Singh 'Suman'<br/>Visiting Professor<br/>Sardar Patel University,<br/>Vallabh Vidyanagar.</li> <li>2. Professor M.P. Bhatt,<br/>Professor of Economics,<br/>Gujarat University,<br/>Ahmedabad.</li> <li>3. Professor N. Rudraiah,<br/>Professor of Mathematics,<br/>Bangalore University,<br/>Bangalore.</li> <li>4. Professor C.V. Subramaniam,<br/>Professor of Botany,<br/>Madras.</li> <li>5. Professor B.R. Virmani*<br/>Administrative Staff College,<br/>Hyderabad.</li> </ol> | <p><i>Convenor</i></p> |
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*Southern Zone*

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <ol style="list-style-type: none"> <li>1. Professor M.S. Kanungo,<br/>Professor of Zoology,<br/>Banaras Hindu University,<br/>Varanasi.</li> <li>2. Professor Lakhnupal,<br/>Department of Chemistry,<br/>Panjab University,<br/>Chandigarh.</li> <li>3. Professor S.K. Joshi,<br/>Head of the Department of Physics,<br/>Roorkee University,<br/>Roorkee</li> <li>4. Professor K.L. Krishna<br/>Delhi School of Economics,<br/>Delhi.</li> </ol> | <p><i>Convenor</i></p> |
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\*These members could not visit the universities concerned.

Note: The names of representatives of States have not been included in the list.

*Western Zone*

1. Professor P.B. Desai,  
Institute of Economic Growth,  
Delhi.
2. Professor Yogendra Singh,  
Professor of Sociology,  
Jawaharlal Nehru University,  
New Delhi.
3. Professor J.N. Kapur,  
Department of Mathematics,  
Indian Institute of Technology,  
Kanpur.
4. Professor R.D. Tiwari,  
Department of Chemistry,  
Allahabad University,  
Allahabad.
5. Dr. Rama Ranjan Mukherji,  
Vice-Chancellor,  
Burdwan University,  
Burdwan.
6. Professor L.S. Kothari,  
Department of Physics,  
Delhi University,  
Delhi-7.

*Convenor**Eastern Zone*

1. Professor M.R. Bhiday,  
Department of Physics,  
Poona University,  
Poona.
2. Professor V.A. Shahne,  
Professor of English,  
Osmania University,  
Hyderabad.
3. Professor M.D. Misra,  
Department of Political Science,  
Jabalpur University,  
Jabalpur.
4. Professor V.C. Shah,  
Department of Zoology,  
Gujarat University,  
Ahmedabad.
5. Professor G.D. Narula,  
I.C.S.S.R., New Delhi.

*Convenor*

**ANNEXURE II(b)**  
**Sub-committees to Colleges**

*Eastern Zone*

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <ol style="list-style-type: none"> <li>1. Dr. T. Barnabas*<br/>Principal,<br/>Ahmednagar College,<br/>Ahmednagar.</li> <li>2. Dr. V.P. Agrawal,<br/>Principal,<br/>D.A.V. College,<br/>Muzaffarnagar.</li> <li>3. Dr. P.C. Banerji*<br/>Reader in Economics,<br/>Aligarh Muslim University,<br/>Aligarh.</li> <li>4. Dr. D.S. Joshi,<br/>Principal,<br/>Government Science College,<br/>Gwalior.</li> <li>5. Professor Satya Bhushan*<br/>Education Commissioner,<br/>Jammu &amp; Kashmir.</li> </ol> | <p><i>Convenor</i></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|

*Western Zone*

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <ol style="list-style-type: none"> <li>1. Dr. H.R. Ladwa,<br/>Karnatak Science College,<br/>Dharwar.</li> <li>2. Dr. (Mrs.) Hem Lata Sarup,<br/>A.N.D. Mahapalika College,<br/>Kanpur.</li> <li>3. Dr. M.K. Agrawal,<br/>Reader in Political Science,<br/>Delhi University,<br/>Delhi-7.</li> <li>4. Dr. T.K. Muthuvenkatraman,<br/>Institute of Social Work,<br/>Madurai.</li> <li>5. Professor Gopinath Nair,<br/>Institute of Development Studies,<br/>Trivandrum.</li> </ol> | <p><i>Convenor</i></p> |
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\*These members could not visit the colleges concerned.

*Southern Zone*

1. Dr. S.S. Nigam,  
Professor of Chemistry,  
Saugar University,  
Sagar.
2. Dr. R.K. Avasthi,  
Professor of Political Science,  
Vikram University,  
Ujjain.
3. Dr. R.A. Kulkarni,  
Principal,  
Ramnarain Ruia College,  
Bombay.
4. Dr. S.P. Sinha,  
Deputy Chairman,  
Bihar Inter-University Board,  
Patna.

*Convenor**Northern Zone*

1. Professor B. Padhi,  
Department of Botany,  
Utkal University,  
Bhubaneswar.
2. Dr. Sushila Vyas,  
Principal,  
Banasthali Vidyapith,  
Rajasthan.
3. Shri P. Jagdishwara Rao,  
Principal,  
V.R.S. and Y.R.N. College,  
Chirala (Andhra Pradesh).
4. Dr. N.V. Kapade,  
Reader in Economics,  
Indore University,  
Indore.
5. Mr. Nambiar\*  
Director,  
Research & Training,  
Kerala Government,  
Trivandrum.

*Convenor*


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\*The member could not visit the colleges concerned.

### ANNEXURE III

#### Main provisions of the UGC Act, 1956 as amended upto 17th June, 1972

The UGC Act, 1956—Act No. 3 of 1956 was amended by the UGC (Amendment) Act, 1972-73 of 1972 vide Ministry of Education Notification No. F. 9-13/72. U. 2 dated 17th June, 1972.

An important feature of the amended Act is the insertion of Section 12-A, which reads as under:

“No grant shall be given by the Central Government, the Commission, or any other organisation receiving any funds from the Central Government, to a university which is established after the commencement of the University Grants Commission (Amendment) Act, 1972 unless the Commission has, after satisfying itself as to such matters as may be prescribed, declared such university to be fit for receiving such grants.”

Another important feature is the power vested with the Commission to allocate and disburse, out of the funds of the Commission, grants for maintenance to universities other than central universities for any specified activities of such universities, or for any other general or specified purpose:.

The composition of the Commission has also undergone a change and according to Section 5 of the Amended Act, the Commission now consists of a Chairman, a Vice-Chairman and ten other members.

The powers and functions of the UGC as laid down under Sections 12, 13 & 14 of the Amended Act are detailed below:—

#### Section 12

It shall be the general duty of the Commission to take, in consultation with the universities or other bodies concerned, all such steps as it may think fit for the promotion and coordination of university education and for the determination and maintenance of standards of teaching, examination and research in universities, and for the purpose of performing its functions under this Act, the Commission may:—

- (a) inquire into the financial needs of universities;
- (b) allocate and disburse out of the fund of the Commission, grants to universities established or incorporated by or under a Central Act for the maintenance and development of such universities or for any other general or specified purpose;
- (c) allocate and disburse, out of the Fund of the Commission, such grants to other universities as it may deem necessary or appropriate for development or both, of any other specified activities or such universities, or for any other general or specified purpose;
- (d) allocate and disburse out of the Fund of the Commission, such grants to institutions deemed to be universities in pursuance of a declaration made by the Central Government under Section 3, as it may deem necessary, for one or more of the following purposes namely:
  1. for maintenance in special cases;
  2. for development;
  3. for any other general or specified purpose;

Provided that in making any grant to such university, the Commission shall give due consideration to the development of the university concerned, its financial needs, the standard attained by it and the national purposes which it may serve;

- (e) recommend to any university the measures necessary for the improvement of

- university education and advise the university upon the action to be taken for the purpose of implementing such recommendations;
- (f) advise the Central Government or any State Government on the allocation of any grants to universities for any general or specified purpose out of the Consolidated Fund of India or the Consolidated Fund of the State, as the case may be;
  - (g) advise any authority, if such advice is asked for, on the establishment of a new university or on proposals connected with the expansion of the activities of any university;
  - (h) advise the Central Government or any State Government or university on any question which may be referred to the Commission by the Central Government or the State Government or the university, as the case may be;
  - (i) collect information on all such matters relating to university education in India and other countries as it thinks fit and make the same available to any university;
  - (j) require a university to furnish it with such information as may be needed relating to the financial position of the university or the studies in the various branches of learning undertaken in that university together with all the rules and regulations relating to the standards of teaching and examination in that university respecting each of such branches of learning;
  - (k) perform such other functions as may be prescribed or as may be deemed necessary by the Commission for advancing the cause of higher education in India or as may be incidental or conducive to the discharge of the above functions.

### **Section 13 (Inspection)**

1. For the purpose of ascertaining the financial needs of a university or its standards of teaching, examination and research, the Commission may, after consultation with the university, cause an inspection of any department or departments thereof to be made in such manner as may be prescribed and by such person or persons as it may direct.
2. The Commission shall communicate to the university, the date on which any inspection under sub-section (1) is to be made and the university shall be entitled to be associated with the inspection in such manner as may be prescribed.
3. The Commission shall communicate to the university, its views in regard to the results of any such inspection and may, after ascertaining the opinion of the university, recommend to the university the action to be taken as a result of such inspection.
4. All communications to a university under this section shall be made to the executive authority thereof and the executive authority of the university shall report to the Commission the action, if any, which is proposed to be taken for the purpose of implementing any such recommendation as is referred to in sub-section (3).

### **Section 14 (Consequences of failure of universities to comply with recommendations of the Commission).**

If any university fails within a reasonable time to comply with any recommendation made by the Commission under Section 12 or Section 13 or contravenes the provisions of any rules made under clause (f) or clause (g) of sub-section (2) of Section 25, or of any regulation made under clause (e) or clause (f) or clause (g) of Section 26, the Commission, after taking into consideration the cause, if any, shown by the university for such failure or contravention with such recommendation, may withhold from the university the grants proposed to be made out of the Fund of the Commission.

## ANNEXURE IV

## Development of Higher Education in India : A Policy Frame\*

## SECTION I

## Objective

1.01 The main objective of this paper is to suggest a policy frame for the development of higher education in India over the next ten to fifteen years. As education at all stages forms an integrated whole, and as the university has a significant role to play in school and adult education, this task has been attempted against the background of a perspective for the development of education as a whole during the same period.

## SECTION II

## Development of Education in India

2.01 *Achievement and Failures:* The history of Indian education is a picture of both light and shade, of some outstanding achievements along with many outstanding failures. As a result of the system of education that we have developed during the last 150 years, we have now more than 120 universities (or similar institutions), 4,500 affiliated colleges, 40,000 secondary schools and 6,00,000 elementary schools, 3.5 million teachers, 100 million students and an annual expenditure of Rs. 25,000 million, which is next only to that on defence. It has given us a high level trained manpower whose size is the largest in the world and the top-levels of which are comparable to those of leading countries in the world. It is this manpower which now provides the key-personnel in all walks of our national life, and also enables us to help several other developing countries.

2.02 Unfortunately, the system has also developed three major weaknesses.

(1) It still continues to be dominated by models and value-systems adopted during the colonial regime. For instance, it lays greater emphasis on narrow individualism, unhealthy competition to the neglect of social good, verbal fluency (especially in English), and mere acquisition of information, while it neglects social objectives, co-operation, manual work, training in skills and building up of character. It places an almost exclusive emphasis on the formal school (with its single-point entry, annual sequential promotions, insistence on full-time attendance, and almost exclusive use of full-time teachers), and neglects both non-formal and recurrent education. The educational institutions function in isolation from the community as well as from one another. The system is gigantic monolith, very difficult to move or change; and in spite of its achievements which are by no means inconsiderable, it has proved itself to be inadequate to meet our national needs and aspirations.

(2) The system maintains a set of double standards. A small minority of educational institutions at all levels is of good quality and compares favourably with those in developed countries. But access to them is *selective* and is mostly availed of by the top social groups, either because they can afford the costs involved or because they show *merit* which, on the basis of the existing methods of selection, shows a high correlation with social status. But this core of good institutions is surrounded by a large penumbra of institutions where although there is *open-door* access, the standards are poor. Consequently it is in these institutions that the large majority of the people including the weaker sections receive their education. This dualism leads to undesirable social segregation and to a perpetuation and strengthening of inegalitarian trends in our society.

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\*Document First printed in February 1978 and Reprinted in May 1978 by the University Grants Commission.

(3) Even in quantitative terms, it is mainly the upper and middle classes that are the beneficiaries of this system. Sixty per cent of the population (age 10 and over), which is still illiterate, has obviously received none of its benefits. Of every 100 children of six years of age, 20 never go to school, 55 drop out at an early stage, so that only about 25 complete class VIII. 70 per cent of the seats in secondary schools and 80 per cent of the seats in higher education are taken by the top 30 per cent of income groups.

**2.03** What the system needs, therefore, is a drastic overhaul; a transformation of its character, through the introduction of a modern scientific outlook and other essential measures, to suit our national needs and aspirations; a substantial improvement of standards; an extension of its coverage so that the education of the people becomes, not a peripheral pursuit, but a central objective. It is in these three main directions that educational reconstruction in India will have to be vigorously pursued in the years ahead.

**2.04** *Transformation of the Educational System:* Perhaps the most urgent and significant reform needed is to transform the value system, the basic structure and processes of the educational system, to make it flexible and dynamic, and to move in the (ultimate) direction of providing opportunities for life-long learning to every individual. This transformation will emphasize ethical values and human welfare enriched by science and technology. It will also imply the shifting of emphasis from teaching to learning, from the individual to social objectives, and from mere acquisition of information to the development of skills and character formation based on knowledge. There would be multiple points of entry, flexible and student-oriented curricula, an equal emphasis on all the three channels of study (full-time, part-time or own-time), use of all the teaching resources of the community (both human and institutional) rather than depending only on the schools or professional teachers. It would imply the provision of every facility for recurrent education so that an individual can join or step off the formal system as and when necessary, adopt any channel of study that suits him, and learn at his own best pace and from whomsoever he chooses; work and education (which will be closely linked to productivity) would run concurrently throughout the life of an individual; and education and development would be linked together, education assisting socio-economic transformation and participation in programmes of such transformation, becoming a medium of education itself.

**2.05** *Improvement of Standards:* The standards of education need to be defined in the wider sense of the all-sided development of the personality of the individual and his commitment to social objectives; and these would have to be substantially improved and continually raised to suit the changing needs of the country. The system of double standards in educational institutions—one for the rich and the well-to-do and the other for the large majority of the people—should be done away with. All children, both rich and poor should rub shoulders with each other in a system of common schools at the elementary stage; and in all post-elementary education. Access to the pace-setting institutions should be available to all talented children, irrespective of their social or economic status. Methods of identifying talents by test which do not discriminate against children from disadvantaged background should be devised; and a preference should be given to those from disadvantaged backgrounds even if their '*talent-rating*' is lower. For such children, special remedial coaching and training will have to be provided, and the appropriate methodology evolved with care. It is true that the maintenance and improvement of standards would need physical inputs, such as good teachers and better learning tools and facilities. But they depend more basically on discovery and cultivation of talent and the creation of a climate of dedicated hard work in all educational institutions. It is these programmes that need to be developed on the basis of a high priority.

**2.06** *Expansion:* If the coverage of the educational system is to be improved and if the



large majority who now remain outside it is to become its principal concern, high priority will have to be given to the following three programmes:

(1) *Adult Education*: The education of adults has received very low priority so far. But in view of the fact that it yields early dividends, it should be accorded the highest priority in the years ahead and even among adults, the education of the large number of poor and illiterate persons should receive the utmost attention. The main objectives of this programme should be to educate and mobilize the masses and to involve them meaningfully in national development. It should also strive to make all adults (particularly in the age group 21-35) functionally literate, and lay the greatest emphasis on the non-formal education of youth (age-group 15-21). A massive programme of motivating adults and enthusing and training voluntary workers and institutions will have to be developed for the purpose.

(2) *Universal Elementary Education*: The objective of this programme should be to provide free and compulsory education for all children (age-group 6-14). The task is very difficult because the non-attending children now consists mostly of girls and children of scheduled castes, scheduled tribes, landless agricultural labourers and other weaker sections of the society. An early solution to the problem, which is closely related to that of adult education, needs a deep political commitment, a mass movement, and a large investment of resources. It will also be necessary to bring about a radical transformation of the existing educational system by the introduction of a multiple-entry system, part-time education and use of non-professional teachers. In addition to the existing channel of full-time formal education in the age group 6-14, which will have to be strengthened and expanded, part-time classes would need to be run for children in the age group 9-14 who are required to work and do not, therefore, go to school, or drop out of it at an early stage. The principle to be followed will be that every child shall continue to learn, from the age of 6 to the age of 14 on a full-time basis, if possible, and on a part-time basis, if unavoidable for economic reasons. The standards of elementary schools should be improved, school timings and vacations suitably altered, and the programme of free midday meals expanded so that their attracting and holding power is substantially increased. The content of elementary education should be radically altered by the introduction of socially useful productive work and social service as integral parts of education and by relating the curriculum to the local environment. The common school system of education should be adopted to promote social cohesion and national integration. Side by side, low-cost programmes of pre-school education should be developed, especially for the children of the poor in rural areas and urban slums, with the use of local personnel and materials.

(3) *Special Facilities for Post-elementary Education*: The access of a large majority of people, and especially the poor, to secondary and higher education should be increased. From this point of view, the special facilities which are now given to scheduled castes and scheduled tribes should continue and should generally be extended to all people below a prescribed income level, irrespective, of caste, region or sex. Special efforts should be made, at all stages of education, to discover talented children from the economically handicapped families, and as this talent is our best national asset, they should be treated as wards of the State and assisted, through scholarships and bursaries, placement, individual tuition and guidance, to receive the highest education they are capable of.

**2.07 Secondary Education**: The significance of high standards in secondary education is obvious; it supplies the teachers for elementary education and the students for higher education and thereby controls the standards in both the stages. Yet, in Indian education, secondary education has always remained the weakest link. This situation calls for immediate and vigorous remedial action.

**2.08** The following measures are suggested for improving the *standards of secondary education*:

(1) As in the new pattern, elementary and secondary education should cover twelve years so that secondary education can prepare for entry into work at a large variety of skilled levels and also send up more mature and better prepared students to the university.

(2) At present, there has been a very haphazard growth of secondary schools, many of which are of such small size that they can be neither economic nor efficient. It is necessary to plan the location of new secondary schools with great care and to rationalise that of the existing ones to the extent possible. Efforts should also be made to see that all secondary schools reach an optimum size, which makes them economically and academically viable.

(3) The curriculum of secondary schools should be drastically revised. Work and social service should become its integral parts. It is necessary to distinguish between the work-load of students and standards of attainment. Today, the work-load is heavy and the standards low. Good planning, good teachers and good methods of teaching and evaluation can reduce work-load and yet improve standards, and this is the direction in which we should work. Till class X, there is need to adjust the curricular load in order to find more time, not only for work and social service, but also for physical education, games and sports and cultural activities so as to develop a complete personality. In classes XI-XII, the higher secondary level, adequate steps towards differentiation and diversification should be taken and the programme should be intensive enough to prepare students either for the university or for entry into the world of work, as the case may be. It is also necessary to emphasize that every thing included in the curriculum need not be a subject for examination. In fact, all curricula should have some elements which exist for their own sake and are not related to examinations.

