# UNIVERSITY GRANTS COMMISSION

# REPORT FOR THE YEAR

1968-69



Presented to the Government of India in compliance with Section 18 of the UGC Act, 1956

**NEW DELHI** 

#### UNIVERSITY GRANTS COMMISSION

#### 1968-69

Professor D.S. Kothari (Chairman)

Shri G.K. Chandiramani, Additional Secretary, Ministry of Education and Youth Services, Government of India

Dr. S. Dhawan, Director, Indian Institute of Science, Bangalore

Dr. P.B. Gajendragadkar, Vice-Chancellor, Bombay University

Professor V.K. Gokak, Vice-Chancellor, Bangalore University

Shri P. Govindan Nair, Secretary, Ministry of Finance, Government of India

Dr. D.S. Reddi, Vice-Ghancellor, Osmania University

Shri B. Shiva Rao

Professor A.R. Wadia

Dr. P.J. Philip (Secretary)

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# UNIVERSITY GRANTS COMMISSION ANNUAL REPORT

# April 1968 to March 1969

In compliance with Section 18 of the University Grants Commission Act, 1956, we present to the Central Government a report on the work of the Commission for the year 1968-69 to be laid before Parliament.

There were some changes in the membership of the Commission during the period under review. Shri P. Govindan Nair, Secretary, Ministry of Finance (Department of Expenditure) was appointed member of the UGC on 2nd April, 1968 in place of Shri T.P. Singh, who resigned. Shri G.K. Chandiramani, Additional Secretary, Ministry of Education and Youth Services was appointed member of the Commission on 30th April, 1968 on the retirement of Shri P.N. Kirpal from the Ministry of Education. Shrimati Indumati Chimanlal and Professor Tapas Majumdar were appointed members of the Commission with effect from 31st January 1969 in the places of Professor A.R. Wadia and Shri B. Shiva Rao respectively, who retired on completion of their tenure as members.\*

We are grateful to Shri P.N. Kirpal, Shri T.P. Singh, Shri B. Shiva Rao and Professor A.R. Wadia for the valuable advice and help they gave to the Commission during their tenure as members.

India today has one of the largest educational systems in the world with a total enrolment exceeding 700 lakhs and with over 20 lakh teachers. The student enrolment in the field of higher education has in recent years been expanding at an average rate of 13% per annum. It rose from 22.19 lakhs in 1967-68 to 24.73 lakhs in 1968-69.\*\* The strength of the teaching staff in the universities and colleges increased from 1.02 lakhs to 1.11 lakhs. We had only 20 universities in 1947; the number rose to 76 in 1968-69.\*\*\* In addition, there are 10 institutions deemed to be universities and

<sup>\*</sup> Some changes occured in the membership of the Commission during 1969-70. Dr. D.S. Reddi retired on 30th April, 1969, and Professor A.B. Lal was appointed member of the Commission in his place on 2nd August, 1969-Professor V.K. Gokak retired on 10th October, 1969, and Dr. A.S. Adke was appointed member of the Commission with effect from 13th January 1970.

<sup>\*\*</sup> During 1969-70 it is estimated to be 27.77 lakhs.

<sup>\*\*\*</sup> In 1969-70 the number rose to 79.

3,112 colleges. A chronological list of the universities and institutions deemed to be universities, with their student enrolment, is given in appendix I. For a person of college age picked at random, the probability or chance of his entering college is now nearly 10 times than what it was at the time of Independence. The upsurge in the field of higher education, which has been a characteristic feature of the educational system in recent years, is the result of a complex of factors and a causes, including the increasing recognition of the important role of education in the national economy and the growing aspiration for the prestige and advantages of higher education.

In view of the statutory responsibility of the Commission "for the promotion and coordination of university education and for the determination and maintenance of standards of teaching, examination and research in universities", a concerted effort is being made within the resources available, to meet the challenge of this unprecedented expansion, involving a large extension of the existing facilities, on the one hand, and the improvement of the quality and standards of higher education, on the other. The maintenance and development of standards of education depend on sustained and coordinated action in different areas, such as curriculum and examination reform, reorientation of teachers, encouragement of research in worthwhile fields, and the provision of requisite facilities for advanced study. Concentration of efforts and resources in selected areas of importance is also necessary if any significant results are to be achieved.

Problems relating to the improvement of standards of education and research have been examined, and programmes has been initiated and assistance has been given to the universities and colleges for improving the quality of university education. The existing syllabi and facilities for research in various subjects of study have been reviewed by expert committees, and suggestions made for the improvement and modernisation of courses of instruction. Programmes have been undertaken to acquaint teachers with new developments in their respective fields of work. Various aspects of the examination system have been carefully examined and recommendations made for improving the procedures of assessment. A planned effort is being made to encourage the pursuit of excellence at the postgraduate and research levels in the centres of advanced study. Assistance is being given to the universities and colleges for the provision of necessary facilities for conducting and improving their programmes of teaching and research. Questions relating to student welfare have been carefully examined and steps taken to improve the conditions in which students live and work. The development programmes being implemented are reviewed and evaluated from time to time by expert committees appointed by the Commission, and suggestions made for further improvement.

Information about the work and programmes undertaken by the

Commission during the year is given below.

# **NEW UNIVERSITIES**

The Education Commission (1964-66) expressed the opinion that, though in view of the expansion visualised at the undergraduate and postgraduate stages, the establishment of some new universities is inevitable, it is necessary to adopt measures to ensure that the establishment of a new university would lead to a substantial improvement in standards and raise the output and level of research. It was pointed out that "the establishment of new universities can be justified only when competent men and physical facilities required for the purpose are available and can be secured, and that it would be wrong to create a situation in which there would be an undue dispersal of intellectual talent, funds and administrative ability, all of which are in scarce supply at present". From this point of view, the Education Commission made the following recommendations:

- (1) No new university should be started unless the agreement of the UGC is obtained and unless adequate provision of funds is made.
- (2) In many cases, it may not really be necessary to start a new university. The object in view can be met by developing under the auspices of a university, one or more postgraduate centres, wherever a number of local colleges can make a cooperative effort to provide facilities for postgraduate teaching.

The UGC Act, 1956, authorises the Commission "to advise any authority, if such advice is asked for, on the establishment of a new university". The planned development of higher education and the need for co-ordination on an all-India level, make it essential that no university should be established without prior consultation with, and the concurrence of, the Commission. The establishment of a new university has to be considered in relation to the availability of competent staff and adequate financial resources, and the contribution it is likely to make in raising the quality and standards of education. The location of a new university, the supporting educational complex, and the administrative and other requirements have also to be considered carefully. The proposals for setting up new universities are examined in the light of the relevant facts by a standing committee constituted by the Commission. Though the Commission is normally consulted in such matters, the Commission is constrained to observe that, in a few cases, action regarding the establishment of new universities was taken without its prior concurrence or knowledge.

It has been agreed that in view of the paucity of resources at the Centre and in the States, and the need for the effective utilisation of the available facilities, as well as the consolidation and improvement of the universities already established, it would be necessary to adopt a restrictive approach

as regards the establishment of new universities. The need for additional facilities for postgraduate studies has to be met to the extent possible by strengthening the departments of the existing universities and establishing new departments where necessary. The possibility of establishing university centres at suitable places within the jurisdiction of a university has also to be explored in this connection. The question of establishing new universities may be considered only where the existing universities cannot cope with the increased number of students coming from the schools and on compelling academic and administrative grounds.

The Commission considered the proposal of the Government of Madhya Pradesh for the establishment of a University at Rewa, and expressed the opinion that since the State already had eight universities, where standards of teaching and research had to be strengthened, there was little justification for the establishment of another university at the present stage. The State Government, however, went ahead with the establishment of the University and named it as Awadhesh Pratap Singh University.

As regards the establishment of the Gujarat Ayurveda University the Commission expressed the view that it would not be in the interest of medical education and research, including Ayurveda, to encourage Ayurvedic studies as a separate discipline isolated from modern medicine and allied sciences.

The Commission regretted its inability to agree to a proposal of the International Council of Arya Samaj Educational Institutions for the establishment of a Daya Nand University at Ajmer, and emphasised that the best way to commemorate the ideals of a great man would be to set up specialised institutions relating to the field of his work and interest.

The Commission considered a reference from the Government of Orissa for the conversion of Ravenshaw College, Cuttack into a residential university, and was of the view that it would not be advisable at this stage to establish such a university, and that a measure of autonomy could be given to the institution as envisaged in the report of the Education Commission 1964-66).

The Commission noted that the Education Commission (1964-66) was not in favour of the establishment of more central universities, and did not agree with the proposal for converting the Bangalore University into a central university. It was felt that the essential problem was to make central assistance available to all state universities on a more liberal scale.

The Commission considered the question of the establishment of Maharashtra Agricultural University at Rahuri, and the decision to establish a second agricultural university in Vidarbha, and referated the principle that, in the interest of coordinated development of higher education, the UGC should be consulted before new universities are set up.

#### INSTITUTIONS DEEMED TO BE UNIVERSITIES

Under Section 3 of the UGC Act, 1956, "the Central Government may on the advice of the University Grants Commission declare by notification in the official gazette that an institution of higher education other than a university shall be deemed to be a university for the purpose of this Act". In the diversified educational system of the country there is need for institutions having the academic status and privileges which generally belong to a university but having more specific and limited functions and scope. There are at present 10 institutions deemed to be universities. The proposals of the National Dairy Research Institute, Karnal, the Indian Veterinary Research Institute, Izatnagar and the National Institute of Health, Administration and Education, Delhi, for recognition as institutions deemed to be universities are under the Commission's consideration. A committee appointed by the UGC has already visited the National Dairy Research Institute, Karnal, and the views of the Indian Council of Agricultural Research on the report of the committee are awaited.

The Commission considered similar proposals regarding Serampore College, Serampore, and the Birla Institute of Technology, Mesra, Ranchi, but after weighing the relevant facts, regretted its inability to recommend to the Central Government that they may be recognised as institutions deemed to be universities.

The Commission had earlier decided that the functioning of the institutions deemed to be universities should be periodically reviewed. The reports of the committees appointed to review the working of the Gujarat Vidyapith, Ahmedabad and the Tata Institute of Social Sciences, Bombay have been sent to the Vidyapith and the Institute for their comments.

#### UNIVERSITY CENTRES OF POSTGRADUATE STUDIES

The development of centres of postgraduate studies at suitable places, under the auspices of the universities concerned, in collaboration with the colleges located in the neighbourhood, has obvious advantages as regards the maintenance of proper standards. The Commission is of the view that such centres should generally be established at places which have a cluster of good colleges. Universities which have well-established departments of postgraduate studies would be in a position to provide adequate assistance and guidance for the development of such centres in specific fields or disciplines. It may also be possible to pool the facilities and resources available in the existing institutions of the locality for promoting programmes of teaching and research undertaken at these centres.

In pursuance of the above policy, the Commission accepted proposals for the development of centres of postgraduate studies in specific fields at Anantpur (Sri Venkateswara University), Guntur (Andhra University),

Mangalore (Mysore University), Rohtak and Simla (Panjab University), and Warangal (Osmania University). The Committee which examined the proposal of the Mysore University for the establishment of a postgraduate centre at Mangalore recommended the formulation of new types of courses in the biological and physical sciences—at the postgraduate level, which would include a study of the related inter-disciplinary areas. The proposals regarding the development of centres of postgraduate study at Coimbatore and Tiruchirapalli (Madras University) were earlier accepted by the Commission and referred to the Government of Tamil Nadu.\* The cuestion of setting up such centres at Imphal (Gauhati University) and Gulbarga\*\* (Karnatak University) are under the Commission's consideration.

#### **EXAMINATION REFORM**

Alongside changes in curricula, the restructuring of courses and emphasis on improved methods of instruction, there have to be corresponding changes in the system of examinations. Teaching, learning and examinations constitute a unity of functions since they are closely inter-related. The Commission has been giving special attention to problems relating to examination reform. Some years ago four seminars on examination reform were organised by the Commission at the Universities of Osmania, Poona, Patna and Aligarh. The proceedings of the seminars were published under the title 'Evaluation in Higher Education'. A brochure entitled "Three Studies in Examination Technique' was also produced. Several problems were taken up for study by the examination reformunits set up by the M.S. University of Baroda, the Aligarh Muslim University, and Gauhati and Delhi Universities, with financial assistance from the Commission, and a number of studies on various aspects of examination reform were produced. Some other universities have also undertaken research in this A committee consisting of two experts, from each of the four central universities, was appointed by the Commission to review the examination system of the central universities. The report of the committee and a note on the 'credit system' of organising studies were circulated. Ar. information booklet outlining the principles and mechanics of the semester system is under preparation. A committee has also been appointed by the Commission to encourage selected universities to undertake specific measures of examination reform.

A number of universities have already introduced changes in the system and pattern of their examinations. Nineteen universities have modified or restructured their courses and introduced the semester or trimester system in one form or another. Some universities have adopted the system of sessional assignments and devised methods of continuing assessment. The Andhra University, for example, has introduced sessional

<sup>\*</sup> The views of the State Government were communicated to the Commission and the establishment of the centres has since been agreed to.

<sup>\*\*</sup> The establishment of the centre at Gulbarga has since been agreed to.

marks for class work in respect of professional courses. The Aligarh Muslim University has adopted the semester system. The Assam Agricultural University has introduced the trimester system of examinations The Banaras Hindu University has accepted the and objective tests. semester pattern in the faculties of engineering and technology, agriculture, commerce, law and medicine. This system has also been introduced for postgraduate examinations in the faculties of arts, science and music. The Bangalore University has experimented with new types of questions at the pre-university examinations. The Jadavpur University has a system of periodical examinations in the faculties of science, engineering and technology: for the B.A. and M.A. examinations marks have been assigned for tutorial work and a viva-voce test. The Jodhpur University has allotted marks for sessional work in all faculties and the marks obtained are taken into account in the final examinations. The Karnatak University has introduced the semester system in the faculties of engineering and law: and for postgraduate courses in arts and science, marks have been allotted for class tests. The Madras University introduced the semester pattern in the faculty of engineering, and is considering the introduction of this system in the faculties of arts and science. The Madurai University has assigned a fixed percentage of marks for internal assessment in the postgraduate courses in arts and science. The Meerut University has accepted the semester system in which each term extends over five months, and there is an examination at the end of each semester. In addition, they have a summer session to provide facilities to students for earning advance credit or for enabling them to take examinations in courses in which they could not get through at the main semester examinations. The pattern of examination papers has also been modified. In the M.S. University of Baroda, the faculties of home science, social work, education and psychology have almost cent per cent internal assessment. These faculties as well as the faculties of engineering and technology have adopted the semester system. In some faculties, the evaluation procedures are decided by the same teachers as are responsible for class instruction. At the M.A. and M.Sc. examinations of the Rajasthan University 10% marks are reserved for internal assessment in each paper, and at the professional examinations in medicine, engineering and education more weightage is given to internal assessment. The Roorkee University has the semester system of examination for courses in engineering, and this system is also being introduced for M.Sc. courses. The Sardar Patel University intends to introduce the semester system in the faculty of engineering and for the postgraduate courses in physics and chemistry. Internal assessment forms an integral part of the over-all performance of a candidate in the various faculties and examinations of this university. The Saugar University has different systems of internal assessment for various courses. The Shivaji University introduced the semester system in the faculty of engineering as well as for the B.Sc. course, and it intends to introduce the system at the postgraduate level also. Internal assessment in the faculties of home science and education forms part of the examinations conducted by the S.N.D.T. Women's University. The South Gujarat University has introduced a system of compulsory tutorials and internal assessment for undergraduate classes in the faculties of arts, science and commerce. The University of Agricultural Sciences, Bangalore, has the trimester system of teaching and an internal evaluation system. The Orissa University of Agriculture and Technology, Bhubaneswar, adopted the trimester system, and every student is required to complete certain units of instruction and to put in a minimum number of hours of work. The evaluation or grading is based on a series of tests which include laboratory work, class-room discussion, assignments etc. In the faculty of agriculture, the Udaipur University has an internal grading system. The U.P. Agricultural University has a trimester system, and the examinations during each trimester include practical tests, class-room discussions etc. The Visva Bharati has started the system of internal assessment.

It is expected that the experiments in the restructuring of courses and the evaluation of student performance now being tried out in many universities will pave the way for a radical improvement of the educational system. Any improvement brought about in these fields will have a beneficial effect on the methods of teaching and learning.

#### CENTRES OF ADVANCED STUDY

The development of centres of advanced study in the universities is one of the major programmes, undertaken by the Commission, for raising standards at the postgraduate and research levels, and encouraging the pursuit of excellence in specific fields. The concentration of our relatively meagre resources at a few selected centres is obviously necessary to raise the level and quality of academic achievement.