(4) Great emphasis should be laid on teacher improvement, provision of adequate facilities for it (including improved teaching and learning materials), adoption of progressive and dynamic methods of teaching and evaluation, and creation of a climate of dedicated hard work.

(5) Every effort should be made to identify talented children at the elementary stage and they should be assisted in all ways possible and necessary, including the provision of bursaries, to continue their education at the secondary stage.

**2.09** The present system of public (and similar) schools run by private bodies, charging high fees which restrict them to the children of the affluent, is inconsistent with an egalitarian society. There is a need for Government to establish many more quality schools so that talented children from poor families may be placed there, and also to require every existing institution of this kind to admit at least half of its students from among the talented but economically handicapped students, and to give freeships to them.

**2.10** Another major programme at the secondary stage which needs, attention on a priority basis is *vocationalization*, which will give us middle level semi-skilled and skilled manpower in all walks of life. The programme will link education closely with productivity and what is even more important. it will reduce pressures on the universities. In the present educational system, each stage is treated as a preparation for the next higher stage of education. Instead, the curriculum at each stage must be designed keeping in view the fact that the stage may be terminal for a large percentage of students. Vocationalization will, therefore, have to be attempted at three levels: (1) at the end of the elementary stage; (2) at the end of class X; and (3) at the end of class XII. It should be clearly related to the employment opportunities available (including programmes of self-employment) and should be school-based, industry/agriculture-based, or of a sandwich type, depending upon the circumstances. The ultimate objective should be to divert about half the young persons to appropriate vocational courses. The successful implementation of the programme will need the co-operation of industry and agriculture, and active participation of all agencies of Government. It must also be emphasized that the extent to which students will opt for these courses will depend upon the development of the economy and the availability of jobs, the narrow-

ing down of the wage-structure between different levels of workers and especially as between the blue and white collar categories, the extent to which the admission to the academic course preparatory to the university become more selective. It will also depend on whether the students who opt for vocational courses are assumed of opportunities for further education and vertical mobility, and on the discontinuance of the present practice of prescribing higher qualifications than actually required for performing the duties of middle level jobs.

**2.11** These significant reforms will convert the existing system of education into a new system suited to our needs and aspirations, and will also involve a major socio-economic transformation. Obviously, the development of higher education and research over the next ten or fifteen years will have to conform to the directions of this educational and social transformation. What is even more important, the university system itself will have to play a leading role in bringing about this transformation. The details of this programme will be discussed in the next section. But before leaving the subject, we would like to emphasize one issue; no educational transformation can be brought about in a vacuum because education is a sub-system of the society as a whole and because the social and educational structure support and strengthen one another. Ours is a dual society in which economic and political power is mainly concentrated in the hands of a small class at the top. This reflects itself in a dual educational system in which the access to the best educational institutions at all stages is mostly limited to the same top class. It is this dual educational system which strengthens and perpetuates our dual society. If this vicious circle is to be broken, action on the educational front alone will not be enough and will not succeed. What we need is a radical, simultaneous and complementary action, for educational as well as social transformation.

While implementing the above educational reforms, therefore, we must also mount a big programme of social, economic, political and normal action to reduce poverty and inequality. This will include the minimization of all forms of exploitation, imposition of limits and curbs on the consumption of the rich and well-to-do and provision of a basic minimum standard of living to all the people through an emphasis on the increased production of goods and services needed by the common man, a guarantee of gainful employment to all able-bodied persons willing to work, and the organisation of nation-wide and efficient public distribution system of food stuffs and other essential commodities. It is also obvious that his attempt at a simultaneous educational and social transformation will not succeed unless we also develop a mass movement in support of these objectives and involve the people themselves in these programmes. The backdrop of a nation-wide and comprehensive mass movement and mass involvement thus becomes indispensable for the educational advance of the people as well as national development.

### SECTION III

#### Development of Higher Education and Research

**3.01** *The Role of the University System:* The university system has important responsibilities to the society as a whole as well as to the educational system itself. The significance of the traditional functions, of acquisition, preservation, dissemination and extension of the frontier of knowledge, the balanced education of individuals, and the training of high level personnel for all walks of life is obvious. But a modern university, especially in a developing country like ours, has to undertake several other functions as well. It must, for instance,

- inculcate and promote basic human values and the capacity to choose between alternate value systems;

- preserve and foster our great cultural traditions and blend them with essential elements from other cultures and peoples;
- promote a rational outlook and scientific temper;
- enrich the Indian languages and promote their use as important means of communication, national development and unity;
- promote the development of the total personality of the students and inculcate in them a commitment to society through involvement in national service programme;
- act as an objective critic of society and assist in the formulation of national objectives and programmes for their realization;
- promote commitment to the pursuit of excellence;
- promote the development of science and technology and of an indigenous capability to apply it effectively with special emphasis on national problems; and above all
- contribute to the improvement of the entire educational system so as to subserve the community.

**3.02 Access to Higher Education:** Admission to post-elementary education should be linked to talent and aptitude. We should not also deny the right of an individual to lifelong learning or to study to the highest extent he is capable of, although the state has every right to decide how its subsidy for such education is to be regulated on the basis of talent and social justice. Our policy in relation to further expansion of all post-elementary (and especially higher) education has, therefore, to be based on several conflicting considerations. On the one hand, we cannot ignore the increasing demand for higher education from all sections of the people and especially from the weaker sections, who consider it an almost exclusive channel of vertical mobility. On the other hand, we cannot also ignore or under-emphasize some aspects of the situation such as the inability of the economy to absorb its products, the growing spectre of educated unemployment, lack of resources in men, materials and money which often makes expansion lead to dilution of standards, and the unacademic consideration that drive thousands of young persons to the universities.

The policy to be adopted in this regard should, therefore, consist of the following: (1) adoption of measures which will reduce pressures on the University system, such as effective vocationalization at the secondary stage, delinking most of the jobs from degrees, and changing the present recruitment policies which virtually make a degree a minimum qualification for any good job; (2) exercising great restraint in the establishment of new institutions, which would not be set-up (except in backward areas) unless their need is clearly established on sound academic considerations and adequate resources in terms of men, materials and money are available; (3) planning the location of new institutions very carefully and rationalising that of the existing ones to the extent possible; (4) adopting a policy of selective admissions to full-time institutions of higher education at first degree and post-graduate levels on the basis of merit with reservation of at least half the seats for all weaker sections; (5) enabling talented but economically weaker students to pursue their studies on a whole-time basis by ensuring to them the full cost of their education through appropriate bursaries, for which funds may be raised from public and private bodies; (6) providing facilities for expansion of higher education through channels of—non-formal education such as correspondence courses; and (7) opening Board and university examinations to private candidates to encourage self-study.

The policy outlined above will create the essential basic conditions for the proper development of higher education. It will also ensure that expansion of facilities in post-elementary education will not be at the cost of quality (which is what often happens at present), that non-formal post-elementary education, where the unit cost of education is appreciably lower, shall be available to all who desire it and qualify for it, that the access of the weaker sections to secondary and higher education will increase rather than decrease,

and that it would be adequately subsidised from State funds. The programme outlined above will largely depend for its success on the quality of leadership provided by university and college teachers. The terms and conditions of service should be attractive enough for some of the best minds in the country to join the profession. At the same time, the facilities for acquisition of further knowledge should be provided. Also, it will succeed better if there are adequate job opportunities for those who have not been selected, if the formal and non-formal channels of education are treated as equal in status for purposes of employment, and if due concessions (including age relaxations) are allowed to ensure that those who adopt a method of recurrent education (i.e. transferring themselves from school to work and *vice-versa* according to needs) are at least not at a disadvantage in comparison with those who complete their education at one stretch.

**3.03 *The Undergraduate Stage:*** A major programme of reform of higher education is the restructuring of courses at the undergraduate stage to make them more relevant and significant, not only to the students but also to the nation as a whole by assisting social transformation and national development. It is absolutely essential that every undergraduate student should be given a grounding in four important areas: (1) a set of *foundation courses* which are designed to create an awareness of areas such as Indian History and Culture; history of the freedom struggle in India and other parts of the world; social and economic life in India, including concepts and processes of development; the scientific method including the role of science and technology in development; alternative value systems and societies based thereon; Cultures of Asia and Africa (selected countries) and Gandhian thought; (2) a set of *core courses* which will give the student an opportunity to acquire a broad familiarity with some chosen disciplines, including a study of one or more of them in depth; (3) *some applied studies* projects/field activity which will form an integral activity of the course and will be carried out in the final year; and (4) involvement in a programme of *national or social service* for the first two years. This will provide a rounded and richer education. To get the full advantage of this reform, several important measures will have to be adopted. For instance, the courses should be diversified, especially to cover newly emergent and inter-disciplinary areas; a greater freedom should be allowed to the student, through the adoption of the semester system, to choose the courses best suited to his interests and capability; unit courses and modern and dynamic methods of learning and study should be adopted; and examination reform should be carried out with vigour and determination.

**3.04** It is also necessary to provide liberal and well planned assistance for the improvement of affiliated colleges, which do most of the undergraduate teaching. From this point of view, the central programmes of assistance to affiliated colleges should be diversified and expanded. An effective machinery should be created at the State level for grants-in-aid to affiliated colleges, and the State grant-in-aid codes should be modernised and revised to bring about improvement of standards. Side by side, adequate and firm measures should be taken to improve the management of colleges.

**3.05 *Post-graduate Education and Research:*** The post-graduate stage assumes the highest significance for maintaining educational standards and for programmes of development. As its objective is to take a student to the threshold of new knowledge, it is essential that the teachers and students at this stage are themselves actively involved in the creation of new knowledge and its techniques, i.e., in research. Every institution providing post-graduate instruction must, therefore, have competent staff actively engaged in research and adequate research facilities in terms of laboratory equipment and research journals. It, therefore, follows that the responsibility for post-graduate education must, by and large, be directly assumed by the universities themselves.

At present about 50 per cent of post-graduate students and about 11 per cent of

research students are studying in colleges. While a few colleges have outstanding research and teaching departments, most of them are poorly equipped for post-graduate instruction. Their situation should be reviewed in terms of the norms established by the University Grants Commission, and those having the potentiality of coming up to the norms within a few years should be assisted to do so as soon as possible, while the others should discontinue post-graduate instruction in the interest of standards. Collaborative efforts by colleges, which may not individually be viable units of post-graduate instruction but may be able to form viable units collectively, should also be encouraged. The University Grants Commission, Universities and State Governments will have to take concerted steps in this regard.

**3.06** Other measures required for the development of higher education include the following:

(1) With the rapid increase in the number of universities, there is a need to ensure that all the University Departments themselves satisfy the norms as viable units of teaching and research.

(2) While inter-disciplinary courses should be introduced at the undergraduate level also, special efforts must be made in this regard at the post-graduate and research level.

(3) Individuals, groups and departments in universities and colleges should be supported, on merits, in carrying out high quality research. Special encouragement should be given to collaborative research efforts by a group, drawn from one or more departments, on the basis of pooled resources.

(4) High quality experimental research demands the development of indigenous instrumentation capability and culture. Efforts in this direction should be encouraged through supported of research schemes and the creation of university instruments and service centres and regional instrumentation centres.

(5) While universities will continue to be involved in fundamental research, application oriented research, especially in collaboration with national laboratories and industries need to be specially encouraged in universities. Both fundamental and applied research require the highest intellectual qualities.

Fundamental discoveries in science lead to technological advances, while progress in technology provides the scientists with sophisticated tools and instruments and enables them to make fundamental discoveries. As such, both in teaching and research, it is necessary to see that the best talent in the country is harnessed for the development of science and technology. Nor should we neglect the most modern and sophisticated technology which is very essential in certain areas such as heavy industries, defence, communications, transport, energy, etc.

(6) In order that universities may be able to contribute to the social development and change, they have to go outside the four walls of the classroom and get involved in a participatory understanding of some of the societal problems. Such research programmes as contribute to social development, especially to rural development, should be encouraged.

(7) While fostering knowledge of science and technology at the highest theoretical level and spreading it in the rural areas, there is a growing need to develop technology relevant to emergent national needs. Such a development would also demand appropriate interaction between the institutions of higher learning and the productive processes and organs of society.

**3.07 Diversification:** As enrolments increase and the student community gets larger, it is essential to diversify the courses and models of higher education, and to create new processes and models to suit the emerging needs. In fact, we should move in a direction where institutions of higher education represent a very wide spectrum of which the classical type is only one, although an important illustration.

**3.08 Decentralization:** It is equally essential to move away from the existing system of the affiliating university or centralization of academic authority and external examinations. The system as it works creates very dilatory procedures. The rigidity of the affiliating system also deprives the good teachers of the opportunity to take initiative for creative, imaginative and more fruitful action. It is, therefore, absolutely essential to decentralise authority and confer autonomy, from the university administration to the university departments and from the universities to colleges. The existing bureaucratic and centralised structures of the universities have to be radically altered to avoid delays, to evade attempt at rigid uniformities, to create an elastic and dynamic system and to promote innovative initiatives and reforms.

**3.09 Autonomous Colleges:** The concept of autonomous colleges is of special significance in this context. Autonomy for a college implies that the college and its teachers assume full responsibility and accountability for the academic programmes they provide, for the content and quality of their teaching, and for the admission and assessment of their students. Unless this basic condition is first met, it will not be possible to tackle the problem of *relevance* satisfactorily or to diversify and relate curricula to local needs and conditions, and what is even more important, to give greater individual attention to the students on the basis of their needs and aptitudes. This alone will make it possible for institutions of higher education to become communities of teachers and students engaged in an agreed and mutually satisfactory joint pursuit of truth and excellence. However, it would be necessary to ensure that the terms and conditions of service for teachers prescribed by the Government and the University Grants Commission continue to apply to these institutions, and that the institutions continue to subserve the needs of national integration and development. The concept of autonomous college does not imply permanent categorisation of an institution under a separate label for a higher formal status. It requires an institution to be continuously subjected, in order to justify its recognition as an autonomous college, to periodic reviews and should be liable to lose its recognition if the conditions of higher academic excellence as well as its contribution to society are not maintained at the expected level. In short, such a privilege will have to be continuously earned and sustained through performance. Over the years, we should move in a direction where autonomy becomes, not a reward for excellence, but the minimum condition for the very existence of the college. It must also be emphasized that, in the interest of good education and in the larger interest of society itself, each institution has to seek its identity in its own unique fashion, consistent with its local situation and the academic perspective of the local community.

**3.10** As a step towards the development of this programme it is necessary to survey carefully all the colleges in a district and to identify one or two colleges which can become academically viable through guidance, planning and financial assistance. These colleges should be assisted to realize their potential and given autonomy to develop new courses in relation to the needs of the local region and its development. The programme can, over the years, be extended to other colleges as they show a desire and potential to develop on these lines.

**3.11 Academic Freedom:** To be an objective critic of society is an important responsibility of the university system. This can be discharged satisfactorily only if the academic freedom of the teachers and students to express their views freely and fearlessly is adequately protected. This freedom also deserves to be exercised more widely and ably.

**3.12 Extension:** if the university system has to discharge adequately its responsibilities to the entire educational system and to the society as a whole, it must assume extension as the third important responsibility and give it the same status as research and teaching. This is a new and extremely significant area which should be developed on the basis of

high priority. As can be easily imagined, the extension programme of the university system will fall into two broad categories.

(1) *Extension Services to Schools and Colleges*: The universities should work with the colleges which, in turn, should work with the secondary and elementary schools in their neighbourhood and help them to improve standards by in-service education of teachers, sharing of facilities, provision of enrichment programme for students and discovery and cultivation of talent. The development of a proper Research and Development (R&D) programme for the education system is also a special responsibility of the universities.

(2) *Extension Service to the Community*: The university system also has a great responsibility to the society as a whole. All universities and colleges should develop close relationships of mutual services and support with their local communities, and all students and teachers must be involved in such programmes as an integral part of their education. The National Service Scheme (N.S.S.) programme should be expanded and improved, ultimately to cover all students. The fundamental purpose of these and other student programmes should be to implant a spirit of cooperation and social commitment inter-related to moral development. It should be the obligation of the teaching community to give extension lectures to interpret recent trends in their fields to the community, to create scientific awareness, to participate in adult education and workers' education programmes, etc. Universities can also help in the preparation of development projects for the community around them, including the rural community. Such involvement will also help in bringing greater relevance into the courses at the undergraduate and the post-graduate levels and into the research programmes.

**3.13 Standards**: It will not be proper to continue to judge standards, as in the past, on the basis of academic performances only. In view of the new concept of the roles and functions of the universities and the acceptance of research, teaching and extension as equally important responsibilities of the universities, standards of higher education will have to be judged, not only on the basis of the academic achievements of its alumni and teachers, but also in relation to their social commitment and their contribution to social and national development. Moreover, attempts will have to be made, on the basis of the highest priority, to improve standards. The programmes to be developed for the purpose will include faculty development, provision of essential equipment, buildings and other facilities and organisation of an adequate programme of students services. These will need considerable investment in men, materials and money. But even more importantly, they need commitment and competence on the part of the teachers, high motivation in students who should be selected for their capacity, and a climate of sustained and dedicated hard work. A selective approach, proper planning and concentration of resources are also equally essential to achieve good results.

**3.14** The problem of the medium of instruction is of special significance in this context. At the undergraduate stage, the process of transition from English to regional languages is already well under way. It must be expedited and assisted through the production of the necessary text books and other learning and teaching materials. At the post-graduate and research stage, where the process is mostly of self-learning, a medium of instruction is of less significance and what really matters is the capacity of the student to directly acquire the growing knowledge in the world in the field of his specialisation. It should be emphasized, however, that the growing use of the Indian languages increases, rather than decreases, the need to study English which will continue to have a significant place in our education. Obligatory passing in English should not be required at the undergraduate stage. Adequate arrangements should, however, be made for specialised intensive courses in English in every college on an optional basis.

Learning of the English language should be promoted not by way of creating an impediment for any student for this or by further studies but should be available as a positive



help in the form of reading service at every stage of education, including the post-graduate level or even after that. English should be used for building knowledge and not for building status. If this role of the English language as a positive instrument of knowledge is accepted, then facilities for its learning in various forms and content should be made available to each group of students according to their own needs. This type of an approach will be an approach of service rather than subjecting everyone to a uniform pattern, irrespective of need.

At the post-graduate stage, the student needs to have a good working knowledge of an international language so that he may have direct access to the specialised and growing knowledge in the world in his own or other fields. Passing a competence test in English may be required of a student seeking admission at the Master's level, depending on the needs of the field he wishes to study. Full encouragement should also be given to the study of foreign languages other than English.

Special groups may be appointed to examine the problem of switch-over to regional languages in the field of professional education.

**3.15 *The Role of the UGC:*** The coordination and maintenance of standards in institutions of higher education and research is a central responsibility. The UGC has been created by an Act of Parliament to look after this responsibility and empowered to take, "in consultation with the Universities and other bodies concerned, all such steps as it may think fit for the promotion and co-ordination of University education and for the determination and maintenance of standards of teaching, examination and research in Universities" (Section 12 of the UGC Act). To discharge this responsibility adequately, the UGC has to assume several roles and functions. For instance, it has a major role of providing leadership and impetus for reform and development. Towards this purpose, the Commission must continuously review the emerging problems of education, the status of teaching and research in different disciplines and the standards of teaching and research in the universities. It should through its committees and panels and other means evolve a consensus within the academic community regarding desirable changes in higher education.