The Education Commission (1964-66) advocated "a rigorously selective approach, a concentration of effort to build centres or peaks of excellence." It recommended that the scale of support to institutions be determined "on the basis of national needs and their level of performance, capabilities and potentiality for growth and development". When resources are scarce the principle of concentration and selectivity becomes all the more imperative. In view of this, the University Grants Commission has been providing assistance to a number of university departments, carefully selected on the basis of their existing facilities and their potentialities for further development, to function as centres of advanced study in specialised fields. The departments recognised by the Commission as centres of advanced study function on an all-India basis, and provide facilities to scholars of outstanding ability for advanced studies and research.

The selection of the university departments for recognition as centres of advanced study is made by the University Grants Commission on the

recommendation of a standing advisory committee of experts. regarding possible departments which could be considered under the scheme are invited from reputed scientists and scholars and also from the individual members of the standing committee. Following up such suggestions, detailed information is first obtained from the departments concerned, and the standing committee is then invited to make a comparative assessment of the work of related departments in different universities. making such assessments the committee tries to base its judgment on such well-defined criteria as the actual achievements of the departments concerned and the current state of their research activities. The committee is expected to pronounce their opinion on the potentiality of a department to grow into an active and viable group and its showing evidence of developing into a strong school in a major area of the subject. The recommendations made by the standing committee are then considered by the Commission. Expert committees are thereafter sent to the departments concerned to make a further detailed examination, and report to the Commission on the possibilities of either providing special assistance to help the development of a major area within the department, or of recognising it as a centre of They make recommendations regarding the nature advanced study. and amount of assistance to be given to the departments concerned over a five-year period. These reports of the visiting committees are again considered by the standing committee on centres of advanced study before they are finally considered by the Commission. Thus the Commission tries to ensure, through several stages, that only judgments based on the highest academic standards and made by the academic community itself, are accepted in the selection of the centres.

The recognition of a university department as a centre of advanced study is a privilege that has to be continually earned and deserved. The continuance of this privilege would depend on the quality of work done and the performance and achievements of the centre. The departments recognised as centres of advanced study send to the Commission periodical reports regarding their work and programmes. Assessment committees, consisting of experts, are appointed to visit the centres and examine the progress made by them. The advisory committee appointed by each centre also helps in evaluating the academic programmes undertaken from time to time and making suggestions regarding new areas of study.

A list of the centres of advanced study and their areas of specialisation is given in appendix II. So far 30 university departments have been recognised as centres of advanced study—of which three, viz., the department of sociology, Delhi University, the department of bio-chemistry, Indian Institute of Science, Bangalore, and the department of history, Aligarh Muslim University, were recognised as centres during 1968-69. The question of giving special assistance to some selected departments in the universitics and colleges to develop a major area in their programmes of advanced study and research is under consideration.

The existing centres have strengthened their teaching and research programmes, organised a number of seminars and symposia in specialised fields, and produced a number of research publications. In 1968-69, about 700 research scholars were working in the centres, and 90 seminars and symposia were organised. The number of research publications produced was over 650. Visiting fellowships have been provided to the centres to enable them to invite scientists and scholars from within and outside the country. The centres have brought out publications giving information about their academic programmes, staff, research projects and the facilities available. Some centres continued their training programmes, extending over an academic year, for college teachers in mathematics. These programmes intended to improve the competence of teachers, have proved to be of great value and benefit to the participants, and have evoked a favourable response.

The centre of advanced study in botany, Madras University, intends to organise an international conference on 'taxonomy and the biology of blue green algae' in 1969-70 and one on the 'pathological wilting of plants' in 1970-71. It is expected that about 30 scientists from the USSR, USA, UK and other countries will participate in these conferences. A similar international symposium on world philosophy is to be organised by the centre of advanced study in philosophy, Madras University, in 1970-71

As in previous years the UNESCO continued to provide assistance to the centres of advanced study for their programmes of teaching and research. This assistance came mainly from the USSR in the shape of equipment, services of experts, and training of Indian scholars in the USSR. Ten consultants and two technicians from the USSR visited the centres in 1968-69, and five Indian scientists went for training to the USSR under the programme. Equipment worth about 93,500 roubles and \$ 30,290 in convertible currency was supplied to the centres. Annual assistance amounting to \$2,85,525 for services of experts, fellowships and equipment is likely to be available to the centres of advanced study from the UNESCO during the biennium 1969-1970. Proposals for setting up instrumentation, computation and documentation facilities in the universities having centres of advanced study, with assistance from the United Nations Special Fund, are presently under consideration. Such facilities are urgently needed for the varied programmes of teaching and research undertaken by the centres of advanced study.

The UNESCO evaluation mission, which earlier in 1967 visited the centres of advanced study, had suggested that for promoting greater contact and collaboration between the centres of advanced study in India and institutions of higher learning and research in the USSR, small liaison groups should be set up. Action in this regard has been initiated by the USSR National Commission and the Indian National Commission for Gooperation with the UNESCO.

Under an assignment from the UNESCO, the centre of advanced study in philosophy, Madras University, undertook the preparation of a report in consultation with UNESCO experts regarding a study of the civilisations of the peoples of Central Asia. The Commission has accepted the proposals of the UNESCO for participation by the centre of advanced study in history, Aligarh Muslim University, and the centre of advanced study in economics, Poona University, in similar work undertaken by institutions in the member States.

The Government of the United Kingdom has been assisting some centres of advanced study. Under this programme the services of British scholars and scientists, training facilities for Indian teachers in the United Kingdom, and specialised equipment are provided for selected centres. During 1968-69, seven British scholars visited India and nine Indian teachers from the centres visited the United Kingdom. Some essential equipment was also received by the centres under this programme.

#### **DEVELOPMENT PROGRAMMES**

#### UNIVERSITIES

The universities had earlier prepared their programmes for the development of teaching and research and provision of necessary facilities for the Fourth Plan period (1966-1971). These programmes included the expansion and diversification of the courses of study and extension of research facilities. Assistance was sought from the Commission for additional staff, library and laboratory facilities, books and equipment, building accommodation etc.

According to the normal practice, the development programmes of the universities were examined and discussed with the universities by visiting committee appointed by the Commission. The reports of the visiting committees assessing the developmental requirements of the universities were then considered by the Commission.

In the light of the recommendations of the visiting committees, grants amounting to Rs. 47.26 crores have been allocated to 60 universities and seven institutions deemed to be universities for the period ending 1973-74. This is inclusive of the expenditure to be incurred on capital projects continuing from the earlier Plan period. In view of the limited funds available, the universities were requested to select, out of the programmes recommended by the committees and accepted by the Commission, such schemes and projects in the first instance, as required an outlay not exceeding 70% of the allocations made to them, including the cost of the continuing schemes. However, it was subsequently found possible to make the total allocation approved by the Commission available to the universities for their development programmes. The Commission also decided that, in the case of schemes involving recurring expenditure, assistance would be extended

up to 1973-74. The universities were requested to assure the Commission, in consultation with the State Government concerned, if necessary, that schemes of a continuing nature would be maintained by them after the Commissions's assistance ceased.

The financial assistance for the development of teaching and research provided to the universities and institutions deemed to be universities, during the period 1966-69 is shown in the following table:

# Development Grants to Universities: 1966-67 to 1968-69

(Rupees in Lakhs)

It was a C. East on Litture	Grants paid				
Items of Expenditure	Science	Humanities and Social Sciences			
Staff	100.21	144.67			
Equipment	207.04	12.39			
Books and Journals	70.45	72.50			
Laboratories and other buildings	229.87	72.97			

Payments during 1968-69 for the development of teaching and research in science subjects and in the humanities (including social sciences) amounted to Rs. 213.42 lakhs and Rs. 96.50 lakhs respectively. The assistance provided by the Commission has enabled the universities to provide the basic facilities needed for their programmes of teaching and research.

In the current plan period, the grants allocated to the universities by the Commission for the development of science subjects, the humanities and social sciences have been substantially increased, as compared to the financial assistance made available in the previous Plans. There has been a significant increase in the allocations provided for additional staff and science equipment. It is expected that, with the help of the grants made available to the universities, an additional staff numbering about 1,600 (professors 11%, readers 24%, lecturers 22% and others 43%) would be available for programmes of teaching and research in science subjects. An attempt has been made to provide an adequate number of senior positions, and to build up the essential infra-structure (laboratory staff, technicians etc.) in the science departments, as needed for advanced training and research. In the field of the humanities and social sciences, an additional staff numbering about 3,100 has been provided (professors 11%, readers 24%, lecturers 40% and others including research assistants 25%).

Assistance is being given to the universities to develop workshop facilities for science departments. Some universities are giving special atten-

tion to developmental work related to the designing and fabrication of equipment required for teaching and research programmes. The M.S. University of Baroda, the Rajasthan University, and the Indian Institute of Science, Bangalore have made progress in this field, and the equipment designed and built by their staff and research students has proved to be a useful substitute for imported equipment. The Commission has been supporting such developmental work, so that the universities may help in building up an indigenous instrumentation technology.

High priority has been given to the provision of library facilities in the universities. Library services of high quality are the heart and soul of all academic programmes, and the development of libraries has to keep pace with the growing and diversified needs of teaching and research, as well as rising enrolment. On the recommendations of the Fourth Plan visiting committees grants amounting to Rs. 78.88 lakhs have been allocated to the universities for the construction/expansion of their library buildings. In 1963-69, grants amounting to Rs. 13.40 lakhs were made available to the universities on this account.

The Commission has been providing assistance to the universities for the development and consolidation of higher education and research in engineering and technology. This assistance is intended for university departments and institutions maintained by the universities. During the period 1966-67 to 1968-69, grants amounting to Rs. 601.45 lakhs were paid to the universities for the development of higher education in engineering and technology. These were intended for the improvement/expansion of existing facilities, five-year integrated courses, courses in chemical engineering, pharmacy and business administration, specialised postgraduate courses and research programmes, fellowships etc. In 1968-69, financial assistance, amounting to Rs. 62.41 lakhs for additional staff and Rs. 57.17 lakhs for equipment, was provided to the universities. During this year postgraduate courses in solid state electronics, applied physics and electronics, and chemical engineering were introduced at the Roorkee University, the Allahabad University and the Birla Institute of Technology and Science The proposals for the introduction of postgraduate respectively. diploma course of three years' part-time duration management at the Indore University, and a full-time postgraduate course in management studies at the Bombay University, were accepted. Visiting committees appointed by the Commission examined the Fourth Plan development proposals of the Universities of Bombay, Calcutta, Banaras, Jadavpur and Roorkee for the development of higher education in engineering and technology. Grants have been made available to these universities for additional staff, buildings, equipment and books. Approval has been given, inter alia, for the introduction of a postgraduate course in pharmacy at the Jadavpur University, an undergraduate course in electronics engineering and a postgraduate course in silicate technology at the Banaras

Hindu University, postgraduate courses in chemical engineering, metallurgical engineering and architecture at the Roorkee University, and a postgraduate course in metallurgical engineering at the Bombay University.

Information about assistance given to universities for a number of other projects relating to teaching and research is given below:

# (i) Area Studies

There is an obvious need for developing studies relating to the life institutions, culture and languages of countries with which India has close social, political and economic relations. The programme of area studies envisages the development of a few centres in selected universities for undertaking specialised studies on specific areas. A standing advisory committee on area studies has been appointed to examine proposals received from the universities in this regard, and to advise the Commission regarding the measures to be taken for implementing the programme. Studies relating to West Asia are being promoted and developed in the Aligarh Muslim University and those relating to China, Japan and Pakistan at the Delhi University. South-East Asian Studies have been undertaken at the Jadavpur University, and South Asian studies at the Rajasthan University. proposals for developing studies relating to East Africa and Soviet Union at the University of Bombay, and those relating to Indo-China at the Sri Venkateswara University have also been accepted. Financial assistance required for promoting these programmes is being provided to the universities concerned. Special scholarships and fellowships have also been created for the purpose.

#### (ii) Publication Grants

For the publication of the research work and doctoral theses, financial assistance is provided to the universities on a cent per cent basis.

# (iii) Unassigned Grants

Grants amounting to Rs. 10.88 lakhs were placed at the disposal of the universities for a number of miscellaneous programmes, and these grants could be utilised by them according to their needs, without reference to the Commission. These could be utilized, *inter alia*, for

- (a) exchange of teachers;
- (b) extension work by university teachers;
- (c) travel grants to teachers for attending international conferences; and
- (d) travel grants to teachers and research scholars for visiting centres of research in the country.

#### (iv) Maintenance Grants: Central Universities

Under Section 12 of the UGC Act, grants for maintenance in addition to those for development are provided to universities established or incorporated by a Central Act. The maintenance grants paid to the Central Universities in 1968-69 are indicated below:

	(Rupees in Lakhs)
Aligarh Muslim University	184.00
Banaras Hindu University	235.69
Delhi University	112.86
Visva-Bharati	51.29

Total: Rs. 583.84 lakhs

#### **COLLEGES**

Colleges obviously represent an important sector of higher education in the country, and the quality of university education would largely depend on the standards maintained by the colleges. Unless the colleges are assisted by being provided the requisite facilities for their academic programmes, no real improvement of university education may be possible.

In 1968-69, about 86.5% of the students and 83% of the teachers in the field of higher education were in the affiliated colleges. The course-wise distribution of colleges and the student enrolment are indicated in appendices III and IV. A statement of the development grants paid to the colleges during 1968-69 is given in appendix V.

#### Liaison between Universities and Colleges

There is an urgent need for closer academic liaison between the universities and their colleges. The UGC Advisory Committee of Vice-Chancellors at its meeting held in September 1968 pointed out that many universities did not have suitable arrangements for giving help and guidance to their affiliated colleges. A committee was set up to examine this need, and suggestions were invited from the universities regarding the machinery they proposed to set up for this purpose. The committee, *inter alia*, made the following recommendations which were generally accepted by the Commission:

- (1) There is need for close liaison and understanding between the university and its affiliated colleges.
- (2) Every affiliating university should have a suitable machinery to provide guidance and assistance to affiliated colleges, and for this purpose a special cell should be created in every university.
- (3) Periodical inspection of the affiliated colleges by a team of

- experts and educationists is essential in the interest of the development of the colleges.
- (4) The university may lay down norms for admission to various courses, physical facilities to be provided in the colleges and appointment of teachers, and also ensure that these norms are fulfilled before the college is granted permanent affiliation.
- (5) The university should be represented on the Board of Management of the colleges.
- (6) The university may organise refresher courses and summer institutes for college teachers.
- (7) The university professors may deliver a course of lectures in affiliated colleges.
- (8) The university should have a say in the framing of service rules for teachers in affiliated colleges.

The recommendations were brought to the notice of the universities.

#### Visits to Colleges

The Education Commission (1964-66) was of the opinion that affiliation is a privilege which is to be 'continually earned and deserved' and, therefore recommended, 'periodical inspection' of colleges affiliated to the universities by eminent university and college teachers. The University Grants Commission has agreed to organise a phased programme of visits to colleges, in consultation with the State Governments and the universities concerned, for examining the problems and difficulties facing such colleges, and suggesting measures for a further improvement of collegiate education.

A committee was appointed to visit the 64 non-professional colleges affiliated to the Rajasthan University, and to make suggestions for the improvement of collegiate education in the area. The committee included representatives of the Rajasthan University and the State Government. Some of the important recommendations made by the committee are as follows:

- (1) It may be desirable to abandon the practice of granting provisional affiliation. Affiliation for science courses particularly should not be given until a college possesses all the basic facilities like laboratories, equipment etc.
- (2) While establishing new colleges the need of the areas in which they are proposed to be started should be carefully considered and assessed on the advice of an expert committee.

- (3) The Rajasthan University may have a machinery to provide bibliographical information regarding the essential books and journal in various disciplines to the colleges, as well as expert advice on setting up and equipping laboratories. The university may appoint expert committees in each subject for a periodical evaluation of teaching in the colleges.
- (4) The provision of suitable library and laboratory buildings and reading room facilities, residential accommodation for teachers and students, non-resident student centres, etc., need urgent attention.
- (5) There is growing need for regular training and orientation programmes for college teachers.
- (6) Student-teacher collaboration in various activities of the colleges should be encouraged, and joint advisory committees of students and teachers set up. Student opinion and participation should be welcomed in planning development programmes, extension work etc.
- (7) There is need for an assessment of the requirement of trained manpower in the State and for reorganising the present university courses on a more functional basis.

The report of the committee was sent to the university and the State Government for their consideration.