**3.16** It is the responsibility of the UGC to strive to provide leadership to the entire educational system and assist it to bring about the needed transformation. This can be done by encouraging the universities to play an increasingly active role in improving the quality of education in colleges and schools, by intensifying the R&D effort in education and by promoting the philosophy of extension whereby teaching, research, service of the community and the building of character become an integral activity.

**3.17** The UGC has to play an increasing role in promotion of high quality research in universities because of the symbiotic relationships between teaching and research. At the same time it must promote applied research which has an immediate impact on the social and economic conditions of the people.

**3.18** The UGC should strive to remove regional imbalances in the development of higher education in different parts of the country and to relate such development to the programmes of socio-economic advance and cultural growth of the people in the various regions.

**3.19** The UGC should actively promote through the creation of an appropriate pattern of recognition and appreciation, the maintenance of values in the academic community so that its commitment to the pursuit of truth and excellence is enhanced and it is enabled better to discharge its responsibilities to society.

**3.20** The leadership and catalytic role of the UGC has to be supported by the creation of appropriate organizations at the university and State levels. These would include a mechanism for surveys of undergraduate colleges in relation to well-defined norms and

guidelines so as to ensure that further proliferation of sub-viable colleges is arrested, and for similar surveys of post-graduate colleges so as to ensure that they satisfy the UGC norms, and maintain certain minimum standards. It would also be necessary for the UGC to persuade the universities to establish academic planning, evaluation and implementation boards to look after the post-graduate and research programmes in a long term perspective, and College Development Councils to advise and guide the colleges to improve their academic standards with the help of various UGC schemes.

**3.21 *Conditions Essential for Success:*** The system of higher education is now in a state of crisis, due to uncontrolled and unplanned expansion, inadequate inputs in terms of money, materials and talent, falling standards in a large proportion of institutions, weakening of student motivation, increase of educated unemployment, weakening of discipline and dys-functionalities created by the adverse effect of socio-economic problems, a lack of relevance, and significance, and because of undue political interference by subjecting universities to political and partisan pressures and lack of a national consensus in dealing with such situations. It is obvious that universities cannot function smoothly without adequate support from the Government. This crisis continues to deepen with the passage of time and spreads, not only to the entire educational system, but back again into the society itself. If this crisis is to be resolved quickly and successfully, three basic conditions will have to be fulfilled:

- (1) The Government should take hard decisions on delinking most of the jobs from degrees, provision of large additional investment needed to discover and develop talent, and to provide satisfactory conditions of work, revision of recruitment policies, etc. It should also support the universities in taking hard decisions in selective admissions, regulation of opening of new colleges, provision of satisfactory conditions of work and protection of university autonomy.
- (2) The teachers and students should carry out their part of the responsibility through intensive efforts to improve standards and the whole academic community should strive to serve society, through sustained, dedicated work, and commitment to the pursuit of knowledge, excellence, and national development.
- (3) A nation-wide effort should be organised to achieve a simultaneous breakthrough on the social as well as educational fronts.

The tasks of educational reconstruction thus require an intensive, coordinated and collaborative effort on the part of all the agencies involved, viz., the Centre, States, public, teachers, students and administrators. Instead of trying to blame each other (and each one of these has its own share of achievements as well as failures), all these agencies should work together for bringing about an educational and social transformation on a scale commensurate with the size and complexity of our problems. If this can be done, there is no doubt that we shall soon be able to create a new educational system and a new society.

## ANNEXURE V

### On-going programmes of the University Grants Commission

#### I. Development of Universities

- (i) General Development (Staff, Equipment, Academic buildings, Books and Journals)
- (ii) Centres of Advanced Study and Departments of Special Assistance
- (iii) University Centres for postgraduate studies
- (iv) Area Studies
- (v) Guest House
- (vi) Establishment of Chairs
- (vii) Development of Computer Facilities
- (viii) Central Instrumentation Facilities
- (ix) Collection and Preservation of Manuscripts
- (x) Appointment of Development Officers
- (xi) Centenary Grants
- (xii) Infrastructural Facilities (Hostels, Staff Quarters, Library Buildings, Laboratory Facilities)
- (xiii) Development of Museums
- (xiv) Unassigned Grants
- (xv) Development of Wild Life and Research
- (xvi) Development of expertise in the field of Archaeology and Museums in the Universities
- (xvii) Establishment of Archival cells in the universities

#### II. Development of Colleges

- (i) General Development (Rs. 3/5 lakh scheme viz. Academic Buildings, Classrooms, Laboratories, Hostels, Staff Quarters, Books and Journals and Equipment).
- (ii) COSIP/COHSSIP
- (iii) Development of Postgraduate Studies in Science
- (iv) Development of Postgraduate Studies in Humanities and Social Sciences
- (v) Development of Autonomous Colleges
- (vi) Centenary Grants
- (vii) Assistance towards Restructuring of Courses

#### III. Faculty Improvement Programmes

- (i) Seminars, Summer Institutes and Workshops
- (ii) National Fellowships
- (iii) National Associateships
- (iv) Visiting Professorships, Fellowships and Faculty
- (v) Research Associateships
- (vi) Teacher Fellowships
- (vii) National Lectures
- (viii) Utilisation of Services of Retired Teachers
- (ix) Travel Grants
- (x) Career Awards to Young Scientists
- (xi) Sabbatical Leave

#### IV. Support for Research Work

- (i) Advanced Research Projects in Humanities and Social Sciences
- (ii) Short-term Research Projects in Humanities and Social Sciences

- (iii) Major Research Projects in Science
- (iv) Minor Research Projects in Science
- (v) Core Support for Research
- (vi) Research Scholarships and Fellowships
- (vii) Financial Assistance to teachers for Research Work
- (viii) Publication of Theses and Learned Research Works

**V. Student Welfare Programmes**

- (i) Student-Aid-Fund
- (ii) Non-Resident Student Centres
- (iii) Study Homes
- (iv) Book Banks
- (v) Health Centres
- (vi) Employment Information, Career-advising and Vocational Guidance Bureaus
- (vii) Construction of Gymnasium
- (viii) Development of Play fields
- (ix) Appointment of Trained Coaches
- (x) Canteens

**VI. Academic and Cultural Programmes**

- (i) Correspondence Courses
- (ii) Adult/Continuing Education and Extension
- (iii) Cultural and Bilateral Exchange Programmes
- (iv) Examination Reforms
- (v) Collection and Preservation of Manuscripts
- (vi) National Integration Samitis
- (vii) Planning Forums
- (viii) Science Education Centres
- (ix) Regional Library Centres
- (x) College Development Councils
- (xi) Gandhian Studies/Gandhi Bhavans
- (xii) Book-writing

## ANNEXURE VI

### Faculty Improvement Programmes Pertaining to Teachers in Affiliated Colleges

The University Grants Commission has been attaching great importance to Faculty Improvement Programmes by providing opportunities to teachers to keep abreast of modern developments in their fields of study and research and to exchange ideas with experts in similar or related fields. One of the major functions of the University Grants Commission pertains to the raising and maintenance of standards in higher education and the local point in the improvement of standards centres around augmenting the professional competence of the teachers in affiliated colleges to make them better equipped to initiate and carry out high quality instructional programmes. With that object in view, the Commission has agreed to provide necessary financial support during the Fifth Five Year Plan for raising the professional competence of teachers in the affiliated colleges with the following programmes: The programmes have been designed to be implemented simultaneously to produce multiplying effect.

1. University Leadership Project
2. Refresher Courses or Short-term Institutes (University or State based) of about six weeks' duration each, during summer or other vacations
3. Refresher Courses or Institutes through Correspondence method in major subjects, statewise, with provision for two weeks' contact classes for laboratory or other allied work
4. All India Advanced Level Institutes in specialised topics or subjects, of about six weeks' duration
5. English Language Teaching Institutes on All India Level, of six weeks' duration
6. Fellowships for teachers in affiliated colleges at Rs 250 p.m. as a living allowance in addition to the salary which they continue to get from the parent institution (when the teachers elect to carry out their higher studies and research at out-station centres)
7. National Associateships, for one year, with provision of visits to specialised laboratories or institutions for research work over a period of 8-12 weeks during the tenure of the award for one year
8. Seminars, symposia, conferences etc., in specialised topics or subjects of 1-2 weeks duration.

The Commission firmly believes that success of these programmes would be possible only with the whole hearted cooperation of the State Governments, the universities and the college authorities and the teachers concerned.

The Commission has formulated guidelines for the implementation of the faculty improvement programmes pertaining to teachers in the affiliated colleges as indicated below:

#### **GUIDELINES IN THE IMPLEMENTATION OF FACULTY IMPROVEMENT PROGRAMMES PERTAINING TO TEACHERS IN AFFILIATED COLLEGES**

##### **1. University Leadership Projects**

The College Science Improvement Programme (COSIP) initiated during the Fourth Plan period has been mainly directed towards improvement of undergraduate science education and has, as its important component, provision for improvement of teacher's

competence, qualifications and other opportunities to improve their teaching methods. The University Leadership Project is aimed to make a distinct contribution towards improvement of the professional competence of the teachers in the colleges and to make available to them the necessary curriculum (curriculum reform reflected in the syllabus and in examination reform) and other material required for better teaching and to establish a meaningful channel of communication between the university and college teachers.

*It is proposed that during the Fifth Plan period, every university which has more than 25 affiliated colleges providing undergraduate studies may be invited to take up a University Leadership Project in each of the major subjects where it has strong viable university departments, so that the instructional facilities and the material for curriculum and examination reform in the colleges with preparation of necessary textbooks, laboratory manuals, monographs etc., to bring about the reform in syllabus as well as in examination at the undergraduate level are made available to the participating teachers.*

It is expected that about 40 additional University Leadership Projects would be initiated in science subjects and a similar number in Humanities and Social Sciences during the Fifth Plan period. Under the ULP, the university will have to take the responsibility of bringing about the improvement of professional competence of the teachers in its affiliated colleges through the organisation of seminars, symposia, summer institutes, workshops and actual participation of the university faculty members in the reform of curriculum and examination and in the effective guidance in bringing about the reform in teaching at the undergraduate level. The preparation of text books with reformed syllabus, manual, monographs and other instructional materials and aids would be a major component of the activity under the ULP. *For this purpose a provision of financial support upto Rs. 5 to 6 lakhs may be made available to each Leadership Project for a period of three years.*

The University has to submit concrete proposals in the implementation. of the programme in the spirit it is intended.

## **2. Refresher Courses or Short-Term Institutes**

The Refresher Courses and Short Term Institutes would be about 8 weeks duration to be held during the summer or other vacations of the university so that the normal teaching and research of the university are not affected. The universities would be free to organise such institutes at any time convenient to them throughout the year preferably during the vacations. It is proposed that each university or a group of universities within a State having affiliated colleges, may take up the responsibility to organise each year atleast one institute each in the Science subjects and one in Social Science subjects depending on the number of teachers and the colleges to be covered. Since the number of teachers and the number of affiliated colleges in the different universities and States would vary considerably, it is proposed that—

- (i) one institute each in Science subjects and one in Social Science subjects if the total number of teachers in the subject concerned in the State is less than 150;
- (ii) two institutes each in Science subjects and two in Social Science subjects if the total number of teachers in the subject concerned is between 150 and 400;
- (iii) three institutes each in Science subjects and three in Social Science subjects if the number of teachers is over 400.

Refresher Courses or Short-term Institutes may be organised by the universities and should be particularly directed towards improvement of curricula, teaching methods and examination reforms proposed to be introduced by the universities. Specific proposals for this purpose may be sent by the universities having affiliated colleges. Proposals relating to refresher courses catering to the needs arising from new curricula etc. that have been or in process of being introduced will receive special attention.

In the organisation of this type of institutes, care should be taken to cover as many teachers as possible from a single college/institute so that the training of 6-8 weeks' duration with revised curricula or in the reform of examination are made available to the majority if not to all the teachers in a State in a particular college. This would enable the colleges concerned to introduce the revised curricula and the methods for evaluation and examination reform to be put to practice. The previous method of picking one teacher from one college for a particular summer institute may not deliver the goods. Each institute may have an enrolment of about 50-60 college teachers as participants. The Commission will make a contribution of about Rs. 35,000 per institute to meet the boarding and travel expenses of the participating teachers and other incidental expenses. Since the institutes are university or state based, the expenses on travel in respect of teachers would not be much. The university concerned would be required to provide free accommodation with the necessary perquisites.

The number of such institutes or refresher courses to be organised by the university concerned would depend on the number of teachers to be covered in a particular State in a particular subject and the convenience of the university concerned to organise such institutes.

It is expected that the performance of all participants in the Refresher Courses or Short term Institutes would be evaluated at the end of the course, and the evaluation (satisfactory or otherwise) should be sent to the college principal concerned. (This will also hold for All-India Advanced Level Institutes and English Language Teaching Institutes) The refresher course itself may be evaluated by the participants and suitable proforma may be prepared for this purpose.

### **3. In-Service post M.A. or M.Sc. Diploma Course through Correspondence in Major Subjects**

The programme is intended mainly for the undergraduate college teachers for raising their qualifications and to give them the subject-matter competence through correspondence course so as to enable them to become better teachers familiar with new subject material and the latest methods of teachers familiar with new subject material and the latest methods of teaching. The programme envisages a one-year course through correspondence covered in eight semesters and one independent project.

The correspondence course may be organised as an inter-university collaborative programme in each State. The course material to be sent to the participating teachers may be prepared by combined efforts of the department concerned in the state or the universities. But the responsibility of coordinating the work to cover the entire population of college teachers in that subject in the State would be entrusted to one of the departments of the collaborating universities in the State.

Besides the provision of courses through correspondence, over one academic year, the participating teachers may be required to have about 2-4 weeks' contact classes and laboratory work in the form of a short-term institute to be organised by each of the participating departments of the universities in the State for the benefit of the teachers coming from the colleges affiliated to that particular university. The programme of Faculty Improvement through correspondence courses may be viable in such subjects where the number of teachers to be covered is 250 or more in a particular State. The universities may organise correspondence courses for one year or in a sequential manner covering 1-3 years depending upon its convenience and the facilities available and the extent of competence of teachers in the affiliated colleges.

On the successful completion of the courses through correspondence and the contact classes for about two weeks' duration and on assessment of the work done, a certificate or diploma would be awarded by the university concerned to the successful teachers from the affiliated colleges.

The estimated expenditure on the preparation of course materials etc. to be sent to

the participating teachers may be Rs. 5,000 in a particular subject and the expenditure on the organisation of contact class of 2 weeks' duration may vary from Rs. 15,000 to Rs. 20,000

#### 4. All-India Advanced Level Institutes

The All-India Advanced Level Institutes would be of about six weeks' duration to be organised in selected university departments for organisation of advanced level institutes in specific fields or disciplines. A provision of Rs. 60,000 to Rs. 70,000 may be made by the Commission for the organisation of an advanced level institute of six weeks' duration. The selection of the All-India advanced level institutes would enable teachers from universities or colleges from different regions to avail themselves of the opportunities for getting acquainted with the latest developments in the subject concerned through lectures, seminars, discussions and possibly through project work. One or two such All-India Advanced Level Institutes may be organised in each major subject annually. It would be desirable for a college teacher to participate at the advanced level institute after he has attended at least one institute organised in his state by his university. The total number of participants in an All India Advanced Level Institute may be about 50 and not more than 25 percent should be drawn from the university teachers as participants, the majority being from the postgraduate colleges. The location of the All-India Advanced Level Institutes could be determined on a regional basis to be organised in universities (affiliating or unitary type), IITs and other Institutes of National Importance.

#### 5. English Language Teaching Institutes

About 6-8 institutes in English Language Teaching may be organised each year for the benefit of teachers of English in the colleges. The English Language Institutes may be of 6-8 weeks' duration to be located in different regions so as to cover as many college teachers as possible, region-wise. A provision of Rs. 60,000 to Rs. 70,000 may be made by the Commission for the organisation of an English Language Teaching Institute of 6-8 weeks' duration. The total number of institutes to be organised in each year, 2-3 may be of an advanced level on an All-India basis for specialised purposes (teaching of professional courses through the medium of English).

#### 6. Teacher Fellowships

Teacher Fellowships are specifically meant to provide opportunities for teachers to work towards either an M. Phil. or M. Litt. or a Ph.D. degree and as such, may be of two types:

- (i) short term fellowship of one year's duration; and
- (ii) long term fellowship of a duration not exceeding three years.

The teachers from affiliated colleges selected for long-term fellowships should preferably be below the age of 35 years so that the benefit of their training would be available to the college for a reasonably long duration. In the case of short-term fellowships of one year's duration, preference may be given to teachers who are below the age of 45 years. More senior teachers will also be considered on merit. Such teachers either for long or short-term fellowships should be sponsored by the colleges concerned which should protect their total emoluments for the period of their academic leave and also give them the necessary increments as due and give an undertaking that such teachers would be taken back to their substantive posts without effecting their seniority etc. The teachers also may be required to give an undertaking to serve such institution for a period of at least five years on their return from advanced study with fellowship. The Commission would provide funds to the college concerned for appointing suitable substitute in place of teachers selected for the fellowship. The Commission would also provide funds to the teacher concerned a living



expenses allowance of Rs. 250 per month in case the teacher decides to utilise the fellowship in a university not located in his place of duty. The teachers selected for the fellowships would be entitled to continue to draw their total emoluments from the college concerned for the duration of their academic leave. The UGC will provide a maintenance grant of Rs. 1,000 per annum to the university or institute where the teacher undertakes his research work.

The teacher fellows may work either at a university department or at IIT's and other Institutes of National Importance.

#### **7. National Associateship**

The Commission has decided to introduce a short-term National Associateship Programme wherein teachers from affiliated colleges or university departments may be selected for a single visit during a year to work in any of the universities or research institutions having specialised facilities connected with their research work over a period of 8-12 weeks. The selected National Associates would be entitled to get the actual first-class railway fare from their place of duty to the institution where they intend to work and back alongwith a living allowance of Rs. 500 p.m. for the duration of their stay at the host institution.

These National Associateships for a year are in addition to the existing programme of National associateships which are valid for a five year period.

#### **8. Seminars, Symposia, Workshops, Conference etc.**

These are proposed to be continued for enabling academic meetings on an All-India basis or regional basis for specified purposes) The selection of such institutes would be made, as at present, with the help of an advisory committee once a year prior to the beginning of the academic year. The seminars and workshops etc. should not be of less than one week's duration and not more than two weeks duration. The duration in respect of conferences etc. would however vary.