In consultation with the Government of Kerala and the Universities of Kerala and Calicut, a committee was appointed in March 1968, to visit the arts, science and commerce colleges of the State, for examining the problems faced by such colleges and for suggesting the steps to be taken for a further improvement of collegiate education in the State. The committee included representatives of the Universities of Kerala and Calicut and the State Government, and visited 85 colleges in two phases. Some of the important observations made by the committee are as under:

- (1) There is need for a suitable and effective machinery in the universities of the Kerala State to enable them to fulfil their responsibilities resulting from their affiliating functions.
- (2) There is at present no liaison or collaboration between sister departments of neighbouring colleges on the one hand, and between these departments and the university departments on the other. Two or more colleges located in close proximity in the same area are allowed to organise postgraduate studies in the same disciplines, without any attempt at co-operative teaching and pooling of the limited resources of the colleges

- concerned. It would be helpful if postgraduate teaching is developed at six or seven centres through cooperative teaching programmes, in collaboration with the university departments.
- (3) Opportunities have to be provided for part-time and non-formal education, particularly through correspondence courses, which will reduce the pressure on the available facilities for full-time education.
- (4) The question of introducing diversified employment-oriented courses at the undergraduate stage with an emphasis on actual work experience, designed for the acquisition of special skills, has to be carefully examined in relation to the local needs and requirements.
- (5) The junior colleges running pre-degree courses of two-year duration could be developed as institutions for running terminal vocational courses along with preparatory courses in general education.
- (6) The colleges should have some consultative machinery such as joint councils of students and teachers for looking into the needs and difficulties of the student community.
- (7) The current procedure for recruitment of the teaching staff needs modification, and provision has to be made for study leave, facilities for research and refresher/orientation courses on a continuing basis.

The report of the committee has been sent for consideration to the Universities of Kerala and Calicut and the Government of Kerala.

It is intended to continue the programme of visits to colleges. The colleges affiliated to the Utkal, Berhampur and Sambalpur Universities will be visited in 1969-70.\*

# Postgraduate Studies

About 45% of the students receiving postgraduate instruction in the country were enrolled in the colleges. Financial assistance is being given to selected colleges for the provision of additional staff, teaching accommodation, library and laboratory facilities etc., on a sharing basis within prescribed ceilings. This has helped a number of colleges to develop and extend facilities for postgraduate instruction.

Assistance was given to 71 colleges for the development of postgraduate departments in the humanities and social sciences, and to 85 colleges for

<sup>\*</sup>These have been visited and the report is being finalised.

the development of facilities for postgraduate studies in science departments up to the end of the Third Plan period. Grants amounting to about Rs. 1.44 crores were made available to the colleges concerned for the purpose. Thereafter, further assistance was provided for the development of postgraduate studies to 82 colleges in science subjects and to 53 colleges in the humanities and social sciences. Grants amounting to Rs. 64.43 lakhs have been approved for this purpose. The proposals received from colleges are usually assessed by expert committees which visit the colleges concerned, to examine the existing facilities, the functioning and achievements of the departments concerned, and the requirements for further development.

# Other Projects

Apart from the assistance given to colleges for postgraduate studies, grants were also provided to a number of colleges, on the prescribed sharing basis, for the extension of libraries and laboratories and purchase of science equipment, books and journals. Up to 1968-69, 765 colleges received the benefit of the Commission's assistance for the development of library and laboratory facilities. In 1968-69, grants amounting to Rs. 31.73 lakhs were sanctioned to 63 colleges for library facilities and Rs. 70.07 lakhs to 92 colleges for laboratory facilities. Information about assistance given to colleges for construction of students' and teachers' hostels, and non-resident student centres is given separately in this report.

Earlier, the Commission provided grants for textbook libraries to arts, science and commerce colleges for purchasing multiple copies of textbooks. A grant of Rs. 15,000 each was also provided to the medical colleges for books. In 1968-69, basic grants for books were given to arts, science, commerce and teachers' training colleges. These grants were also given on a cent per cent basis, subject to fixed ceilings.

The Commission has been assisting the chemistry departments in colleges to the extent of Rs. 5,000 each, on a cent per cent basis, for the purchase of semi-micro analysis equipment, which helps in reducing the recurring expenditure on chemicals. During 1968-69, the Commission gave assistance to 19 colleges for the purchase of this equipment. So far, the Commission has provided financial assistance to 267 colleges for this purpose.

The programme of assistance to affiliated colleges and the training programmes undertaken in the summer schools and institutes organised by the Commission in collaboration with the United States Agency for International Development and the National Science Foundation, USA, have highlighted the need and urgency of evolving a scheme for giving substantial assistance to selected colleges for improving undergraduate science education. Such colleges would maintain the highest possible standards and act as pace-setting institutions. It is expected that a scheme for the purpose would be considered for implementation in the near future.

# Maintenance Grants to Delhi Colleges

The Commission continued to provide maintenance grants to the non-government constituent/affiliated colleges of the Delhi University. The maintenance grants to 40 such colleges in 1968-69 amounted to Rs. 193.35 lashs. In addition, grants amounting to Rs. 30.23 lashs were paid to these colleges for specific projects.

#### PROGRAMMES FOR TEACHERS

The provision of essential amenities and incentives for the teaching profession are obviously an important factor in the maintenance and improvement of standards of education and research.

Information about the strength and pattern of the academic staff in the universities and colleges, and their distribution according to designation, is given in appendices VI and VII.

The Commission had earlier considered the revision of the existing scales of pay for university and college teachers. The recommendations made by the Commission were accepted by the Government of India in 1966. Assistance for implementing the revised scales is being provided by the Ministry of Education and Youth Services, Government of India, through the State Governments.

#### SUMMER INSTITUTES, SEMINARS AND REFRESHER COURSES

Alongside steps to improve the curriculum and the efficiency of the educational process through the provision of the requisite physical and academic facilities, there is a continuing need to acquaint teachers with current developments in their respective fields of work. In view of the rapid advances in various fields of knowledge, a competent teacher has to be a continuing student. Teachers, therefore, have to be exposed to new concepts and developments to enable them to improve their professional competence. The programme of summer institutes and schools, seminars and conferences has been sponsored for this purpose.

During 1968-69, 61 summer institutes were organised in science subjects for the benefit of secondary school teachers. Funds for these institutes were provided by the National Council of Educational Research and Training. The United States Agency for International Development provided books and equipment, and also made available the services of American consultants who worked as members of the academic staff of the institutes. Four of the summer institutes—one each in physics, chemistry, biology and mathematics—were organised in collaboration with the British Council. The total number of participants in the institutes for school teachers was 2302. The number of institutes held so far and the enrol-

ment in these institutes are shown in the following table:

Summer Institutes for School Teachers: 1963-1968 (Figures within brackets indicate the number of institutes organised)

Year		Number of Participants								
	Mathe	matics	P/	ysics	Chen	istry	Biole	y Y		
1963	34	(1)	43	(1)	38	(1)	39	(1)	154	(4)
1964	169	(4)	170	(· <b>I</b> ·)	148	(4)	153	(4)	640	(16)
1965	616	(16)	488	(13)	464	(13)	261	(7)	1829	(49)
1966	490	(12)	468	(12)	410	(11)	308	(8)	1676	(43)
1967	747	(15)	572	(16)	580	(16)	482	(13)	2381	(60)
1968	646	(15)	594	(17)	612	(16)	450	(13)	2302	(61)
Total	2702	(63)	2335	(63)	2252	(61)	1693	(46)	8982	(233)

These summer institutes incidentally helped in establishing links between schools and universities, and in revitalising science education in the schools.

# Summer Institute for College Teachers

During 1968-69, 61 summer institutes for college teachers were organised in collaboration with the National Science Foundation and the United States Agency for International Development. The total number of participants in these institutes was 2109. Up to 1968, 190 summer institutes in physics, chemistry, biology and mathematics were organised and 6922 college teachers participated in them. The number of institutes held year-wise, and the enrolment in these institutes are shown in the following table:

Summer Institutes for College Teachers: 1964 - 1968 (Figures within brackets indicate the number of institutes organised)

1 car	Number of Participants								Tot	Total	
	Mathe	malics	Phys	ics	Chem	istry	Biol	ogy	7		
1964	163	(4)	166	(4)	162	(4)	168	(4)	659	(16)	
1965	269	(7)	258	(8)	248	(7)	277	(7)	1052	(29)	
1966	326	(9)	308	(9)	344	(9)	257	(7)	1235	(34)	
1967	560	(14)	375	$(\dot{1}\dot{1})$	522	(14)	410	(11)	1867	(50)	
1968	627	(18)	508	(14)	449	(14)	525	(15)	2109	(61)	
Total	1945	(52)	1615	(46)	1725	(48)	1637	(44)	6922	(190)	

# Summer Institute in English Language

These institutes offer intensive courses in English language teaching and are designed to acquaint teachers from colleges with new methods and techniques of instruction. During 1968-69, 10 summer institutes were organised in collaboration with the British Council and the Central Institute of English, Hyderabad. The British Council provided books, reading material and the services of experts. The services of specialists working in the Central Institute of English were also available for these institutes.

#### Summer Institutes for Students

In 1968-69, an all-India summer institute in physics was organised for talented students under the auspices of the Delhi University. Forty four students from various parts of the country attended the institute. The topics covered by the institute included particle physics, plasma physics, reactor physics and electronics.

### Research Participation Programmes

As a 'follow-up' of the summer institutes programme, the Commission sponsored a scheme in 1968 for research participation in science subjects by college teachers. The objective of this scheme is to initiate selected teachers and students from colleges into research methodology, and to provide them with opportunities and requisite facilities for acquiring creative educational experience through research, under the guidance of qualified staff. This programme is being implemented in 46 departments of 29 universities. The number of participants is 164 teachers and 86 students.

#### Assessment

The programme of summer institutes was reviewed and assessed in the evaluation conferences attended by the directors of the institutes. In the light of the reports furnished by the directors and of the comments received, steps were taken, wherever necessary, for a further improvement of the programme.

The programme of summer institutes has made sustained progress and has grown in dimensions over the years. The Education Commission (1964-66) described the programme of summer institutes "as a major instrument in the country effort towards the improvement of science education in schools and colleges."

# Conferences, Symposia and Refresher Courses

The Commission provided assistance to the universities for academic conferences, symposia, refresher courses, seminars etc., wherein the participants had an opportunity of discussing important academic problems

and issues relating to the improvement of the standards of teaching and research. During 1968-69, as many as 114 of the proposals made by the universities for organising such conferences and seminars were accepted.

#### Assistance to Teachers for Research and Learned Work

The Commission has been giving assistance to the universities for the provision of facilities required for their programmes of teaching and research. However, individual teachers are sometimes handicapped in carrying on their research or learned work in the absence of the necessary equipment and literature needed specifically by them. To meet this need, a scheme was initiated under which assistance up to Rs. 5,000 in a year is made available to a teacher for field work, books, chemicals etc., required by him in connection with his research, in case such facilities are not normally provided by the institution where he works. During 1968-69, 262 projects in the humanities and social sciences and 509 projects in science subjects (including engineering and technology) were approved for assistance under the scheme. Since the institution of the scheme in 1963, 1053 teachers in the humanities and social sciences and 1,817 in science subjects have received assistance for research projects undertaken by them.

# Exchange of Teachers

It is desirable to utilize the services of talented academic personnel in the universities and other centres of learning as widely as possible. Under the scheme for exchange of teachers, financial assistance is provided to the universities on a cent per cent basis, to enable them to invite reputed teachers and experts from other universities or centres of learning in the country for short periods to deliver lectures, conduct seminars or guide research workers. Opportunities are thus provided for the staff and students engaged in advanced studies to contact outstanding scholars and experts in various fields of knowledge. The persons to be invited are selected by the universities, the duration of their visits depending on the nature of their assignment and the time for which the visiting teachers or experts can be spared by their parent institutions. Expenditure on this account is met by the universities out of the unassigned grants placed at their disposal.

#### Travel Grants

Assistance is available to universities for giving travel grants to teachers and research workers for visiting centres of research or advanced study, or attending conferences, seminars etc., in the country. Expenditure on this is met by the universities on a cent per cent basis out of the unassigned grants provided by the Commission. Financial assistance is also provided for foreign travel to teachers selected for attending international conferences abroad. Such assistance is available to a teacher who is invited to preside at a conference or a section of the conference, or is invited to contribute a paper, provided the sponsoring university is willing to share 50% of the expenditure on travel.

#### Retired Teachers

Universities and colleges are helped for utilising the services of selected teachers beyond the age of superannuation, provided they are otherwise fit to continue their teaching and research. An honorarium of Rs. 6,000 per annum and an annual grant of Rs. 1,000 per annum for meeting expenditure on contingencies relating to the work undertaken are provided to such selected retired teachers. During 1968-69 awards were made to 46 teachers under the scheme. At the end of the year, 165 retired teachers—103 in the humanities and social sciences and 62 in science subjects—were working under this scheme at different institutions in the country.

#### Residential Accommodation for Teachers

There is a pressing need for the provision of suitable residential accommodation for teachers in universities and colleges. A committee on residential accommodation for students and teachers (appointed by the University Grants Commission in 1962) estimated that it would be necessary to construct 900 teachers' hostels, accommodating about 20,000 teachers, and 44,000 staff quarters at a total cost of Rs. 137 crores to accommodate 50% of the teachers in the universities and colleges by the end of the Fourth Plan period. The requisite resources for the purpose are not available. Limited assistance was, however, given to the universities and colleges for the construction of staff quarters and teachers' hostels. Up to 1968-69, grants amounting to Rs. 1.19 crores for the construction of teachers' hostels and Rs. 2.35 crores for staff quarters were paid to the universities. Sixty eight proposals received from colleges for the construction of staff quarters/teachers' hostels were accepted.

#### STUDENT AFFAIRS

The total student enrolment in higher education, in the country as a whole has doubled in less than ten years. This obviously is an extremely rapid rate of growth. The statements given in appendices VIII — X indicate the annual increase in student enrolment since 1958-59, and the trends in enrolment, faculty-wise and by stages of instruction, during the period 1966-67 to 1968-69. It is apparent that during the last three years, the student enrolment has been rising at an average rate of about 13 per cent per annum. At the present rate of growth, the increase in student enrolment in the universities and colleges, in one year, approximately equals the total enrolment in higher education in the United Kingdom. Since the enrolment has been rising rapidly, and the available resources are very inadequate, the provision of essential needs and requirements such as a library and laboratory facilities, teaching staff, residential accommodation, etc., imposes an unbearable strain on the educational system. The maintenance of reasonable standards of academic performance and achievement, under these circumstances, becomes a formidable problem.

#### Welfare and Discipline

The Commission has been giving carnest and serious consideration to questions relating to student unrest, and has taken active and sustained interest in programmes of student welfare and services. It has to be recognised that the causes of student unrest are complex and varied, some of which lie outside the educational system.

The conditions in which students live and work significantly affect the academic atmosphere, and the provision of essential services and amenities generally has a salutary influence on attitudes and academic performance. Problems relating to student welfare and allied matters were carefully examined in 1965-66 by a committee constituted by the University Grants Commission under the chairmanship of Dr. T. Sen. Later, a panel of vice-chancellors and educationists set—up—by the University Grants Commission in October 1966, recommended a number of concrete programmes for the provision of necessary facilities for the student community, and these, it was estimated, would cost Rs. 67 crores. Though funds of this magnititude were not available, the Commission continued to provide all possible assistance to the universities and colleges, within the available resources, for programmes relating to student welfare.

The University Grants Commission has emphasized the necessity of careful and sympathetic consideration of the genuine needs and difficulties of students, and of devising a consultative machinery, so that the authorities in the universities and colleges may discuss these matters periodically with students, and take remedial action expeditiously. It was suggested that joint advisory committees of teachers and students be set up in order to identify and deal with difficulties which agitate the minds of students, and to take appropriate action and, wherever possible, advance action to deal with them. The question of student participation in the academic and administrative affairs of universities and colleges is being examined.\*

Several schemes relating to the provision of essential amenities for the student community have been approved by the Commission, and assistance is being given to universities and colleges within the framework of the resources available. Information about these programmes is given below.

# Scholarships and Fellowships

The enrolments at the postgraduate and research levels in various faculties have risen significantly during recent years. With the increase in the volume and diversity of postgraduate studies and research now being undertaken in the universities and colleges, the need for scholarships and fellowships has been growing apace. Scholarships for undergraduate

<sup>\*</sup> This was considered at the conference of vice-chancellors (April 1969), and the conference of student representatives (May 1969). It is being further examined by a UGC committee on the governance of universities and colleges.

and postgraduate studies are provided by the Ministry of Education and Youth Services and other agencies. In addition to the scholarships and fellowships specially created for various centres of advanced study, and those made available to the universities for approved programmes of research, the University Grants Commission has made provision for a specific number of scholarships and fellowships which are awarded every year for promoting research and advanced studies in different fields.

Senior fellowships of the value of Rs. 500 per month are meant for those who have obtained a doctoral degree or have equivalent published research work to their credit and have shown aptitude for original work. The normal tenure of a senior fellowship is two years, but it may be extended by one year in special cases. A junior fellowship is of the value of Rs. 300 per month and is available for a period of three years. Junior fellowships are generally intended for those who have at least one year's research experience after obtaining the master's degree. A sum of Rs. 1,000 per annum is provided with each fellowship for meeting expenditure on contingencies related to the research undertaken. Wherever necessary, the Commission also provides an additional amount of Rs. 1,000 during the tenure of fellowship for field work and publication of research work undertaken and completed. During 1968-69, the Commission awarded 29 senior and 117 junior fellowships in science subjects, and 22 senior and 75 junior fellowships in the humanities and social sciences. At the end of the year, the number of research scholars working under the fellowships awarded by the University Grants Commission was 210 in science subjects (37 senior and 173 junior) and 191 in the humanities and social sciences (40 senior and 151 junior).