## ANNEXURE VII

Staff Positions sanctioned and filled during IV Plan  
(1969-70 to 1973-74)

## General Development Schemes

University	Professor		Reader		Lecturer	
	Posts sanctioned	Posts filled	Posts sanctioned	Posts filled	Posts sanctioned	Posts filled
Sardar Patel	1	1	3	3	9	9
Jabalpur	4	4	14	11	9	6
Poona	7	6	23	21	23	22
Sri Venkateswara	11	3	24	17	18	18
Calicut	7	7	10	10	18	18
Madras	23	17	23	19	19	14
Panjab	8	6	10	7	4	3
Gorakhpur	—	—	21	20	—	—
Delhi	23	21	44	44	47	47
Ranchi	10	10	12	12	10	10
Calcutta	19	17	23	18	35	33
Gauhati	—	—	16	15	28	27
<i>Total:</i>	113	92	223	197	220	207

## ANNEXURE VIII

## Staff Positions sanctioned &amp; filled during 1974-75 to 1978-79

## General Development Schemes

<i>University</i>	<i>Professor</i>		<i>Reader</i>		<i>Lecturer</i>	
	<i>Posts sanctioned</i>	<i>Posts filled</i>	<i>Posts sanctioned</i>	<i>Posts filled</i>	<i>Posts sanctioned</i>	<i>Posts filled</i>
Sardar Patel	9	8	18	17	19	19
Jabalpur	1	—	11	7	10	2
Poona	16	14	17	14	18	11
Sri Venkateswara	8	8	18	18	16	14
Calicut	12	11	28	21	40	23
Madras	18	15	34	23	66	66
Panjab	4	3	23	16	20	16
Gorakhpur	11	8	27	10	1	0
Delhi	22	19	22	21	9	8
Ranchi	15	11	17	10	5	2
Calcutta	22	7	51	33	42	20
Gauhati	13	13	37	35	10	11
<i>Total:</i>	151	107	303	200	249	175

## ANNEXURE IX

## Percentage of Senior Teachers\* to Total Number of Teachers in selected (12) Universities

Sl. No.	Name of the University	1969-70			1977-78		
		No. of Sr. Teachers	No. of Jr. Teachers	Percentage of Sr. teachers to total no. of teachers	No. of Sr. teachers	No. of Jr. teachers	Percentage of Sr. teachers to total no. of teachers
1.	2.	3.	4.	5.	6.	7.	8.
1.	Poona	60	60	50	93	95	49
2.	Sardar Patel	25	51	33	49	70	41
3.	Jabalpur	19	15	56	18	26	41
4.	Calicut	7	8	47	50	60	45
5.	Sri Venkateswara	36	96	27	88	118	43
6.	Madras	87	105	45	191	152	56
7.	Gauhati	45	167	21	85	157	35
8.	Calcutta	122	184	40	239	261	48
9.	Ranchi	29	60	33	76	30	72
10.	Panjab	143	239	37	212	328	39
11.	Gorakhpur	48	199	19	63	226	22
12.	Delhi	209	177	54	314	234	57
<i>Total:</i>		830	1,361	38	1,478	1,757	46

\*Professors and Readers.

## ANNEXURE X

### Staff expected to be in position and actually in position in 1977-78

Sl. No.	Name of the University	Staff strength in 1969-70			Staff positions filled during fourth plan (1969-70 to 1973-74)			Staff positions filled during 1974-75 to 1977-78			Staff which should have been in position upto (1977-78 (col.2+3+4)			Staff actually in position in 1977-78		
		P	R	L	P	R	L	P	R	L	P	R	L	P	R	L
1.	1a.	2.			3.			4.			5.			6.		
1.	Poona	21	39	60	6	22	22	13	18	16	40	79	98	40	53	95
2.	Sardar Patel	8	17	51	1	3	9	7	13	19	16	33	79	15	34	70
3.	Jabalpur															
3.	Calicut	2	5	8	7	10	18	10	20	22	19	35	48	23	27	60
4.	Sri Venkateswara	11	25	96	3	17	20	6	10	7	20	52	123	27	61	118
5.	Gauhati	15	30	167	—	15	27	3	12	1	18	57	195	22	63	157
6.	Calcutta	42	80	184	17	18	33	2	13	6	61	111	223	94	145	261
7.	Panjab	45	98	239	6	12	5	4	12	11	55	122	255	69	143	328
8.	Gorakhpur	17	31	199	—	20	—	4	4	—	21	55	199	21	42	226
9.	Delhi*	60	149	177	30	63	54	19+	17+	—	109	229	231	91	223	234

\* Staff positions filled under Col. 3 pertain to the period 1966-67 to 1973-74.

+Estimated

Note: Universities of Jabalpur, Madras and Ranchi have not furnished yearwise details of posts filled. Hence they do not appear here.

## ANNEXURE XI

**Percentage of students having facility of Reading Seats in selected  
(12) Universities**

<i>Sl. No. Name of the University</i>		<i>1977-78</i>		
		<i>No. of Students</i>	<i>No. of Reading Seats in the Library</i>	<i>Percentage of students having reading seats</i>
<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>
1.	Poona	2,773	300	11
2.	Sardar Patel	1,220	700	57
3.	Jabalpur	1,197	400	33
4.	Calicut	791	325	41
5.	Sri Venkateswara	1,798	432	24
6.	Madras	2,508	290	12
7.	Gauhati	1,844	210	11
8.	Calcutta	13,057	702	5
9.	Ranchi	1,590	40	3
10.	Panjab	4,801	500	10
11.	Gorakhpur	7,362	100	2
12.	Delhi	9,738	400	4

## ANNEXURE XII

## Utilisation of Developmental Assistance on Buildings

(in lakhs of rupees)

University	IVth Plan (1969-70 to 1973-74)		1974-75 to 1978-79	
	Amount allocated	Amount utilised	Amount allocated	Amount utilised
Sardar Patel	14.74	9.97	35.00	24.19
Jabalpur	7.22	7.22	2.07	2.07
Poona	35.54	31.52	51.35	8.14
Sri Venkateswara	13.04	13.04	29.60	29.60
Calicut	37.67	37.67	32.57	32.57
Madras	5.00	5.00	18.59	18.59
Panjab	38.07	35.10	62.08	21.36
Gorakhpur	90.62	85.51	19.70	6.99
Delhi	76.88	69.59	89.74	41.90
Ranchi	19.43	19.43	49.30	25.72
Calcutta	63.84	49.25	77.29	36.51
Gauhati	58.46	19.03	59.74	28.72
<i>Total:</i>	460.51	382.95	527.03	276.36

## ANNEXURE XIII

## Utilisation of Developmental Assistance on Books &amp; Journals

(in lakhs of rupees)

<i>University</i>	<i>IV Plan (1969-70 to 1973-74)</i>		<i>1974-75 to 1978-79</i>	
	<i>Amount allocated</i>	<i>Amount utilised</i>	<i>Amount allocated</i>	<i>Amount utilised</i>
Sardar Patel	6.00	3.40	15.00	15.00
Jabalpur	3.35	3.35	22.00	22.00
Poona	13.00	11.29	24.30	24.30
Sri Venkateswara	10.06	10.02	24.45	24.27
Calicut	13.41	13.41	36.55	36.55
Madras	10.23	9.30	42.05	31.83
Panjab	19.98	19.75	53.68	51.98
Gorakhpur	9.20	9.19	21.90	15.18
Delhi	3.50	3.50	28.40	24.66
Ranchi	7.15	6.88	16.45	16.45
Calcutta	14.57	14.22	65.40	63.02
Gauhati	12.87	5.82	49.80	31.09
<i>Total:</i>	123.32	110.13	399.98	366.03



## ANNEXURE XIV

## Utilisation of Developmental Assistance on Equipment

*(in lakhs of rupees)*

<i>University</i>	<i>IV Plan (1969-70 to 1973-74)</i>		<i>1974-75 to 1978-79</i>	
	<i>Amount allocated</i>	<i>Amount utilised</i>	<i>Amount allocated</i>	<i>Amount utilised</i>
Sardar Patel	18.74	12.83	30.75	27.21
Jabalpur	4.22	4.19	21.80	18.18
Poona	13.76	13.41	41.25	41.25
Sri Venkateswara	18.31	18.31	35.75	34.80
Calicut	15.54	15.54	25.89	23.63
Madras	17.70	14.79	57.80	46.63
Panjab	18.80	18.78	75.60	63.42
Gorakhpur	12.89	10.94	26.80	12.57
Delhi	14.79	13.02	56.50	25.80
Ranchi	10.95	8.83	12.94	12.94
Calcutta	29.58	29.37	91.65	59.02
Gauhati	13.43	5.13	40.55	25.48
<i>Total:</i>	188.70	165.14	517.28	390.93

## ANNEXURE XV

## List of USICs approved by the Commission

<i>Sl. No.</i>	<i>Name of the University</i>	<i>Sl. No.</i>	<i>Name of the University</i>
1.	Allahabad	26.	Kurukshetra
2.	Andhra	27.	Madras
3.	Banaras Hindu	28.	Madurai Kamraj
4.	Bangalore	29.	Magadh
5.	Bhagalpur	30.	Marathwada
6.	Bhopal	31.	Mysore
7.	Burdwan	32.	Nagpur
8.	Calicut	33.	North Bengal
9.	Cochin	34.	Osmania
10.	Delhi	35.	Panjab
11.	Dibrugarh	36.	Patna
12.	Gauhati	37.	Poona
13.	Gujarat	38.	Panjabi
14.	Guru Nanak Dev	39.	Rajasthan
15.	Himachal Pradesh	40.	Ravi Shankar
16.	Indore	41.	Roorkee
17.	Jabalpur	42.	Sambalpur
18.	Jadavpur	43.	Sardar Patel
19.	Jawaharlal Nehru	44.	Saugar
20.	Jiwaji	45.	Shivaji
21.	Jodhpur	46.	South Gujarat
22.	Kalyani	47.	Sri Venkateswara
23.	Karnatak	48.	Udaipur
24.	Kashmir	49.	Utkal
25.	Kerala	50.	Vikram

## ANNEXURE XVI

**Computer Facilities available in Universities**  
**November, 1979**

<i>S. No.</i>	<i>Name of the University</i>	<i>Type of computer</i>	<i>Remarks</i>
1	2	3	4
1.	Aligarh Muslim	IBM-1130	The proposal for computer YAX/11/780 system has been approved by the Department of Electron ICS Computer building yet to be constructed. Installation will take time.
2.	Andhra	IBM-1130	—
3.	Annamalai	TDC-316	—
4.	Banaras Hindu	i. TDC-12 ii. ICL-1904 S	ICL-1904 S system arrived in March 1979.
5.	Bombay	i. IBM-1620 ii. TDC-316	—
6.	Calcutta	IBM-1130	—
7.	Delhi	i. IBM-1620 ii. IBM-360-44	—
8.	Dibrugarh	TDC-312	—
9.	Gauhati	TDC-316	—
10.	Gujarat	IBM-1620	—
11.	Jadavpur	B-6700	Eastern Regional Computer Centre
12.	Jammu	TDC-316	—
13.	Jawaharlal Nehru	R-1020	—
14.	Jodhpur	TDC-12	—
15.	Karnatak	TDC-12	—
16.	Kerala	TDC-316	—
17.	Kurukshetra	i. TDC-12 ii. TDC-316	—
18.	Madras	IBM-1130	—
19.	Mysore	TDC-1130	—
20.	Osmania	TDC-12	—
21.	Panjab	i. IBM-1620 ii. Regional Computer Centre	VDU Terminals from DEC 2050 Computer system have been provided.
22.	Poona	ICL-1904 S	—
23.	Ranchi	TDC-316	—
24.	Roorkee	i. TDC-12 (two) ii. DEC-2040 or 2050	— To be installed; building under construction.

## ANNEXURE XVI—Contd.

1	2	3	4
25.	Sardar Patel	IBM-1620	—
26.	Utkal	IBM-1130	—
27.	Birla Institute of Technology & Sciences, Pilani	IBM-1130	—
28.	Indian Institute of Science, Bangalore	IBM-360	DEC 1090 system is being imported.

- Note:** (1) The proposal from M.S. University of Baroda for installation of Computer has been approved. The Computer IBM 360-44 System on transfer from Indian Institute of Science, Bangalore will be installed shortly.
- (2) After installation of large computers at Aligarh and Panjab Universities and the Indian Institute of Science, Bangalore, the existing computers would be transferred to other universities.
- (3) The Commission has agreed to provide grants (Rs. 50,000 each) to (i) Sri Venkateswara (ii) Visva-Bharati (iii) M.S. University of Baroda (iv) Bangalore University—and Rs. 25,000/- each to Madurai, Madras and Calicut Universities—and Rs. 10,000/- to Patna University. All these Universities had requested for setting up of Computers.

## ANNEXURE XVII

Grants paid by UGC under Quality Programmes  
(1969-70 to 1973-74)

(Grants paid in lakhs of Rupees)

<i>Sl. Programme No.</i>	<i>1969-1970</i>	<i>1970-1971</i>	<i>1971-1972</i>	<i>1972-1973</i>	<i>1973-1974</i>	<i>Total</i>
<b>1. Faculty Improvement Programme</b>						
(a) Seminars, Summer Institutes and Workshops	44.22	29.77	11.04	40.99	27.16	153.18
(b) National Fellowships	—	—	—	0.43	1.24	1.67
(c) National Associateships	—	—	—	—	—	—
(d) Visiting Professorships, visiting fellows, visiting faculty	—	0.12	—	—	—	0.12
(e) Research Associateships	—	—	—	—	—	—
(f) Teachers Fellowships	—	—	—	—	—	—
(g) National Lectures	—	—	—	—	—	—
(h) Utilisation of services of Retired Teachers	11.09	10.84	12.11	15.33	14.60	63.97
(i) Travel Grants	0.63	0.82	1.07	1.46	0.17	4.15
<i>Total:</i>						223.09
<b>2. Support for Research Work</b>						
(a) Projects and Institutions	—	—	—	—	—	—
(b) Research Fellowships	84.08	86.53	130.07	120.01	111.90	532.59
(c) Scholarships in Arabic & Persian	0.41	0.50	0.62	0.52	0.38	2.43
(d) PG Scholarships for Sanskrit, Pali/Prakrit	—	—	0.15	0.20	0.45	0.80
(e) Financial assistance to teachers for research work	4.73	—	4.84	7.22	7.01	23.80
(f) Publications of thesis & learned research work	0.78	0.85	1.57	2.87	2.60	8.67
<i>Total:</i>						568.29
<b>3. Student Welfare Programme</b>						
(a) Student Aid Fund	25.06	40.55	41.60	46.66	41.35	195.22
(b) Non-Resident Student Centre	7.06	9.90	13.84	18.42	14.52	63.74
(c) Students Study Homes	2.48	4.40	7.07	3.85	4.90	22.70
(d) Book Bank	—	—	114.13	23.68	9.91	147.72
<i>Total:</i>						429.38

## ANNEXURE XVII—Contd.

<i>Sl. Programme No.</i>	<i>1969-70</i>	<i>70-71</i>	<i>71-72</i>	<i>72-73</i>	<i>73-74</i>	<i>Total</i>
<b>4. Other Schemes</b>						
(a) Correspondence Courses	2.80	2.95	3.05	0.25	3.15	12.20
(b) Adult Education	—	—	0.15	0.90	0.97	2.02
(c) Cultural & Bilateral Exchange Programmes	0.02	6.92	4.01	10.41	2.60	23.96
(d) Examination Reforms	0.15	0.04	—	0.23	0.40	0.82
(e) Centres of Advanced Study and Departments of Special Assistance	69.41	72.33	85.05	109.06	90.88	426.73
(f) University Centres for PG Studies	36.90	38.80	20.51	31.08	30.37	157.66
(g) Area Studies	3.88	3.49	2.37	8.79	5.56	24.09
<i>Total:</i>						647.48
<i>Grand Total:</i>						1,868.24

## ANNEXURE XVIII

Grants paid by UGC under Quality Programmes  
(1974-75 to 1978-79)

(Grants paid in lakhs of Rupees)

Sl. No.	Programme	1974-75	75-76	76-77	77-78	78-79	Total
<b>1. Faculty Improvement Programme</b>							
(a)	Seminars, Summer Institutes & Workshops	29.26	21.99	55.59	42.23	66.40	215.47
(b)	National Fellowships	1.38	2.75	2.54	2.07	4.04	12.78
(c)	National Associateships	0.20	0.39	0.99	0.98	1.26	3.82
(d)	Visiting Professorships, Visiting Fellowships, Visiting Faculty	0.02	—	37.38	8.50	4.95	50.85
(e)	Research Associateships	—	1.11	2.30	2.96	5.35	11.72
(f)	Teacher Fellowships	—	—	7.27	115.64	241.26	364.17
(g)	National Lectures	0.61	0.84	1.16	1.34	1.30	5.25
(h)	Utilisation of services of Retired Teachers	8.83	17.77	35.60	20.35	23.80	106.35
(i)	Travel Grants	0.91	0.65	1.97	2.15	3.05	8.73
<i>Total:</i>							779.14
<b>2. Support for Research Work</b>							
(a)	Projects & Institutions	17.37	96.80	163.52	167.30	108.22	553.21
(b)	Research Fellowships	266.79	262.96	251.15	224.24	165.10	1170.24
(c)	Scholarships in Arabic & Persian	0.34	0.56	0.66	0.92	0.53	3.01
(d)	PG Scholarships for Sanskrit, Pali/Prakrit	0.54	0.57	0.66	1.08	0.66	3.51
(e)	Financial Assistance to Teachers for Research Work	8.41	14.70	37.15	67.34	25.59	153.19
(f)	Publication of Thesis and learned research work	3.69	2.88	8.23	9.78	10.66	35.24
<i>Total:</i>							1,918.40
<b>3. Students Welfare Programmes</b>							
(a)	Students Aid Fund	27.92	27.80	31.28	48.56	33.72	169.28
(b)	Non-Resident Students Centre	11.53	4.30	2.38	2.69	1.47	22.37
(c)	Students Study Homes	8.45	2.58	1.08	0.89	—	13.00
(d)	Book Banks	58.14	96.44	75.91	46.19	8.37	295.05
<i>Total:</i>							499.70

ANNEXURE XVIII—*Contd.*

<i>Sl. Programme No.</i>	<i>1974-75</i>	<i>75-76</i>	<i>76-77</i>	<i>77-78</i>	<i>78-79</i>	<i>Total</i>
<b>4. Other Schemes</b>						
(a) Correspondence Courses	2.88	12.72	10.06	4.28	10.06	40.00
(b) Adult Education	2.72	3.70	0.60	8.70	17.80	33.52
(c) Cultural & Bilateral Exchange Programme	7.98	7.25	5.16	23.61	25.77	69.77
(d) Examination Reforms	0.69	2.12	7.06	5.16	17.77	32.80
(e) Centres of Advanced Study and Departments of Special Assistance	104.36	112.62	169.68	105.13	110.58	602.37
(f) University Centres for PG Studies	31.55	46.21	48.92	46.50	60.60	233.78
(g) Area Studies	3.11	5.52	7.65	5.63	10.20	32.11
<i>Total:</i>						1,044.35
<i>Grand Total:</i>						4,241.59



## ANNEXURE XIX

**Development Grants to Universities  
(1969-70 to 1973-74)**

*(Grants paid in lakhs of Rupees)*

<i>Item</i>	<i>Year</i>					<i>Total</i>
	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>	<i>1972-73</i>	<i>1973-74</i>	
Staff	150.46	197.46	267.96	271.79	301.74	1,189.41 (20)
Equipment	168.27	127.70	142.95	408.56	264.25	1,111.73 (20)
Books & Journals	167.92	140.66	96.96	127.24	115.62	648.40 (11)
Buildings	162.30	153.04	195.91	183.35	139.27	833.87 (14)
Other infrastructural facilities	244.51	441.09	473.12	532.30	386.45	2,077.47 (35)
<i>Total:</i>	893.46	1,059.95	1,176.90	1,523.24	1,207.33	5,860.88

**Note:** Figures in parenthesis indicate percentage to the total.

## ANNEXURE XX

**Development Grants to Universities  
(1974-75 to 1978-79)**

*(Grants paid in lakhs of rupees)*

<i>Item</i>	<i>Year</i>					<i>Total</i>
	<i>1974-75</i>	<i>1975-76</i>	<i>1976-77</i>	<i>1977-78</i>	<i>1978-79</i>	
Staff	183.25	83.49	372.82	133.72	149.35	922.63 (13)
Equipment	278.63	347.58	554.22	485.68	772.43	2,438.54 (34)
Books & Journals	153.35	212.59	342.31	356.63	536.08	1,600.76 (23)
Buildings	160.38	114.62	128.66	159.04	171.95	734.65 (10)
Other Infrastructural facilities	350.14	198.77	184.61	205.59	467.80	1,406.91 (20)
<i>Total:</i>	1,125.75	957.05	1,582.62	1,340.66	2,097.61	7,103.49

**Note:** Figures in parenthesis indicate percentage to the total.

## ANNEXURE XXI.1

## Profile of Universities visited by Sub-committees

1. University: Sardar Patel
2. Year of Establishment: 1955
3. Courses Offered: (a) Undergraduate, (b) Postgraduate and (c) Research.
4. Number of Departments: 16
5. Student Enrolment in the university:

Year	UG	PG	Res.	Total
1969-70	255	521	136	912
1977-78	210	804	206	1,220

6. Faculty Strength:

Year	P	R	L	Total
1969-70	8	17	51	76
1977-78	15	34	70	119

7. Teacher-student ratio:

Year	
1969-70	1 : 12
1977-78	1 : 10

8. Research

1969-70	1974-75	1977-78
---------	---------	---------

- (a) Ph.D. scholars with fellowships/scholarships

36	49	51
----	----	----

- (b) Ph.D. scholars without fellowships

84	106	120
----	-----	-----

- (c) No. of Ph.Ds awarded

18	19	38
----	----	----

9. Number of (a) Centres of Advanced Study: Nil

(b) Departments of Special Assistance: 1 (Science)

(c) University Leadership Projects: Nil

10. Library facilities

(a) Number of Volumes: 1,05,258

(b) Reading Seats: 700

- 11(a) Staff (General Development Schemes):

Posts approved	Professor(s)	Reader(s)	Lecturer(s)
(1969-70 to 1973-74)	1	3	9
Posts filled (yearwise):			
1969-70	1	3	9
1970-71	—	—	—
1971-72	—	—	—
1972-73	—	—	—
1973-74	—	—	—
<b>Total:</b>	<b>1</b>	<b>3</b>	<b>9</b>

P—Professor R—Reader L—Lecturer

**Note:** Research enrolment in item 5 is as on 30th September of the respective year whereas that in item 8 (a and b) is as on 31st March of the respective year. Hence the discrepancy.

## ANNEXURE XXI.1 (Contd.)

<i>Posts approved</i>	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
(1974-75 to 1978-79)	9	18	19
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	—
1976-77	—	1	1
1977-78	7	12	18
1978-79	1	4	—
<i>Total:</i>	8	17	19

**11(b) Staff (Quality Improvement Programmes):**

1969-70 to 1973-74: Nil

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved</i>			
(1974-75 to 1978-79)	1	1	—
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	—
1976-77	—	—	—
1977-78	—	—	—
1978-79	1	—	—
<i>Total:</i>	1	—	—

**12 Utilisation of Development Assistance:**

(Rupees in lakhs)

	<i>1969-70 to 1973-74</i>		<i>1974-75 to 1978-79</i>	
	<i>Grants allocated</i>	<i>Grants utilised</i>	<i>Grants allocated</i>	<i>Grants utilised</i>
(a) Books	6.00	3.40	15.00	15.00
(b) Equipment	18.74	12.83	30.75	27.21
(c) Buildings	14.74	9.97	35.00	24.19
(d) Staff*	—	7.80	—	13.08
(e) Other Schemes	—	—	—	—
<b>Total (a+b+c+d+e):</b>		34.00		79.48
(f) Quality Schemes	—	—	22.10	7.86
<b>Grand Total (a+b+c+d+e+f):</b>		34.00		87.34

\*No amount was allocated for staff. As such, universities were informed that the Commission would reimburse the actual expenditure incurred by them on approved staff positions.

## ANNEXURE XXI.2

1. **University:** Poona
2. **Year of Establishment:** 1949
3. **Courses offered:** (a) Undergraduate, (b) Postgraduate and (c) Research.
4. **Number of Departments:** 23
5. **Student Enrolment in the university:**
- | Year    | UG  | PG    | Res. | Total |
|---------|-----|-------|------|-------|
| 1969-70 | 921 | 999   | 701  | 2,621 |
| 1977-78 | 913 | 1,192 | 668  | 2,773 |
6. **Faculty Strength:**
- | Year    | P  | R   | L  | Total |
|---------|----|-----|----|-------|
| 1969-70 | 21 | 39  | 60 | 120   |
| 1977-78 | 40 | 53* | 95 | 188   |
7. **Teacher-Student ratio:**
- | Year    | Ratio  |
|---------|--------|
| 1969-70 | 1 : 22 |
| 1977-78 | 1 : 15 |
8. **Research:**
- |                                                  | 1969-70 | 1974-75 | 1977-78 |
|--------------------------------------------------|---------|---------|---------|
| (a) Ph.D. Scholars with fellowships/scholarships | 66      | 85      | 176**   |
| (b) Ph.D. scholars without fellowships           | 635     | 1,060   | 492     |
| (c) No. of Ph.Ds awarded                         | 84      | 89      | 103     |
9. **Number of (a) Centres of Advanced Study:** 3 (Humanities)  
 (b) **Departments of Special Assistance:** 2 (Science)  
     1 (Humanities)  
 (c) **University Leadership Projects:** 2 (Science)  
     3 (Humanities)
10. **Library facilities:**  
 (a) **Number of Volumes:** 2,23,132  
 (b) **Reading Seats:** 300
- 11(a) **Staff (General Development Schemes)**

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved</i> (1969-70 to 1973-74)	7	23	23
<i>Posts filled (yearwise)</i>			
1969-70	3	13	9
1970-71	1	2	4
1971-72	2	4	2
1972-73	—	2	7
1973-74	—	—	—
<b>Total:</b>	<b>6</b>	<b>21</b>	<b>22</b>

P—Professor R—Reader L—Lecturer

\*A tally of figures supplied by the university under items 6 and 11 shows that presumably some of the posts approved and filled subsequently fell vacant.

\*\*Includes 83 teacher fellows.

## ANNEXURE XXI.2 (Contd.)

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved</i> (1974-75 to 1978-79)	16	17	18
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	—
1976-77	—	—	—
1977-78	11	8	5
1978-79	3	6	6
<i>Total:</i>	14	14	11

## 11(b) Staff (Quality Improvement Programmes)

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved:</i> (1969-70 to 1973-74)	—	1	—
<i>Posts filled (yearwise):</i>			
1969-70	—	—	—
1970-71	—	—	—
1971-72	—	1	—
1972-73	—	—	—
1973-74	—	—	—
<i>Total:</i>	—	1	—

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved:</i> (1974-75 to 1978-79)	2	12	15
<i>Posts filled (yearwise)</i>			
1974-75	2	5	2
1975-76	—	—	—
1976-77	—	1	1
1977-78	—	4	8
1978-79	—	1	2
<i>Total:</i>	2	11	13

## ANNEXURE XXI.2 (Contd.)

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	13.00	11.29	24.30	24.30
(b) Equipment	13.76	13.41	41.25	41.25
(c) Buildings	35.54	31.52	51.35	8.14
(d) Staff		31.94		4.34
(e) Other Schemes	3.00	3.00	110.29	57.75
<i>Total (a + b + d + c + d + e):</i>		91.16		135.78
(f) Quality Schemes	52.96	52.96	109.93	100.52
<i>Grand Total (a + b + c + d + e + f):</i>		144.12		236.30

## ANNEXURE XXI.3

1. University: Jabalpur

2. Year of Establishment: 1957

3. Courses offered: (a) Undergraduate (b) Postgraduate (c) Research

4. Number of Departments: 15

5. Student Enrolment in the University:	Year	UG	PG	Res.	Total
	1969-70	158	500	451*	1,109
	1977-78	252	480	465*	1,197

6. Faculty Strength:	Year	P	R	L	Total
	1969-70	12	7	15	34
	1977-78	5	13	26	44

7. Teacher-Student Ratio:	Year
	1969-70 1 : 30
	1977-78 1 : 27

8. Research:	1969-70	1974-75	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	48	58	75
(b) Ph.D. Scholars without fellowships	403	800	390
(c) No. of Ph.Ds awarded	37	28	32

9. Number of (a) Centres of Advanced Study:	}	Nil
(b) Departments of Special Assistance;		
(c) University Leadership Projects:		

10. Library facilities:

(a) Number of Volumes: 92,213

(b) Reading Seats 400

11. Staff\*

	1969-70 to 1973-74		1974-75 to 1978-79	
	Posts approved	Posts filled	Posts approved	Posts filled
P	4	4	1	—
R	14	11	11	7
L	9	6	10	2

\*Relates to Ph.D. enrolment only



## ANNEXURE XXI .3(Contd.)

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	3.35	3.35	22.00	22.00
(b) Equipment	4.22	4.19	21.80	18.18
(c) Buildings	7.22	7.22	2.07	2.07
(d) Staff		11.24		2.38
(e) Other Schemes	27.06	27.06	10.94	10.52
<i>Total (a+b+c+d+e):</i>		53.06		55.15
(f) Quality Schemes	3.57	3.05	18.94	13.98
<i>Grand Total (a+b+c+d+e+f):</i>		56.11		69.13

\*Break-up between general development and quality programmes not given by the university.

## ANNEXURE XXI.4

1. University: Calicut
2. Year of Establishment: 1968
3. Courses offered: (a) Postgraduate (b) Research
4. Number of Departments: 20
5. Student Enrolment in the

University:	Year	UG	PG	Res.	Total
	1969-70	—	70	16	86
	1977-78	—	359	432+	791

6. Faculty Strength:
 

Year	P	R	L	Total
1969-70	2	5	8	15
1977-78	23	27*	60	110
7. Teacher-Student Ratio:
 

Year	Ratio
1969-70	1 : 6
1977-78	1 : 7

8. Research:	1969-70	1974-75	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	7	4	16
(b) Ph.D. scholars without fellowships	9	13	411
(c) No. of Ph.Ds. awarded	—	2	5

9. Number of (a) Centres of Advanced Study: nil.  
 (b) Departments of Special Assistance: nil.  
 (c) University Leadership Projects: 1 (Science)

## 10. Library facilities:

- (a) Number of Volumes: 28804  
 (b) Reading Seats: 325

## 11(a) Staff (General Development Scheme):

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i>			
(1969-70 to 1973-74)	7	10	18
<i>Posts filled (yearwise)</i>			
1969-70	2	2	1
1970-71	1	—	—
1971-72	3	3	9
1972-73	1	3	6
1973-74	—	2	2
<b>Total:</b>	<b>7</b>	<b>10</b>	<b>18</b>

P—Professor R—Reader L—Lecturer

\*A tally of figures supplied by the university under items 6 and 11 shows that presumably some of the posts approved and filled fell vacant subsequently.

+Includes research scholars in addition to Ph.D. scholars.

## ANNEXURE XXI.4 (Contd.)

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	12	28	40
<i>Posts filled (yearwise)</i>			
1974-75	1	1	1
1975-76	—	1	6
1976-77	7	13	13
1977-78	2	5	1
1978-79	1	1	2
<b>Total:</b>	11	21	23

## 11(b) Staff (Quality Improvement Programmes)

1969-70 to 1973-74: Nil

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	—	1	2
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	—
1976-77	—	—	—
1977-78	—	—	1
1978-79	—	—	1
<b>Total:</b>	—	—	2

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	13.41	13.41	36.55	36.55
(b) Equipment	15.54	15.54	25.89	23.63
(c) Buildings	37.67	37.67	32.57	32.57
(d) Staff		11.56	8.00	21.81
(e) Other Schemes	0.62	0.62	3.70	3.70
<b>Total (a+b+c+d+e):</b>		78.80		118.26
(f) Quality Schemes	1.34	1.34	16.80	16.80
<b>Grand Total (a+b+c+d+e+f):</b>		80.14		134.06

## ANNEXURE XXI.5

1. University: Sri Venkateswara
2. Year of Establishment: 1954
3. Courses offered: (a) Undergraduate, (b) Postgraduate (c) Research
4. Number of Departments: 30
5. Student enrolment in the university:

Year	UG	PG	Res.	Total
1969-70	446	657	88	1,191
1977-78	—	1,536	262	1,798

6. Faculty Strength:

Year	P	R	L	Total
1969-70	11	25	96	132
1977-78	27	61	118	206

7. Teacher-Student Ratio:

Year	Ratio
1969-70	1 : 9
1977-78	1 : 9

8. Research:

	1969-70	1974-75	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	59	121	177
(b) Ph.D. scholars without fellowships	29	52	85
(c) No. of Ph.Ds awarded	15	21	32

9. Number of (a) Centres of Advanced Study: Nil.  
(b) Departments of Special Assistance: Nil.  
(c) University Leadership Projects: 1 (Science)

10. Library facilities:

- (a) Number of Volumes: 2,24,877
- (b) Reading Seats: 432

- 11(a) Staff (General Development Schemes):

	Professor(s)	Reader(s)	Lecturer(s)
Posts approved: (1969-70 to 1973-74)	11	24	18
Posts filled (yearwise):			
1969-70	—	1	3
1970-71	1	8	3
1971-72	1	5	7
1972-73	—	3	7
1973-74	1	—	—
<b>Total:</b>	<b>3</b>	<b>17</b>	<b>20*</b>

P—Professor R—Reader L—Lecturer

\*Against 18 sanctioned posts of lecturers, 20 lecturers were appointed. This has been adjusted against the vacant posts of readers.

## ANNEXURE XXI.5 (Contd.)

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	8	18	16
<i>Posts filled (yearwise):</i>			
1974-75	1	—	2
1975-76	—	—	—
1976-77	5	7	5
1977-78	—	3	—
1978-79	2	8	7
<b>Total:</b>	8	18	14

## 11(b) Staff (Quality Improvement Programmes):

1969-70 to 1973-74 } Nil.  
 1974-75 to 1978-79 } Nil.

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	10.06	10.02	24.45	24.27
(b) Equipment	18.31	18.31	35.75	34.80
(c) Buildings	13.04	13.04	29.60	29.60
(d) Staff		10.95		9.05
(e) Other Schemes	2.68	2.68	21.79	10.66
<b>Total (a+b+c+d+e):</b>		55.45		120.57
(f) Quality Schemes	7.86	7.30	38.19	29.67
<b>Grand Total (a+b+c+d+e+f):</b>		62.75		150.24

## ANNEXURE XXI.6

1. University: Madras  
 2. Year of Establishment: 1857  
 3. Courses offered: (a) Undergraduate (b) Postgraduate (c) Research  
 4. Number of Departments: 54  
 5. Student Enrolment in the University:

	<i>Year</i>	<i>UG</i>	<i>PG</i>	<i>Res.</i>	<i>Total</i>
	1969-70	238	748	162*	1148
	1977-78	762	946	800*	2508

6. Faculty Strength:

	<i>Year</i>	<i>P</i>	<i>R</i>	<i>L</i>	<i>Total</i>
	1969-70	43	44	105	192
	1977-78	86	105	152	343

7. Teacher-Pupil Ratio:

<i>Year</i>	
1969-70	1 : 6
1977-78	1 : 7

8. Research:

	<i>1969-70</i>	<i>1974-75</i>	<i>1977-78</i>
(a) Ph.D. Scholars with fellowships/scholarships	24	30	133
(b) Ph.D. Scholars without fellowships	1	12	25
(c) No. of Ph.Ds awarded	53	52	71

9. Number of (a) Centres of Advanced Study: 2 (Science), 1 (Humanities)  
 (b) Departments of Special Assistance: 1 (Science)  
 (c) University Leadership Projects: 2 (Science)

10. Library facilities:

- (a) Number of Volumes: 4,00,000  
 (b) Reading Seats: 290

- 11(a) Staff (General Development Schemes):

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lectuer(s)</i>
<i>Posts approved:</i>			
1969-70 to 1973-74)	23	23	19
<i>Posts filled (yearwise):</i>			
1969-70	1	1	1
1970-71	—	1	2
1971-72	—	—	—
1972-73	—	—	—
1973-74	2	—	1
1974-75 to 1978-79	14	17	10
<i>Total:</i>	17	19	14

\*Includes M.Litt., M.Phil. and Ph.D. both in the university departments and affiliated colleges. Hence the discrepancy between item 5 and item 8(a) & (b).

## ANNEXURE XX.6 (Contd.)

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	18	34	66
<i>Posts filled (yearwise)</i>			
1974-75	—	—	—
1975-76	—	2	1
1976-77	7	9	21
1977-78	4	2	7
1978-79	2	10	34
1979-80	2	1	2
<b>@Total:</b>	<b>15</b>	<b>24</b>	<b>65</b>

**11(b) Staff (Quality Improvement Programmes):**

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1969-70 to 1973-74)	7	19	18
<i>Posts filled (yearwise):</i>			
1969-70	4	15	13
1970-71	—	—	—
1971-72	—	1	—
1972-73	—	—	1
1973-74	—	—	—
<b>Total:</b>	<b>4</b>	<b>16</b>	<b>14</b>

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	2	3	3
<i>Posts filled (yearwise):</i>			
1974-75	2	2	—
1975-76	—	—	3
1976-77	—	1	—
1977-78	—	—	—
1978-79	—	—	—
<b>Total:</b>	<b>2</b>	<b>3</b>	<b>3</b>

## ANNEXURE XXI.6 (Contd.)

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	10.23	9.30	42.05	31.83
(b) Equipment	17.70	14.79	57.80	46.63
(c) Buildings	5.00	5.00	18.59	18.59
(d) Staff	—	7.55	—	21.93
(e) Other Schemes	0.75	0.75	2.15	2.14
<i>Total (a+b+c+d+e):</i>		37.39		121.12
(f) Quality Schemes	49.63	49.63	97.60	49.92
<i>Grand Total (a+b+c+d+e+f):</i>		87.02		171.04



## ANNEXURE XXI.7

1. University: Panjab

2. Year of Establishment: 1947

3. Courses offered: (a) Undergraduate (b) Postgraduate (c) Research

4. Number of Departments: 48

5. Student Enrolment in the

University:	Year	UG	PG	Res.	Total
	1969-70	1,528	3,084	225*	4,837
	1977-78	1,323	2,951	527*	4,801

6. Faculty Strength:

Year	P	P	L	Total
1969-70	45	98	239	382
1977-78	69	143	328	540

7. Teacher-Student Ratio:

Year	
1969-70	1 : 13
1977-78	1 : 9

8. Research :

	1969-70	1974-75	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	170	216	274
(b) Ph.D. scholars without fellowships	55	127	253
(c) No. of Ph.Ds	81	71	94

9. Number of (a) Centres of Advanced Study: 2 (Science)

(b) Departments of Special Assistance: 2 (Science)  
1 (Humanities)(c) University Leadership Projects: 3 (Humanities)  
1 (Science)

10. Library facilities:

(a) Number of Volumes: 4,16,237

(b) Reading Seats: 500

11(a) Staff (General Development Schemes)

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved**:</i> (1969-70 to 1973-74)	8	10	4
<i>Posts filled (yearwise):</i> 1969-70	1	1	1
1970-71	3	2	—
1971-72	1	1	1
1972-73	1	1	1
1973-74	—	2	—
<i>Total:</i>	6	7	3

\*\*Relates to Ph.D. enrolment only.