The Commission has also been providing research fellowships in engineering and technology of the value of Rs. 400 per month. Each of these fellowships also carries an amount of Rs. 1,000 per annum for meeting expenditure on contingencies related to the research undertaken, and an additional amount of Rs. 1,000 may be provided for field work and publication of the research work completed. During 1968-69, 42 fellowships were awarded by the Commission for research in various fields of engineering and technology. At the end of the year, 48 scholars were carrying on research in engineering and technology under the fellowships awarded by the the Commission.

Research scholarships, each of the value of Rs. 250 per month available for a period of three years, are placed at the disposal of the universities every year for promoting research in science subjects and the humanities and social sciences. The universities are requested to award two thirds of the scholarships allocated to them in science subjects and the rest in the humanities and social sciences, and to set apart some of these scholarships for encouraging research work in their affiliated colleges, wherever the requisite facilities are available. The number of these research scholar-

ships has been raised and 500 such scholarships were allocated to 64 universities during 1968-69.

For promoting postgraduate studies in engineering and technology, junior fellowships of the value of Rs. 250 per month have been instituted in various branches of such studies in the universities.

Fourteen scholarships (each of the value of Rs. 120 per month) for postgraduate studies, and five for research (each of the value of Rs. 250 per month) were made available to the students of the hill areas of north-east India. Seventeen scholarships (each of the value of Rs. 1,200 per annum) were provided during 1968-69 for honours and postgraduate studies in Arabic and Persian.

# Residential Accommodation for Students

The provision of suitable and adequate hostel accommodation for students is essential for a rich and healthy corporate life and for the improvement of academic standards. A large proportion of students living in their own homes or in rented accommodation do not have the facilities and conditions congenial for serious study.

The question of providing adequate hostel accommodation was examined by a committee appointed by the University Grants Commission in 1962. The committee estimated that additional hostels for three lakh students at an estimated cost of Rs. 120 crore (at the rate of Rs. 4,000 per student) will be needed by the end of the Fourth Plan period to accommodate 25% of the total student population in the universities and colleges. Funds of this magnitude are not available to the Commission.

The Commission, however, continued to assist the universities and colleges for the construction of hostels within the limited funds available for the purpose. During the Third Plan period, the Commission sanctioned construction of 119 hostels in various universities at an estimated cost of Rs. 5.59 crores. The grants paid for student hostels to the universities and colleges during the last three years are as follows:

#### Construction of Hostels: 1966-67 to 1968-69

(Rupees in lakhs)

Year	Grant Paid				
	Universities	Colleges			
1966-67	52.02	29.90			
1967-68	58.39	10.58			
1968-69	72.95	23.85			

Up to 1968-69, the proposals of 372 colleges for the construction of hostels were accepted by the Commission.

#### Students Home/Non-Resident Student Centres

The Education Commission (1964-66) recommended that day study centres and library scats should be provided on a liberal scale for the use of the day scholars who do not have adequate facilities for academic work at home. The UGC has been giving assistance to universities and colleges for the construction of student homes and non-resident student centres which, *inter alia*, are intended to provide facilities for study to day-scholars during their leisure hours.

A student home normally has reading room facilities for 100 students at a time with a stack room for about 5,000 books, a cafetaria and a dining hall. The Commission's assistance to a university for a student home is limited to rupees one lakh against an estimated cost of Rs. 1.25 lakhs, and a further grant for books may also be provided. In view of the value and importance of the scheme, it has been decided that assistance to a university for a student home may be given in future in addition to the financial allocations provided for their Fourth Plan development schemes. Up to 1968-69, the Commission accepted the proposals of 44 universities for setting up student homes.

The Commission has also assisted colleges for establishing non-resident student centres. These are smaller than student homes and the maximum grant payable to a college for such a centre is Rs. 35,000. Up to 1968-69, the proposals of 274 colleges were accepted by the Commission for the construction of non-resident student centres. During the year under review, the proposals of 21 colleges for the construction of non-resident student centres were accepted.

#### **Health Centres**

The Commission has helped universities to establish health centres intended for the medical examination of students and the treatment of simple ailments. Assistance for a health centre for a student population of 5,000 is limited to Rs. 50,000. For a larger student community, the Commission may provide a grant of rupees one lakh to a university. The proposals of 39 universities have so far been accepted for the construction of health centres.

#### Students Aid Fund

The Commission has been contributing to the students aid fund in the universities and colleges wherefrom needy students are given financial assistance for paying their tuition or examination fees, purchasing books or meeting other expenses related to their studies. A grant equal to the total amount subscribed by the students and collected from other sources is provided to a university subject to a maximum of Rs. 10,000 per annum. Grants ranging from Rs. 500 to Rs. 3,000 are given to colleges for the student aid fund on the basis of the student enrolment.\* In 1968-69 the Commission paid grants amounting to Rs- 1.54 lakhs to the universities and Rs. 27.05 lakhs to the colleges for the students aid fund.

#### Student Welfare Programme

In 1968-69, the Commission sanctioned grants to arts, science, commerce, teachers training and law colleges for the improvement of facilities in the existing hostels, and for student common rooms and canteens. These grants could also be utilised for the improvement of sanitary facilities. Colleges were free to formulate alternative programmes of a similar nature. It was suggested that the staff and students should be consulted regarding the utilisation of the grants offered.

Grants to colleges ranged from Rs. 2,000 to Rs. 7,000 under this programme, on the basis of student enrolment. An amount of Rs. 27.65 lakhs was paid to the colleges in 1968-69 on this account.

#### INTERNATIONAL COLLABORATION

Assistance from a number of foreign agencies and countries was made available to the universities through the UGC. Such assistance helped the universities concerned in developing their programmes of teaching and research in various fields. Foreign aid programmes for the benefit of the universities are operated by the University Grants Commission in collaboration with the Department of Economic Affairs, the Ministry of Finance, and other Union Ministries concerned. During 1968-69, a number of universities received assistance from the UNESCO, the UK, USA and some other foreign countries. This assistance was given under specific agreements entered into by the Government of India with the countries concerned.

It has been stated earlier in this report that assistance was made available by the UNESCO, the USSR and the UK for the centres of advanced study. A reference has also been made to the assistance provided by the United States Agency for International Development and the National Science Foundation, USA, for the programmes of summer institutes.

Foreign aid was also made available to the universities from other sources and agencies. Information about some of the important program-

<sup>\*</sup> From 1970-71 onwards the ceiling of assistance to a university has been raised to Rs. 15,000. In colleges the Commission's contribution will range from Rs. 750 of Rs. 3250.

mes relating to such assistance is given below.

# Indo-UK Exchange Programme

The programme of exchange of visits by young scientists between India and the UK was earlier initiated in collaboration with the Indian High Commission in the United Kingdom and the British Council. In 1968-69, six scientists from the United Kingdom visited India, and six teachers from Indian Universities visited the United Kingdom. Nominations of scientists from the UK and India to visit India and the UK respectively during the next year have been finalised. The number of Indian participants in this programme during 1969-70 will be eight.

Professor J.M. Ziman, FRS of the Bristol University visited India and delivered the Rutherford Memorial Lecture in the department of physics, Delhi University. At this suggestion, a short-term course in solid state physics in the Delhi University has been planned for 1970.

Sir Alec G. Dickson, founder director of the UK Voluntary Services Overseas, visited India in September 1968 at the invitation of the University Grants Commisssion and the Ministry of Education and Youth Services, Government of India. The visit was sponsored by the British Council. Sir Alec Dickson visited Bangalore, Bombay, Roorkee and Delhi and had discussions with the Union and some State Ministers, vice-chancellors, officials of the University Grants Commission, principals and student groups on problems relating to the national service programme. At the conclusion of his visit, he submitted a report on the programme of national service by students proposed to be introduced by the Ministry of Education and Youth Services.