\*\*This is for the period 1967-68 to 1973-74

## ANNEXURE XXI.7 (Contd.)

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved:</i>			
(1974-75 to 1978-79)	4	23	20
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	—
1976-77	—	3	2
1977-78	3	7	8
1978-79	—	6	6
<i>Total:</i>	3	16	16

## 11(b) Staff (Quality Improvement Programmes) :

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved:</i>			
(1969-70 to 1973-74)	1	5	3
<i>Posts filled (yearwise):</i>			
1969-70	—	—	—
1970-71	—	—	—
1971-72	—	—	—
1972-73	—	3	—
1973-74	—	2	2
<i>Total:</i>	—	5	2

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer's'</i>
<i>Posts approved:</i>			
(1974-75 to 1978-79)	12	8	1
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	1
1976-77	—	—	—
1977-78	1	2	—
1978-79	3	5	—
<i>Total:</i>	4	7	1

## ANNEXURE XXI.7 (Contd.)

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	<i>Grants allocated</i>	<i>Grants utilised</i>	<i>Grants allocated</i>	<i>Grants utilised</i>
(a) Books	19.98	19.75	53.68	51.98
(b) Equipment	18.80	18.78	75.60	63.42
(c) Buildings	38.07	35.10	62.08	21.36
(d) Staff		10.68		7.43
(e) Other Schemes:	26.83	20.44	44.80	35.60
<i>Total (a+b+c+d+e):</i>		104.75		179.79
(f) Quality Schemes	59.02	59.02	95.37	95.37
<i>Grand Total (a+b+c+d+e+f):</i>		163.77		275.16

## ANNEXURE XXI.8

## 1. University: Gorakhpur

2. Year of Establishment: 1957

3. Courses offered: (a) Undergraduate (b) Postgraduate (c) Research

4. Number of Departments: Not available

## 5. Student Enrolment in the University:

Year	UG	PG	Res.	Total
1969-70	3,624	1,773	455	5,852
1977-78	3,980	2,383	999	7,36x

## 6. Faculty Strength:

Year	P	R	L	Total
1969-70	17	31	199	247
1977-78	21	42	226	289

## 7. Teacher-Student Ratio:

Year	Ratio
1969-70	1 : 24
1977-78	1 : 26

## 8. Research:

	1969-70	1974-75	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	115	172	244
(b) Ph.D. Scholars without fellowships	340	246	755
(c) No. of Ph.Ds awarded	35	60	160

## 9. Number of (a) Centres of Advanced Study: Nil

(b) Departments of Special Assistance: Nil

(c) University Leadership Projects: 2 (Science)

## 10. Library facilities: (1976-77)

(a) Number of Volumes: 1,56,168

(b) Reading Seats: 100

## 11(a) Staff (General Development Schemes):

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1969-70 to 1973-74)	—	21	—
<i>Posts filled (yearwise):</i>			
1969-70..	—	5	—
1970-71	—	11	—
1971-72	—	3	—
1972-73	—	1	—
1973-74	—	—	—
<i>Total:</i>	—	20	—

## ANNEXURE XXI.8 (Contd.)

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	11	27	1
<i>Posts filled (yearwise):</i>			
1974-75	—	—	—
1975-76	—	—	—
1976-77	—	—	—
1977-78	4	4	—
1978-79	4	6	—
<b>Total:</b>	8	10	—

	Professor(s)	Reader(s)	Lecturer(s)
<b>11(b) Staff (Quality Improvement Programmes):</b> 1969-70 to 1973-74	—	—	—
<i>Posts approved:</i> (1974-75 to 1978-79)	—	3	3
<i>Posts filled (yearwise):</i>			
1974-75	—	3	3
1975-76	—	—	—
1976-77	—	—	—
1977-78	—	—	—
1978-79	—	—	—
<b>Total:</b>	—	3	3

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	9.20	9.19	21.90	15.18
(b) Equipment	12.89	10.94	26.80	12.57
(c) Buildings	90.62	85.51	19.70	6.99
(d) Staff	—	9.49	—	3.18
(e) Other Schemes	—	—	1.25	00.72
<b>Total (a+b+c+d+e):</b>		115.13		38.64
(f) Quality Schemes	3.81	3.81	25.84	19.86
<b>Grand Total (a+b+c+d+e+f):</b>		118.94		58.51

## ANNEXURE XXI.9

## 1. University: Delhi

2. Year of Establishment: 1922

3. Courses offered : (a) Undergraduate (b) Postgraduate (c) Research

4. Number of Departments: 40

5. Student Enrolment in the

University:	Year	UG	PG	Res,	Total
	1969-70	948	2,304	1,153	4,405
	1977-78	2,158	5,482	2,098	9,738

6. Faculty Strength:

Year	P	R	L	Total
1969-70	60	149	177	386
1977-78	91	223	234	548

7. Teacher-Student Ratio:

Year	
1969-79	1 : 11
1977-78	1 : 18

8. Research:	1969-70	1973-74	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	1,153		2,098
(b) Ph.D. scholars without fellowships		2,447	
(c) No. of Ph.Ds awarded	100	126	138

9. Number of (a) Centres of Advanced Study: 4 (Science)

2 (Humanities)

(b) Departments of Special Assistance: Nil

(c) University Leadership Projects: Nil

10. Library facilities:

(a) Number of Volumes: 6,13,776

(b) Reading Seats: 1250

11(a) Staff (General Development Schemes):

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved*</i>			
1969-70 to 1973-74	23	44	47
<i>Posts filled*</i>	21	44	47
<i>Posts approved</i>			
1974-75 to 1978-79	22	22	2
<i>Posts filled (yearwise)</i>			
1974-75	1	2	—
1975-76	—	—	—
1976-77	9	4	—
1977-78	5	5	—
1978-79	4	5	1
<b>Total</b>	<b>19</b>	<b>16</b>	<b>1</b>

\* Figures pertain to the period 1966-67 to 1973-74

## ANNEXURE XXI.9 (Contd.)

## 11(b) Staff (Quality Improvement Programmes):

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved*</i>			
1969-70 to 1973-74	10	19	7
<i>Posts filled †</i>	9	19	7
<i>Posts approved</i>			
(1974-75 to 1978-79)	7	10	—
<i>Posts filled</i>	6	9	—

## 12. Utilisation of Development Assistance:

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	3.50	3.50	28.40	24.66
(b) Equipment	14.79	13.02	56.50	25.80
(c) Buildings	76.88	69.59	89.74	41.90
(d) Staff		61.38		19.43
(e) Other Schemes	2.42	1.82	29.23	10.46
<i>Total (a+b+c+d+e):</i>		149.31		122.25
(f) Quality Schemes	Not available	Not available	72.43	50.76
<i>Grand Total (a+b+c+d+e+f):</i>		149.31		173.01

\*Figures pertain to the period 1966-67 to 1973-74

## ANNEXURE XXI.10

1. University: Gauhati  
 2. Year of Establishment: 1948  
 3. Courses offered: (a) Undergraduate (b) Postgraduate (c) Research  
 4. Number of Departments: 30  
 5. Student Enrolment in the

University	Year	UG	PG	Res.	Total
	1969-70	1,165	1,676	72	2,913
	1977-78	206*	1,583	55	1,844

6. Faculty Strength:
- | Year    | P  | R  | L     | Total |
|---------|----|----|-------|-------|
| 1969-70 | 15 | 30 | 167   | 212   |
| 1977-78 | 22 | 63 | 157** | 242   |

7. Teacher-Student Ratio :
- | Year    |        |
|---------|--------|
| 1969-70 | 1 : 14 |
| 1977-78 | 1 : 8  |

8. Research:
- |                                                  | 1969-70 | 1974-75 | 1977-78 |
|--------------------------------------------------|---------|---------|---------|
| (a) Ph.D. Scholars with fellowships/scholarships | —       | —       | 5       |
| (b) Ph.D. Scholars without fellowships           | 72      | 43      | 50      |
| (c) No. of Ph.Ds awarded                         | 23      | 17      | 32      |
9. Number of (a) Centres of Advanced Study:  
 (b) Departments of Special Assistance: Nil  
 (c) University Leadership Projects:

## 10. Library facilities:

- (a) Number of Volumes: 1,69,873  
 (b) Reading seats: 210

## 11(a) Staff (General Development Schemes):

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1969-70 to 1973-74)	—	16	28
<i>Posts filled (yearwise)</i>			
1969-70	—	1	4
1970-71	—	4	—
1971-72	—	1	15
1972-73	—	1	8
1973-74	—	8	—
<b>Total:</b>	—	15	27

\*Decline in enrolment in 1977-78 as compared to 1969-70 is due to (a) discontinuation of B.Ed. classes and (b) opening of several affiliated law colleges so that dependence on university law classes has reduced considerably.

\*\*The system of ad hoc promotion for the teachers of this university was introduced as far back as 1972. As per rule laid down, when a lecturer on fulfilment of necessary conditions is promoted to the post of reader on ad hoc basis, the post of lecturer is automatically abolished. This is the main reason for decline in the strength of lecturers in 1977-78 as compared to 1969-70.



## ANNEXURE XXI.10 (Contd.)

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i> (1974-75 to 1978-79)	13	37	10
<i>Posts filled (yearwise):</i>			
1974-75	1	—	—
1975-76	—	1	—
1976-77	—	1	1
1977-78	2	10	—
1978-79	—	3	—
<b>Total:</b>	<b>3</b>	<b>15</b>	<b>1</b>

11(b) *Staff (Quality Improvement Programme):* Nil

12. *Utilisation of Development Assistance:*

(Rupees in lakhs)

	1969-70 to 1973-74		1974-75 to 1978-79	
	Grants allocated	Grants utilised	Grants allocated	Grants utilised
(a) Books	12.87	5.82	49.80	31.09
(b) Equipment	13.43	5.13	40.55	25.48
(c) Buildings	58.46	19.63	59.74	28.72
(d) Staff	—	15.63	—	4.00
<b>Total (a+b+c+d):</b>		<b>46.21</b>		<b>89.29</b>

## ANNEXURE XXI.11

<b>1. University:</b>	<b>Calcutta</b>				
<b>2. Year of Establishment:</b>	1857				
<b>3. Courses offered:</b>	(a) Undergraduate (b) Postgraduate (c) Research				
<b>4. Number of Departments:</b>	Not available.				
<b>5. Student Enrolment in the University:</b>	<i>Year</i>	<i>UG</i>	<i>PG</i>	<i>Res.</i>	<i>Total</i>
	1969-70	6,064	7,262	310*	13,636
	1977-78	6,872	5,735	390	13,057
<b>6. Faculty Strength:</b>	<i>Year</i>	<i>P</i>	<i>R</i>	<i>L</i>	<i>Total</i>
	1969-70	42	80	184	306
	1977-78	94	145	261	500
<b>7. Teacher-Student Ratio:</b>	<i>Year</i>				
	1969-70	1 : 44			
	1977-78	1 : 26			
<b>8. Research :</b>	<i>1969-70</i>	<i>1974-75</i>	<i>1977-78</i>		
(d) Ph.D. Scholars with fellowships/scholarships	224	261	307		
(b) Ph.D. Scholars without fellowships	60	85	83		
(c) No. of Ph.Ds awarded	193	258	281		
<b>9. Number of (a) Centres of Advanced Study:</b>	1 (Science)				
(b) Departments of Special Assistance:	3 (Science) 2 (Humanities)				
(c) University Leadership Projects:	1 (Science) 2 (Humanities)				
<b>10. Library Facilities:</b>	(1976-77)				
(a) No. of Volumes:	5,56,636				
(b) Reading Seats:	702				
<b>11(a) Staff (General Development Schemes)</b>	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>		
<i>Posts approved:**</i> (1969-70 to 1973-74)	19	23	35		
<i>Posts filled* :*</i>	17	18	33		
	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>		
<i>Posts approved:**</i> (1974-75 to 1978-79)	22	51	42		
<i>Posts filled (yearwise)</i>					
1974-75	—	—	—		
1975-76	—	—	—		
1976-77	—	—	—		
1977-78	2	13	6		
1978-79	5	20	14		
<b>Total:</b>	7†	33†	20†		

\*Includes research scholars in addition to Ph.D. scholars.

\*\*Break-up between General Development and Quality Programme not available.

†The remaining posts have been filled during 1979-80.

## ANNEXURE XX.11 (Contd.)

## 11(b) Staff (Quality improvement Programmes):

	<i>Professor(s)</i>	<i>Reader(s)</i>	<i>Lecturer(s)</i>
<i>Posts approved</i>			
(1974-75 to 1978-79)	7	11	11
<i>Posts filled</i>	6	11	10

## 12. Utilisation of Development Assistance:

	<i>(Rupees in lakhs)</i>			
	<i>1969-70 to 1973-74</i>		<i>1974-75 to 1978-79</i>	
	<i>Grants allocated</i>	<i>Grants utilised</i>	<i>Grants allocated</i>	<i>Grants utilised</i>
(a) Books	14.57	14.22	65.40	63.02
(b) Equipment	29.58	29.37	91.65	59.02
(c) Buildings	63.84	49.25	77.29	36.51
(d) Staff		30.57		11.53
(e) Other Schemes	1.43	0.84	9.00	2.00
<i>Total (a+b+c+d+e):</i>		124.25		172.08
(f) Quality Schemes	45.15	42.35	196.57	106.13
<i>Grand Total (a+b+c+d+e+f):</i>		166.60		278.21

## ANNEXURE XXI.12

1. University: Ranchi

2. Year of Establishment: 1960

3. Courses offered: (a) Postgraduate (b) Research

4. Number of Departments: 19

5. Student Enrolment in the

University:	Year	PG	Res.	Total
	1969-70	1,183	130	1,313
	1977-78	1,390	200	1,590

6. Faculty Strength:

Year	P	R	L	Total
1969-70	10	19	60	89
1977-78	16	60*	30*	106

7. Teacher-Student Ratio:

Year	
1969-70	1 : 15
1977-78	1 : 15

8. Research:

	1969-70	1974-75	1977-78
(a) Ph.D. Scholars with fellowships/scholarships	17	30	53
(b) Ph.D. Scholars without fellowships	113	145	147
(c) No. of Ph.Ds awarded	23	44	44

9. Number of (a) Centres of Advanced Study: Nil

(b) Departments of Special Assistance: 1 (Humanities)

(c) University Leadership Projects: 1 (Science)

10. Library facilities:

(a) Number of Volumes:	61,418
(b) Reading Seats:	40

11(a) Staff (General Development Schemes):

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved:</i>			
(1969-70 to 1973-74)	10	12	10
<i>Posts filled</i>	10	12	10
<i>Posts approved</i>			
(1974-75 to 1978-79)	15	17	5
<i>Posts filled</i>	11	10	2

11(b) Staff (Quality Improvement Programmes):

1969-70 to 1973-74: Nil

	Professor(s)	Reader(s)	Lecturer(s)
<i>Posts approved</i>			
(1974-75 to 1978-79)	1	3	—
<i>Posts filled</i>	—	—	—

\*This includes 40 posts of college professors in the scale of readers sanctioned by the state government to which lecturers were promoted. Decline in the number of lecturers between 1969-70 and 1977-78 is due to this reason.

## ANNEXURE XXI.12—(Contd.)

12. *Utilisation of Development Assistance:*

	(Rupees in lakhs)			
	1969-70 to 1973-74		1974-75 to 1978-79	
	<i>Grants allocated</i>	<i>Grants utilised</i>	<i>Grants allocated</i>	<i>Grants utilised</i>
(a) Books	7.15	6.88	16.45	16.45
(b) Equipment	10.95	8.83	12.94	12.94
(c) Buildings	19.43	19.43	49.30	25.72
(d) Staff		18.81		5.15
(e) Other Schemes	1.15	0.64	1.73	1.18
<i>Total (a+b+c+d+e):</i>		54.59		61.44
(f) Quality Schemes	4.41	4.41	17.81	11.94
<i>Grand Total (a+b+c+d+e+f):</i>		59.00		73.38

## ANNEXURE XXI-A

Percentage utilisation of developmental assistance on books, equipment and building and percentage of staff positions filled during IV Plan and 1974-75 to 1978-79 (Universitywise position)

S. No.	Name of the University	Books		Equipment		Buildings		Staff		Average	
		IV Plan	1974-75 to 78-79	IV Plan	74-75 to 78-79	IV Plan	74-75 to 78-79	IV Plan	74-75 to 78-79	IV Plan	74-75 to 78-79
1	2	3	4	5	6	7	8	9	10	11	12
1.	Sardar Patel	57	100	68	88	68	69	100	94	73	95
2.	Poona	87	100	97	100	89	16	93	81	91	74
3.	Jabalpur	100	100	99	83	100	100	78	41	94	81
4.	Calicut	100	100	100	91	100	100	100	69	100	90
5.	Sri Venkateswara	100	99	100	97	100	100	75	95	94	98
6.	Madras	91	76	83	81	100	100	77	89	88	86
7.	Panjab	99	97	100	84	92	34	74	69	91	71
8.	Gorakhpur	100	69	85	47	94	35	95	53	93	51
9.	Delhi	100	87	88	46	90	47	98	81	94	65
10.	Gauhati	45	62	38	63	34	48	95	32	53	51
11.	Calcutta	98	96	99	64	77	47	88	60	90	67
12.	Ranchi	96	100	81	100	100	52	100	56	94	77
*Average		90	89	87	76	83	52	90	69		

\*The average has been calculated on the basis of the actual figures of utilisation and not the percentages indicated above.

## ANNEXURE XXII

**Restructuring of Courses by Universities**

**Poona University:** The University has over the years modernized its courses to include new approaches as also to make courses relevant to present demands and outlook. In general, courses also prepare students for participation in rural and urban development programmes through extension activities. In restructuring courses, emphasis has been laid on project work and the introduction of inter-disciplinary courses on an optional basis. M.Phil courses have also been introduced in many departments.

**Jabalpur University:** Courses have been restructured in some departments viz. Chemistry, Botany, Hindi and Linguistics. The university has also been imparting compensatory coaching for scheduled caste and scheduled tribe students.

**Sardar Patel University:** Courses have been restructured in a number of departments viz. Physics, Chemistry, Botany, Mathematics, Economics, Commerce and History. Special mention may be made of courses in computer science, operations research and other courses for increasing the employability of students in research laboratories and industrial firms and the introduction of new areas of specialisation in a number of disciplines.

**Calicut University:** The departments have introduced new areas of specialisation at all levels.

**Sri Venkateswara University:** The university has started inter-disciplinary courses in a number of areas such as constitutional/international law and econometrics. Three Centres of inter-disciplinary studies have been established in the university for studies in Indo-China, peace and violence and human and social development. The university has also introduced postgraduate courses in population studies, adult education, bio-chemistry, applied mathematics and a post M.Sc. diploma course in Electronics. The university is also offering a number of diploma and certificate courses of a job-oriented nature in such areas as population, family health, counselling and guidance, student personnel services, accountancy, secretarial practice, labour and industrial law etc.

The university has also taken initiative in restructuring of courses by the affiliated colleges with a view to local relevance and practical orientation.

**Madras University:** The university has formulated courses of studies leading to the first degree of B.A./B.Sc./B.Com. under the new pattern of education. The main feature of the scheme is the provision of foundation courses, and in-built programmes of applied studies and projects and community and social services as part of the undergraduate curricula.

The university has also taken initiative in restructuring of courses by the affiliated colleges with a view to local relevance and practical orientation.

**Gauhati University:** The courses have been modernized or new areas of specialisation introduced in a number of departments viz. Assamese, History, Bengali, Economics, Education, Political Science, Philosophy, Physics, Statistics, Botany, Geology and Commerce.

**Calcutta University:** The university has introduced from 1978-79 a not new pattern of undergraduate degree courses consisting of two-year pass and three-year honours after 10+2 in arts, science and commerce. Syllabi in about 50 under-graduate subjects have

been modernised and reoriented. A new division of subjects with professional and employment oriented courses is also being introduced.

**Ranchi University:** The university has not given the details of restructuring of courses except that the department of Physics has developed some teaching materials for theory as well as for workshop and modern topics. Significant contributions have been made in crystallography in Physics; action research in Chhotanagpur area in Anthropology and Social Psychology.

**Gorakhpur University:** The university has stated that its programme of restructuring of courses has been affected by the attitude of the State Government favouring stereo-typed courses in all universities in the State. In spite of this limitation, courses have been modernised by almost every department of the university and inter-disciplinary diplomas have been instituted.

**Panjab University:** The faculty of the university has been very active in improving and restructuring the various undergraduate and postgraduate courses and syllabi in some of the departments e.g. Mathematics, Botany, Economics and Sociology.

**Delhi University:** During the last 10-15 years and more particularly during the fifth five year plan new areas have been added to the teaching and research programmes of the university departments. One important change has been the introduction of quantitative methods of research particularly with the help of computers. Almost all the departments have introduced the M.Phil. course which is essentially an inter-disciplinary programme.

Several diploma courses, mostly of a job-oriented nature have been/are being started in departments like Commerce, Business Management, Chinese, Japanese, European Languages and some colleges of the university.

Another important feature has been the strengthening of experimental research programme which has been made possible through substantial inputs in terms of sophisticated equipments acquired with assistance from Ford Foundation and the UGC.

The scheme of having tutorials and seminars and arranging field trips and project work have been an integral part of teaching in the university.

Although the University of Delhi appointed a committee to review the undergraduate courses in the context of the new pattern of education as far back as in 1975, the work was interrupted by some uncertainty at the national level and delay in the finalisation of courses at the +2 stage. The undergraduate courses at all levels are being revised now to make them more modern and to bring them in tune with needs and requirements.



## ANNEXURE XXIII

## Statement showing No. of research scholars and Ph.D.s awarded

Sl. No.	Name of University	1969-70			1974-75			1977-78		
		1	2	3	1	2	3	1	2	3
1.	Poona	66	635	84	85	1060	89	176	492	103
2.	Sardar Patel	36	84	18	49	106	19	51	120	38
3.	Jabalpur	48	403	37	58	800	28	75	390	32
4.	Calicut	7	9	—	4	13	2	16	411	5
5.	Sri Venkateswara	59	29	15	121	52	21	177	85	32
6.	Madras	24	1	53	30	12	52	133	25	71
7.	Gauhati	—	38	23	—	43	17	15	22	32
8.	Calcutta	224	60	193	261	85	258	307	83	281
9.	Ranchi	17	113	23	30	145	44	53	147	44
10.	Panjab	170	55	81	216	127	71	274	253	94
11.	Gorakhpur	115	340	35	172	246	60	244	755	160
12.	Delhi	1153		100	2447		126	2098		138
<i>Total</i>		3780		662	6162		787	6480		1030

**Note:** 1 Number of Research Scholars with fellowship  
2 Number of Research Scholars without fellowship  
3 . Ph.D. degrees awarded.

## ANNEXURE XXIV

## Teacher—Pupil Ratio

Sl. No.	Name of University	1969-70			1977-78		
		Staff strength	Student Enrolment	Teacher Pupil Ratio	Staff strength	Student Enrolment	Teacher Pupil Ratio
1.	Poona	120	2621	1:22	188	2773	1:15
2.	Sardar Patel	76	912	1:12	119	1220	1:10
3.	Jabalpur	34	1109	1:30	44	1197	1:27
4.	Calicut	15	86	1:6	110	791	1:7
5.	Sri Venkateswara	132	1191	1:9	206	1798	1:9
6.	Madras	192	1148	1:6	343	2508	1:7
7.	Gauhati	212	2913	1:14	242	1844	1:8
8.	Calcutta	306	13636	1:44	500	13057	1:26
9.	Ranchi	89	1313	1:15	106	1590	1:15
10.	Panjab	382	4837	1:13	540	4801	1:9
11.	Gorakhpur	247	5852	1:24	289	7362	1:26
12.	Delhi	386	4405	1:11	548	9738	1:18
<i>Total:</i>		2191	40023	1:18	3235	48679	1:15

**ANNEXURE XXV**

**Development Grants to Colleges (1969-70 to 1978-79)**

<i>Schemes</i>	<i>Grants paid (in lakhs of Rupees)</i>											<i>Total (74-75 to 78-79)</i>
	<i>69-70</i>	<i>Fourth Plan</i>			<i>Total</i>		<i>74-75</i>	<i>75-76</i>	<i>76-77</i>	<i>77-78</i>	<i>78-79</i>	
		<i>70-71</i>	<i>71-72</i>	<i>72-73</i>	<i>73-74</i>	<i>Fourth Plan</i>						
(a) Rs. 3/5 lakhs	218.58	416.08	400.73	403.08	145.27	1,583.74	214.63	99.16	177.91	930.82	803.79	2,226.31
(b) COSIP/COHSSIP	—	22.09	49.67	48.25	61.80	181.81	82.57	92.84	126.65	110.20	111.71	523.97
(c) Development of Post-graduate Studies in Science	11.85	17.57	16.00	19.78	18.08	83.28	13.87	10.75	10.54	72.04	52.26	159.46
(d) Development of Post-graduate Studies in Humanities	5.80	6.94	7.58	5.02	8.65	33.99	5.01	9.91	7.33	46.07	32.37	100.69
<i>Total</i>						1,882.82						3,010.43

## ANNEXURE XXVI

**Evaluation of Colleges visited by the Sub-committees**

**Western Zone:** Sophia College, Bombay, has taken up several projects for improvement of curriculum, integration of science departments, study of environment and building up of social awareness. The internal assessment system has existed in the college for about eight years. The colleges has also tried out unsupervised examinations, annual evaluation of teachers by students and self-evaluation by the teaching staff. The polytechnic on the campus of the college offers various diploma and certificate courses. This has helped the University of Bombay to introduce new subjects with applied components as part of the restructuring of undergraduate education. The new courses are of a job-oriented nature such as secretarial practice, Business communication, communication skills etc. There is also a school on the campus for the mentally retarded and a nursery teacher training programme which give the students of the psychology department contact with child psychology and abnormal psychology in real life situations. The college also collaborates with a number of institutions at both the undergraduate and postgraduate levels. The Kasturba Gram Rural Institute, Indore, has taken up extension work, community development, investigations into the health and other problems of the local village. The Government College, Ajmer, has started ten adult education centres in the city and nearby villages and also offers remedial courses in English, Sanskrit and Mathematics. At least two to three teachers in each discipline are doing research without financial support from any agency. About a dozen faculty members have been selected for the award of teacher fellowships. Students and teachers participate actively in such programmes as youth against famine and flood, hospital services and agricultural extension projects.

**Southern Zone:** American College, Madurai, has introduced projects by students in their fields of specialisation as cocurricular work. Courses and curricula have been designed in keeping with the objectives of the college for achieving an autonomous status. Besides the regular courses under each major, time is set apart for inter-disciplinary, need-based and job-oriented courses, promotion of ethical and moral values and a compulsory course in science for the humanities and social science students and vice-versa. Chemistry has a course in Industrial Chemistry taught entirely by persons drawn from a few local industries. Physics has courses in practical electronics and photography. Botany has a course in economic botany. Tamil and English have introduced courses in Tourism and Journalism. The Department of Applied Science, a non-teaching department of this College is engaged in servicing the equipments of the Agricultural University and of the soil Testing Laboratories in the state. The college supported as many as 25 research projects in 1977 and 21 projects in 1978 from its own funds. The staff and students of the colleges also participate in extension and community service work in some village and in the Karunmalai slum. Mount Carmel College, Bangalore, offers a course in journalism under the supervision of the department of English. The college also organised a programme of adult education for attendants working in the college. The college carried out a survey of the economic conditions of domestic workers living in Begner. Students have also been trained in the extraction of plant products and analysis of minerals and ores of iron and copper found in Karnataka. The New Science College, Hyderabad introduced a two-year M.Sc. course in Applied Electronics in June, 1973 and M.Sc. course in Biological Sciences (including new areas) in June, 1974. The undergraduate science courses have also been restructured and the students are now exposed to practical application in major areas e.g. industrial electronics, computer science, linear programming, biochemistry, ground water and mineral prospecting, industrial microbiology, general microbiology, fisheries etc. Students of M.Sc. (Applied Electronics) have compulsorily to take 1½ months or practical training in different

divisions of the EGIL. Further, they also visit **Signal and Telecommunications Department** of South General Railway besides various smaller establishments. Students of M.Sc. (Biological Sciences) attend training course in Fisheries Training Institute managed by the Government of India. They also visit the Fisheries Institute at Karinada. Students of Physics, Major who have Electronics and Industrial Electronics as their subjects, are allotted annually, simple projects, and visits to local industrial centres are also arranged. Students of Chemistry Major who have Biochemistry as well as Industrial Biochemistry as their subjects have so far not been linked up with any industrial centres for practical training. However, they maintain closest contacts with the Biochemistry department of Osmania University, National Institute of Nutrition Laboratories. Students of Zoology Major who also do Biochemistry, Limnology and Fisheries are given an opportunity to visit Fisheries Institute and also undertake project work on the material collected by them during the field work. Students of Geology Major go for field work regularly. Students of Botany Major also undertake field work and projects.

**Eastern Zone:** B.N. College Patna undertook a project under the auspices of the department of sociology for surveying the local community. Students and teachers of J.B. College, Jorhat have, over the years, participated in constructive work in the rural areas by constructing and repairing bridges, roads and schools. Special camps are organised during the summer vacations in the rural areas for the organization of rural youth, improvement of sanitation and health and eradication of illiteracy.

**Northern Zone:** Agra College, Agra, is an outstanding college and although it has received meagre grants from the Commission during the past ten years, its contribution to teaching and research has been noteworthy. D.A.V. College, Jullundur has taken up several projects like hospital services, adult education and adoption of villages. G.M. College, Srinagar has formulated a proposal under the scheme of restructuring of courses for the introduction of applied and relevant aspects of courses at the undergraduate level.

## ANNEXURE XXVII

## Profile of Colleges visited by Sub-committees

1. Name of College: Kasturba Gram Rural Institute, Indore  
 2. Courses offered: Under-graduate  
 3. Number of Departments: 2  
 4. Student Enrolment:
- |         | UG  | PG | Res. | Total |
|---------|-----|----|------|-------|
| 1969-70 | 88  | —  | —    | 88    |
| 1977-78 | 266 | —  | —    | 266   |
5. Faculty Strength:
- |         | Senior teachers* | Lecturers**   | Total |
|---------|------------------|---------------|-------|
| 1969-70 |                  | Not available |       |
| 1977-78 | —                | 12            | 12    |
6. Teacher-Pupil Ratio:  
 1969-70 : Not available  
 1977-78 : 1 : 22
7. (a) Ph.D. Scholars with fellowships/scholarship: } 1969-70                      1974-75                      1977-78  
 (b) Ph.D. Scholars without fellowship/Scholarship: } NIL  
 (c) No. of Ph.D's awarded }
8. Special programme offered: Extension services.  
 9. Library facilities: (as in 1978-79)  
 (a) Number of books: 2,500  
 (b) Number of reading seats: 10
10. (a) Number of books, monographs, brochures, research papers published by college teachers:

Publications	1969-70	1974-75	1977-78
	Humanities & Social Sciences	Humanities & Social Sciences	Humanities & Social Sciences
1. Books		NIL	
2. Research papers		NIL	
3. Monographs		NIL	
4. Others		NIL	

## 10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

Programme	1969-70 to 1973-74	1974-75 to 1978-79
1. Seminars		NIL
2. Workshops		NIL
3. Conferences		NIL

\*Includes Principal/Professor/Reader

\*\*Includes Assistant Professors and Assistant Lecturers also.

## ANNEXURE XXVII.2

1. Name of College: Sophia College, Bombay
2. Courses offered: (a) Under-graduate (b) Post-graduate (c) Research
3. Number of Departments: 15
4. Student Enrolment:

	<i>UG</i>	<i>PG</i>	<i>Res.</i>	<i>Total</i>
1969-70	1785	25	—	1810
1977-78	973	39	3	1015

5. Faculty Strength:

	<i>Senior teachers*</i>	<i>Lecturers**</i>	<i>Total</i>
1969-70	1	42	43
1977-78	1	38	39

6. Teacher-Pupil Ratio:

1969-70: Not available  
1977-78:

7. (a) Ph.D. Scholars with fellowships/Scholarship: *1969-70* — *1974-75* — *1977-78* —
- (b) Ph.D. Scholars without fellowship/Scholarship: 4 4 3
- (c) No. of Ph.D's awarded: — — —

8. Special programmes offered: COSIP/COHSSIP

9. Library facilities: (as in 1978-79)

- (a) Number of books: 31,758
- (b) Number of reading seats: 126

- 10.(a) Number of books, monographs, brochures, research papers published by college teachers:

<i>Publications</i>	<i>1969-70</i>		<i>1974-75</i>		<i>1977-78</i>	
	<i>Humanities &amp; Social Sciences</i>	<i>Science</i>	<i>Humanities &amp; Social Sciences</i>	<i>Science</i>	<i>Humanities &amp; Social Sciences</i>	<i>Science</i>
1. Books	5	2	6	2	—	—
2. Research papers	1	—	1	6	—	4
3. Monographs	3	—	8	—	8	2
4. Others	5	—	3	—	12	—

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

<i>Programme</i>	<i>1969-70 to 1973-74</i>	<i>1974-75 to 1978-79</i>
1. Seminars	31	64
2. Workshops	16	15
3. Conferences	22	20

\*Includes Principal/Reader/Professor.

\*\*Includes Assistant Professors & Assistant Lecturers.

## ANNEXURE XXVII.3

1. Name of college: Kanoria Mahila Mahavidyalaya
2. Courses offered: Under-graduate
3. Number of Departments: 18
4. Student Enrolment:
 

	<i>UG</i>	<i>PG</i>	<i>Res*</i>	<i>Total</i>
1969-70	822	—	—	822
1977-78	1133	9	—	1133
5. Faculty Strength:
 

	<i>Senior Teachers*</i>	<i>Lecturers**</i>	<i>Total</i>
1969-70	—	33	33
1977-78	—	47	47
6. Teacher-Pupil Ratio:
 

1969-70	1: 25
1977-78	1: 24
7. (a) Ph.D. Scholars with fellowships/Scholarship:
 

	<i>1969-70</i>	<i>1974-75</i>	<i>1977-78</i>
—	—	—	—
- (b) Ph D. Scholars without fellowship/Scholarship:
 

1	4	8
---	---	---
- (c) No. of Ph.D's awarded:
 

—	3	4
---	---	---
8. Special programmes offered: COHSSIP
9. Library facilities: (as in 1978-79)
  - (a) Number of books: 19470
  - (b) Number of reading seats: 156
10. (a) Number of books, monographs, brochures, research papers published by college teachers:

<i>Publications</i>	<i>1969-70</i>	<i>1974-75</i>	<i>1977-78</i>
	<i>Humanities &amp; Social Sciences</i>	<i>Science &amp; Social Sciences</i>	<i>Humanities &amp; Social Sciences</i>
1. Books	—	2	3
2. Research papers	2	20	26
3. Monographs	—	2	—
4. Others	—	6	15

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

<i>Programmes</i>	<i>1969-70 to 1973-74</i>	<i>1974-75 to 1978-79</i>
1. Seminars	6	35
2. Workshops	3	18
3. Conferences	5	14

**Note:** Number of publications indicated includes those in Sciences also for which separate figures have not been given by the college.

\*Includes Principal/Readers/Professors.

\*\*Includes Assistant Professors and Assistant Lecturers.



## ANNEXURE XXVII.4

1. Name of College: Government College, Ajmer
2. Courses offered: (a) Under-graduate (b) Post-graduate (c) Research
3. Number of Departments: 20
4. Student Enrolment:
 

	<i>UG</i>	<i>PG</i>	<i>Res.</i>	<i>Total</i>
1969-70	2185	515	—	2700
1977-78	2672	1050	38	3760
5. Faculty Strength:
 

	<i>Senior Teachers*</i>	<i>Lecturers*</i>	<i>Total</i>
1969-70	14	113	127
1977-78	61	100	161
6. Teacher-Pupil Ratio:
 

1969-70	1: 21
1977-78	1: 23
7. (a) Ph.D. Scholars with fellowship/Scholarship:
 

	<i>1969-70</i>	<i>1974-75</i>	<i>1977-78</i>
—	—	2	9
- (b) Ph.D. Scholars without fellowship/Scholarship:
 

—	—	2	31
---	---	---	----
- (c) No. of Ph.D's awarded
 

—	—	—	—
---	---	---	---
8. Special programmes offered: COSIP/COHSSIP; Remedial classes
9. Library facilities: (as in 1978-79)
 

(a) Number of books:	82,718
(b) Number of reading seats:	200
10. (a) Number of books, monographs, brochures, research papers published by college teachers:

<i>Publications</i>	<i>1969-70</i>		<i>1974-76</i>		<i>1977-78</i>	
	<i>Humanities &amp; Social Sciences</i>	<i>Science</i>	<i>Humanities &amp; Social Sciences</i>	<i>Science</i>	<i>Humanities &amp; Social Sciences</i>	<i>Science</i>
1. Books	26		23		43	
2. Research papers	52		60		68	
3. Monographs	7		6		8	
4. Others	—		—		2	

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

<i>Programme</i>	<i>1969-70 to 1973-74</i>	<i>1974-75 to 1978-79</i>
1. Seminars	33	42
2. Workshops	28	47
3. Conferences	48	68

\*Includes Principal/Professor/Reader.

\*\*Includes Assistant Professors and Assistant Lecturers also.

Note: Number of publications indicated includes those in Science also for which separate figures have not been given by the university.

## ANNEXURE XXVII.5

1. Name of College: Bihar National College, Patna
2. Located in: Urban area
3. University to which affiliated: Patna
4. (a) Year of establishment of college: 1889  
(b) Year of affiliation to the university: 1952
5. Type of affiliation: Permanent
6. Enrolment Course-wise (1978-79):
 

<i>Course</i>	<i>Enrolment</i>
B.A./B.A. (Hons)	871
B.Sc./B.Sc. (Hons)	422
7. Teaching staff (1978-79):
 

Professors	—	33
Lecturers	—	89
		<hr/>
Total	—	122
		<hr/>
8. Total number of books (1976-77): 38,596

## ANNEXURE XXVII.6

1. Name of College: Jagannath Barooah College, Jorhat
2. Courses offered: Under-graduate
3. Number of Departments: 33
4. Student Enrolment:

	UG	PG	Res.	Total
1969-70	1004	—	—	1004
1977-78	969	—	—	969

5. Faculty Strength:

	Senior Teachers*	Lecturers**	Total
1969-70	—	73	73
1977-78	—	78	78

6. Teacher-Pupil Ratio:

1969-70	1: 14
1977-78	1: 12

7. (a) Ph.D. Scholars with fellowships/Scholarship: } 1969-70 1974-75 1977-78
- (b) Ph.D. Scholars without fellowships/Scholarship: } NIL
- (c) No. of Ph.D's awarded }

8. Special programmes offered: COSIP/COHSSIP

9. Library facilities: (as in 1978-79)

- (a) Number of books: 49,263
- (b) Number of reading seats: 150

10. (a) Number of books, monographs, brochures, research papers published by college teachers:

Publications	1969-70	1974-75	1977-78
	Humanities & Social Sciences	Science Humanities & Social Sciences	Humanities & Social Sciences
1. Books	—	—	1
2. Research papers	—	—	—
3. Monographs	—	—	—
4. Others	—	—	—

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

Programme	1969-70 to 1973-74	1974-75 to 1978-79
1. Seminars	—	5
2. Workshops	—	—
3. Conferences	—	—

\*Including Principal/Professor/Reader.

\*\*Including Assistant Professors and Assistant Lecturers.

## ANNEXURE XXVII.7

1. Name of College: Agra College, Agra
2. Located in: Urban area
3. University to which affiliated: Agra
4. (a) Year of establishment of college: 1823  
(b) Year of affiliation to the university: 1927
5. Type of affiliation: Permanent
6. Enrolment Course-wise (1977-78):
 

<i>Course</i>	<i>Enrolment</i>	<i>No. of scheduled castes/tribes enrolled</i>
B.A. ...	2,047	
B.Sc. ...	1,126	
M.A. ...	708	
M.Sc. ...	313	
Ph.D. ...	371	
7. Teaching staff (1977-78):
 

Senior Teachers*	...	1
Lecturers**	...	221
Total	...	222
8. Library facilities (1977-78):
 

Total number of books	...	95,678
-----------------------	-----	--------
9. Staff quarters (1977-78):
 

(a) Teaching staff	...	38
(b) Non-teaching staff	...	8
10. Hostel facilities (1977-78):
 

Hostels	...	595 (Number of students residing)
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\*Including Principal/Professor/Reader

\*\*Including Assistant Professors and Assistant Lecturers.

## ANNEXURE XXVII.8

1. Name of College: D.A.V. College, Jullundur
2. Courses offered: (a) Under-graduate (b) Post-graduate
3. Number of Departments: 15
4. Student Enrolment:

	UG	PG	Res.	Total
1969-70	3409	685	—	4094
1977-78	4112	681	—	4793

5. Faculty Strength:

	Senior Teachers*	Lecturers**	Total
1969-70	—	142	142
1977-78	—	167	167

6. Teacher-Pupil Ratio:

1969-70	1: 29
1977-78	1: 29

7. (a) Ph.D. Scholars with fellowships/Scholarship: } 1969-70                      1974-75                      1977-78
- (b) Ph.D. Scholars without fellowship/Scholarship: }                                              NIL
- (c) No. of Ph.D's awarded }                                              NIL

8. Special programme offered: COSIP/COHSSIP

9. Library facilities (as in 1978-79):

- (a) Number of books: 1,05,873
- (b) Number of reading seats: 300

10. (a) Number of books, monographs, brochures, research papers published by college teachers:

Publications	1969-70		1974-75		1977-78	
	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science
1. Books	11	8	12	11	13	11
2. Research papers	10	5	13	6	14	7
3. Monographs	—	—	—	—	—	—
4. Others	—	—	—	—	—	—

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

Programme	1969-70 to 1973-74	1974-75 to 1978-79
1. Seminars	9	—
2. Workshops	—	—
3. Conferences	—	1

\*Includes Principal/Professor/Reader.

\*\*Includes Assistant Professors and Assistant Lecturers also.

## ANNEXURE XXVII.9

1. Name of College: Gandhi Memorial College, Srinagar.
2. Located in: Urban area
3. University to which affiliated: Kashmir
4. (a) Year of establishment of college: 1943  
(b) Year of affiliation to the university: 1943
5. Type of affiliation: Permanent
6. Enrolment Course-wise (1977-78):
 

<i>Course</i>	<i>Enrolment</i>
B.A.           ...	40
B.Sc.           ...	28
7. Teaching staff (1977-78):
 

Senior teachers*...	12
Lecturers**   ...	27
Total           ...	39
8. Library facilities (1977-78):
  - (a) Total number of books: 8,882
  - (b) Number of books in book-bank, if any: 624
  - (c) Actual number of days for which the library was open during 1977-78: 274

\*Includes Principal/Professor/Reader

\*\*Includes Assistant Professors and Assistant Lecturers.

## ANNEXURE XXVII.10

1. Name of College: Mount Camel College, Bangalore.
2. Courses offered: Under-graduate
3. Number of Departments: 14
4. Student Enrolment:

	UG	PG	Res.	Total
1969-70	944	..	—	944
1977-78	956	—	—	956

5. Faculty Strength:

	Senior Teachers*	Lecturers**	Total
1969-70	13	30	43
1977-78	6	43	49

6. Teacher-Pupil Ratio:

1969-70	1: 22
1977-78	1: 19

7. (a) Ph.D. Scholars with fellowships/Scholarship: 1969-70 — 1974-75 — 1977-78 —
- (b) Ph.D. Scholars without fellowship/Scholarship: 1 — —
- (c) No. of Ph.D's awarded: 1 — —

8. Special Programmes offered: COSIP/COHSSIP

9. Library facilities: (as in 1978-79)

- (a) Number of books: 31,348
- (b) Number of reading seats: 125

10. (a) Number of books, monographs, brochures, research papers published by college teachers:

Publications	1969-70		1974-75		1977-78	
	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science
1. Books	1	—	3	—	6	—
2. Research papers	1	—	11	—	9	—
3. Monographs	—	—	—	—	—	—
4. Others	—	—	—	—	—	—

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

Programme	1969-70 to 1973-74	1974-75 to 1978-79
1. Seminars	15	44
2. Workshops	—	8
3. Conferences	5	24

\*Including Principal/Professor/Reader.

\*\*Including Assistant Professors and Assistant Lecturers.

Note: Number of publications indicated includes those in Science also for which separate figures have not been given by the college.

## ANNEXURE XXVII.11

1. Name of College: New Science College, Hyderabad.
2. Courses offered: (a) Under-graduate (b) Post-graduate (c) Research
3. Number of Departments: 8
4. Student Enrolment:

	UG	PG	Res.	Total
1969-70	1343	—	—	1343
1977-78	436	33	—	469

5. Faculty Strength:

	Senior Teachers*	Lecturers**	Total
1969-70	1	63	64
1977-78	1	51	52

6. Teacher-Pupil Ratio:

1969-70	1 : 21
1977-78	1 : 9

7. (a) Ph.D. Scholars with fellowships/Scholarship: 1969-70 — 1974-75 — 1977-78 —
- (b) Ph.D. Scholars without fellowship/Scholarship: — — —
- (c) No. of Ph.D's awarded — — —

8. Special programmes offered: COSIP

9. Library facilities: (as in 1978-79)

- (a) Number of books: 16430
- (b) Number of reading seats: 186

10. (a) Number of books, monographs, brochures, research papers published by college teachers:

Publications	1969-70		1974-75		1977-78	
	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science
1. Books						
2. Research papers			44†			
3. Monographs						
4. Others						

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

Programmes	1969-70 to 1973-74	1974-75 to 1978-79
1. Seminars	3	4
2. Workshops	1	—
3. Conferences	5	8

\*Includes Principal/Reader/Professor.

\*\*Includes Assistant Professors & Assistant Lecturers.

†During the period 1969-70 to 1977-78.



## ANNEXURE XXVII.12

1. Name of College: The American College, Madurai.
2. Courses offered: (a) Under-graduate (b) Post-graduate (c) Research.
3. Number of Departments: 11
4. Student Enrolment:

	UG	PG	Res.	Total
1969-70	1634	93	—	1727
1977-78	1544	83	—	1627

5. Faculty Strength:

	Senior Teachers*	Lecturers**	Total
1969-70	14	55	69
1977-78	13	64	77

6. Teacher-Pupil Ratio:

1969-70	1 : 25
1977-78	1 : 21

7. (a) Ph.D. Scholars with fellowships/Scholarships: } 1969-70                      1974-75                      1977-78
- (b) Ph.D. Scholars without fellowship/Scholarship: }                                      NIL
- (c) No. of Ph.D's awarded) }

8. Special programmes offered: Autonomous college: COSIP

9. Library facilities: (as in 1978-79)

- (a) Number of books: 54,359
- (b) Number of reading seats: 156

10. (a) Number of books, monographs, brochures, research papers published by college teachers:

Publications	1969-70		1974-75		1977-78	
	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science	Humanities & Social Sciences	Science
1. Books	—	2	—	—	—	—
2. Research papers	—	—	—	4	—	9
3. Monographs	—	—	—	—	—	—
4. Others	1	—	—	—	3	—

10. (b) Number of teachers participating in Seminars, Workshops, Conferences etc.

Programme	1969-70 to 1973-74	1974-75 to 1978-79
1. Seminars	4	4
2. Workshops	49	44
3. Conferences	5	6

\*Includes Principal/Professor/Reader.

\*\*Includes Assistant Professors and Assistant Lecturers also.

## ANNEXURE XXVIII

## List of Members of the Review Committee on CAS/DAS

- |     |                                                                                                                               |                         |
|-----|-------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 1.  | Professor C.V. Subramaniam,<br>Centre of Advanced Study in Botany,<br>Madras University,<br>Madras.                           | <i>Convenor</i>         |
| 2.  | Professor Usha H. Mehta,<br>Department of Civics and Politics,<br>Bombay University,<br>Bombay.                               |                         |
| 3.  | Professor C.N.R. Rao,<br>Department of Chemistry,<br>Indian Institute of Science,<br>Bangalore.                               |                         |
| 4.  | Professor M.P. Singh,<br>Department of Mathematics,<br>Indian Institute of Technology,<br>New Delhi.                          |                         |
| 5.  | Professor M.S.A. Rao,<br>Department of Sociology,<br>Delhi School of Economics,<br>Delhi University,<br>Delhi-7.              |                         |
| 6.  | Dr. S.N. Sen,<br>18-C, Lake View Road,<br>Calcutta-700029.                                                                    |                         |
| 7.  | Professor J.N. Bhar,<br>Institute of Radio Physics and Electronics,<br>92, Acharya Prafulla Chandra Road,<br>Calcutta-700009. |                         |
| 8.  | Dr. R.N. Dandekar,<br>Bhandarkar Oriental Research Institute,<br>Poona-411004.                                                |                         |
| 9.  | Dr. D. Shankar Narayan,<br>Additional Secretary,<br>University Grants Commission.                                             | <i>Member-Secretary</i> |
| 10. | Dr. T.N. Hajela,<br>Deputy Secretary,<br>University Grants Commission.                                                        | <i>Member-Secretary</i> |

## ANNEXURE XXIX

List of Centres of Advanced Study in Science  
SCIENCE

<i>S. No.</i>	<i>Subject</i>	<i>Area or Specialisation</i>	<i>Department</i>	<i>Year of recognition</i>
1	2	3	4	5
1.	Physics	Theoretical Physics and Astrophysics	Department of Physics & Astrophysics, Delhi University	1963
2.	Physics	Radiophysics & Electronics	Institute of Radio-physics & Electronics Calcutta University	1963
3.	Chemistry	Chemistry of Textile Fibres and Dyes	Department of Chemical Technology, Bombay University	1963
4.	Chemistry	Chemistry of Natural Products	Department of Chemistry, Delhi University	1963
5.	Botany	Plant Morphology and Embryology	Department of Botany, University of Delhi	1963
6.	Botany	Plant Pathology and Mycology	Department of Botany University of Madras	1963
7.	Zoology	Cell Biology and Endocrinology	Department of Zoology Delhi University	1963
8.	Zoology	Marine Biology	Department of Marine Biology Anamalai University	1963
9.	Geology	Himalayan Geology and Palaeontology	Department of Geology Panjab University	1963
10.	Mathematics	Pure Mathematics	Department of Mathematics, Bombay University (in collaboration with the Tata Institute of Fundamental Research Bombay)	1963
11.	Mathematics	Pure Mathematics	Department of Mathematics, Panjab University.	1963
12.	Mathematics	Pure Mathematics	Department of Mathematics, University of Madras & Ramanujan Institute of Mathematics, Madras.	1967
13.	Astronomy	Experimental Astronomy	Department of Astronomy & Observatory, Osmania University, Hyderabad	1964
14.	Biochemistry	Proterine, Lipids, Vitamins	Department of Bio-chemistry, Indian Institute of Science, Bangalore.	1968

## ANNEXURE XXX

## List of Centres of Advanced Study in Humanities and Social Sciences

<i>Sl. Name of the Centre No.</i>	<i>Subject</i>	<i>Area of specialisation</i>	<i>Year of recognition</i>
1. Deptt. of Economics, Bombay University, Bombay-32.	Economics	Public Finance and Industrial Economics	1963
2. Deptt. of Economics, Delhi University, Delhi.	-do-	Economics of Development and Economic History	1963
3. Gokhale Instt. of Politics & Economics Poona University.	-do-	Agricultural Economics	1963
4. Deptt. of Philosophy, Madras University, Madras.	Philosophy	Advaita and Allied Systems of Philosophy	1964
5. Deptt. of Sanskrit, Poona University, Poona.	Sanskrit	Sanskrit Literature	1964
6. Deptt. of Linguistics Annamalai University	Linguistics	Dravidian Linguistics	1963
7. Deptt. of Education, MS University of Baroda.	Education	Educational Research	1963
8. Deptt. of History Aligarh Muslim Univ.	History	Medieval Indian History	1968
9. Deptt. of Sociology Delhi University	Sociology	Sociology	1968

## ANNEXURE XXXI

**List of Departments approved under Special Assistance Programme in  
Science Subjects**

<i>Sl. No.</i>	<i>Department</i>	<i>University</i>
1.	Bio-Chemistry	1. Lucknow University
2.	-do-	2. M.S. University of Baroda
3.	Bio-Physics	1. Indian Institute of Science, Bangalore
4.	Biological Sciences	1. Madurai Kamraj University
5.	Botany	1. Andhra University
6.	-do-	2. Banaras Hindu University
7.	-do-	3. Calcutta University
8.	-do-	4. Lucknow University
9.	-do-	5. Panjab University
10.	-do-	6. Patna University
11.	Chemistry	1. Allahabad University
12.	-do- (Inorganic & Physical)	2. Indian Institute of Science, Bangalore.
13.	-do- (Pure)	3. Calcutta University
14.	-do- (Physical)	4. Madras University
15.	-do-	5. Osmania University
16.	-do-	6. Panjab University
17.	-do-	7. Poona University
18.	-do-	8. Rajasthan University
19.	-do-	9. Sardar Patel University
20.	Geography	1. Aligarh Muslim University
21.	-do-	2. Osmania University
22.	Geology	1. Andhra University
23.	-do-	2. Jadavpur University
24.	-do-	3. Mysore University
25.	Geology & Geophysics	1. Roorkee University
26.	Metallurgical Engineering	1. Banaras Hindu University
27.	Physics	1. Allahabad University
28.	-do-	2. Andhra University
29.	-do-	3. Roorkee University
30.	Statistics	1. Poona University
31.	Zoology	1. Banaras Hindu University
32.	-do-	2. Calcutta University
33.	-do-	3. Marathwada University

## ANNEXURE XXXII

**List of Departments of Special Assistance in the Humanities and  
Social Sciences**

<i>Subject</i>	<i>Name of the University/ College</i>	<i>Year of Establish- ment</i>
A. Economics	1. Osmania	1972
	2. Presidency College, Calcutta	1972
	3. Andhra	1977
	4. Panjabi	1977
	5. Calcutta	1977
B. History	1. Patna	1972
	2. Allahabad	1977
	3. Mysore	1977
	4. Calcutta	1977
	5. Baroda	1977
C. Sociology	1. Bombay	1972
	2. Panjab	1977
D. Anthropology	1. Saugar	1972
	2. Ranchi	1977
E. Archaeology	1. Deccan College, Post-graduate & Research Institute, Poona	1972
F. Psychology	1. Utkal	1976
	2. Allahabad	1977
G. Linguistics	1. Osmania	1977
H. Philosophy	1. Jadavpur	1977
	2. Rajasthan	1977

## ANNEXURE XXXIII

## List of Members of the Review Committee on COSIP/COHSSIP

1. Professor B.M. Udgaonkar,  
Tata Institute of Fundamental Research,  
Homi Bhabha Road,  
Bombay.
2. Dr. Mrinal Miri,  
Professor of Philosophy,  
North Eastern Hill University,  
Shillong.
3. Shri N.M. Kothari\*  
Director of Education,  
Government of Rajasthan,  
Jaipur.
4. Dr. S.P. Tewarson,  
Principal,  
Lucknow Christian College,  
Lucknow.
5. Smt. Rajammal P. Devadas,  
Principal,  
Sri Avinashilingam Home  
Science College for Women,  
Coimbatore-641022.
6. Professor R.C. Paul,  
Vice-Chancellor,  
Panjab University,  
Chandigarh.
7. Dr. S. Krishnaswamy,  
Coordinator and Head,  
School of Biological Sciences,  
Madurai Kamraj University,  
Madurai.
8. Shri D.P. Nayar,  
Visiting Professor,  
Panjab University,  
Chandigarh.
9. Dr. D. Shankar Narayan,  
Additional Secretary,  
University Grants Commission,  
*Member Secretary*
10. Dr. T.N. Hajela,  
Deputy Secretary,  
University Grants Commission,  
*Member Secretary*

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\*Since retired.

## ANNEXURE XXXIV

List of Members of the Review Committee on financial assistance to teacher  
for research work

- |     |                                                                                                                                                                                      |                         |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 1.  | Professor A.R. Kidwai*<br>7-Tughlak Road,<br>New Delhi.                                                                                                                              | <i>Convener</i>         |
| 2.  | Dr. V. Puri,<br>Visiting Professor in Botany,<br>Vikram University,<br>Ujjain.                                                                                                       |                         |
| 3.  | Dr. Chandran D.S. Devanesan,<br>1, Anasuya Avenue,<br>(Off Ormes Road),<br>Madras.                                                                                                   |                         |
| 4.  | Professor V.K. Deshpande,<br>Professor of Physics,<br>Indian Institute of Technology,<br>Kanpur.                                                                                     |                         |
| 5.  | Dr. M.A. Thangaraj,<br>General Secretary,<br>All-India Association for<br>Christian Higher Education,<br>C-6, Community Centre,<br>Safdarjang Development Area,<br>New Delhi-110016. |                         |
| 6.  | Professor Mohan Lal,<br>Professor of English,<br>Saugar University,<br>Sagar.                                                                                                        |                         |
| 7.  | Shri N.K. Rout,<br>Principal,<br>Ravenshaw College,<br>Cuttack.                                                                                                                      |                         |
| 8.  | Fr. Francis Leo Braganza S.J.,<br>Principal,<br>St. Xavier's College,<br>Ahmedabad.                                                                                                  |                         |
| 9.  | Dr. D. Shankar Narayan,<br>Additional Secretary,<br>University Grants Commission,                                                                                                    | <i>Member-Secretary</i> |
| 10. | Dr. T.N. Hajela,<br>Deputy Secretary,<br>University Grants Commission.                                                                                                               | <i>Member-Secretary</i> |

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\*Presently, Governor of Bihar

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