#### United States P.L. 480 Programme

Assistance from the rupee fund of the United States (PL 480 Programme) was provided to a number of university departments and other institutions for research projects in agricultural, physical and biological sciences. As stated in the report of 1967-68, the Government of India appointed a national screening committee, with Professor D.S. Kothari as chairman, to examine the proposals for research in the physical and biological sciences, received from the universities and other institutions, for financial assistance from the United States PL 480 Funds. During 1968-69, 24 proposals estimated to cost Rs. 63.34 lakhs were approved by the committee. The projects cleared by the committee were of a high priority, and of value and importance both to India and the USA. At the end of 1968-69, 21 research projects estimated to cost Rs. 55.46 lakhs were being implemented in the universities and colleges under the programme. The projects involve collaboration with seven US agencies interested in physical, biological and agricultural sciences. Besides, these, a large number of projects in basic sciences, but of importance to agriculture, have been taken up by the university departments in collaboration with the US Department of Agriculture, and they are supported by PL 480 rupee funds.

# Indo-USSR Agreement of Economic and Technical Cooperation

It was stated in the report for 1967-68, that under the Indo-USSR Agreement of Economic and Technical Cooperation, it was proposed to set up a specialised institute of earth sciences with Soviet assistance in the Osmania University, Hyderabad. In this connection, Professor M.I. Plusnin, head of the department of geology, Moscow Geological Prospecting Institute, visited India and worked out a detailed project for a centre for teaching and research in geophysics in consultation with the Osmania University. The expenditure on the project, it is estimated, will be Rs. 96.05 lakhs, including the cost of specialised equipment and the training of Indian teachers and students in the USSR. The report of Professor Plusnin has been accepted by the University Grants Commission and the project is to be implemented in two phases. In this connection a two-man delegation from the Osmania University visited the USSR for discussions with the Soviet authorities. The delegation visited a number of institutions and determined the specialised fields in which the services of Soviet consultants would be obtained, and the areas in which training would be required in the USSR for Indian students and teachers. The list of equipment to be procured from the USSR was also finalised.

The Commission has examined the immediate requirements of the centre and has agreed to provide financial assistance to the Osmania University for this purpose.

It has been decided to set up a school of advanced studies in electronics and automation at the Indian Institute of Science, Bangalore, with Soviet assistance. The expenditure on the project, it is estimated, will be Rs. 176 lakhs. Assistance would be provided by the USSR, under the Indo-USSR Agreement for Economic and Technical Cooperation, for equipment, services of experts, training facilities etc.

#### Cultural Exchange Programmes

Exchange of visits by educationists, teachers and scholars between India and other countries are arranged by the Commission under the programmes of cultural exchange, finalised by the Government of India with the Governments of the countries concerned. During 1968-69, exchange programmes were in operation between India and Bulgaria, Czechoslovakia, France, German Democratic Republic, Federal Republic of Germany, Hungary, Poland, Rumania, the USSR, Yugoslavia and the United Arab Republic. The Commission also agreed to implement cultural exchange programmes on an ad hoc basis with Mexico, Ghana and Nigeria. During 1968-69, 49 Indian teachers and scholars visited different countries under the various cultural exchange programmes, and 44 foreign educationists came to India. Reports are normally received from the participants in

the programmes, and requisite action is taken on the suggestions or recommendations made.

The Indo-USSR programme also covers visits by Russian language teachers who work in the Indian Universities.

The duration of visits for Indian scholars and teachers under the cultural exchange programmes ranges from 3 to 12 weeks for short-term visits, and six months to two years for long-term training. The German Democratic Republic, Hungary and the USSR have provided training scholarships of one to two years' duration, to enable Indian students to specialise in various fields, mainly in the sciences, engineering and technology. The exchange of visits under the various cultural exchange programmes has helped universities to establish closer academic contacts with universities outside the country, and has also promoted exchange of information and ideas regarding advanced studies and research.

A committee has been constituted to advise the Commission on matters regarding promotion of contacts and cooperation with foreign countries under the cultural exchange programmes. The Committee recommends to the Commission the names of Indian participants in these programmes.

#### Other Programmes

In 1968-69, proposals received from the University of Roorkee, for the services of foreign experts, for the training of Indian teachers abroad and for the supply of equipment in the fields of sanitary engineering and architecture, were accepted by the technical assistance committee of the Ministry of Finance.

The Government of the United Kingdom agreed to the supply of equipment costing £ 50,000 for the central instrumentation workshop of the Indian Institute of Science, Bangalore.

Professor S. Chandrasekhar, FRS of the University of Chicago, USA visited India and delivered the Nehru Memorial Lecture in November 1968. At the request of the University Grants Commission, he visited the Universities of Osmania, Madras and Bombay and the Indian Institute of Science, Bangalore. Professor S. Maclane of the department of mathematics, Chicago University delivered some lectures in the faculty of mathematics, Delhi University. Two British historians, Professor E. Hobshawm and Professor J. Morris of the University of London visited a number of universities in 1968-69, and gave lectures and conducted seminars.

The information received from the Indian National Commission for Co-operation with UNESCO regarding the organisation of various international training programmes, seminars and conferences was brought to the notice of universities and colleges, and names of suitable candidates were recommended to the Indian National Commission for participation in such programmes.

### FOREIGN EXCHANGE

It has been pointed out in the earlier reports that in view of the development of specialised courses and the research programmes undertaken, there is a pressing need for adequate foreign exchange, particularly for sophisticated equipment which cannot at present be fabricated within the country. The foreign exchange that has been made available to the universities has so far been very inadequate in relation to their essential needs and requirements. A committee appointed by the Commission to examine the question of allocation of foreign exchange to the universities suggested that foreign exchange worth Rs. 9.94 crores would be needed during the Fourth Plan period for the development of higher education and research. It was recommended that powers should be delegated to the University Grants Commission for releasing foreign exchange to the universities for additional equipment as well as items and accessories required for maintenance and replacement. The committee was of the view that for importing chemicals without licence the ceiling should be raised from Rs. 250 to Rs. 1,000 for each indent.

Since powers for the release of foreign exchange to the universities have not been delegated to the University Grants Commission, the proposals received from the universities and colleges for the import of equipment were referred for clearance to the Ministry of Finance, Government of India, through the Ministry of Education & Youth Services. During the licensing year 1968-69, foreign exchange worth Rs. 16.31 lakhs for the free resources area and Rs. 39.79 lakhs for the rupee payment area was provided to the universities and colleges. The foreign exchange in respect of free resources or general area was made available only for spare parts, accessories etc., required for maintenance or replacement.

Under a loan agreement entered into by the Government of India with the United States Agency for International Development, foreign exchange worth \$4.87 million was made available to the universities and colleges for the import of specialised equipment from the United States. This is expected to meet, to some extent, the pending requirements of foreign exchange for importing equipment from the USA. Lists of equipment required by the universities and colleges were drawn up and submitted to the Government of India. These, inter alia, include highly sophisticate equipment needed for developing computer facilities in a number of universities.

During 1968-69, the Indian National Commission for Cooperation with UNESCO made available UNESCO coupons worth \$40,000 which were allocated by the UGC to some universities and colleges. The present allocation of UNESCO coupons is inadequate and the National Commission has been requested to enhance it suitably.

### ACADEMIC ADVICE AND CONSULTATION

The Commission normally functions with the help and assistance of expert committees appointed to examine problems related to the development of teaching and research. Academic opinion is regularly consulted and the composition of the UGC committees is made as representative as possible. Standing committees are reconstituted from time to time. The procedure adopted enables the Commission to obtain the benefit of independent academic advice based on an objective and critical examination of various problems and difficulties in the field of higher education.

Information about some of the important committees and conferences convened by the University Grants Commission during 1968-69 is given below.

## 1. Advisory Committee of Vice-Chancellors

An advisory committee of Vice-Chancellors (consisting of 16 Vice-Chancellors) was earlier set up to advise the Commission on matters regarding development of higher education, coordination between the universities in specialised facilities for postgraduate studies and research, and other problems engaging the attention of the universities and the Commission. It was agreed that the committee would meet two or three times in a year. The second meeting of the advisory committee was held in September 1968. The committee, *inter alia*, made the following suggestions:

- (a) A carefully selected number of colleges may be permitted to function as autonomous institutions within the framework of the universities to which they are affiliated.
- (b) There is need for setting up development panels in the universities.
- (c) The concept of block grants for universities, with provision for an annual increase, deserves support.
- (d) There is need for uniformity in the commencement of academic terms and examinations, and declaration of examination results.
- (e) It should not be necessary to insist on the production of a migration certificate before a student is admitted.

The Commission generally accepted the recommendations made by the committee. Action on the recommendations is being taken.

## II. Meeting with Vice-Chancellors of Northern Universities

It was earlier agreed that some meetings of Commission would be held outside Delhi, which would give an opportunity for discussing problems relating to the development and coordination of higher education and research with the vice-chancellors of the universities in the region concerned.

The Commission met the vice-chancellors of southern universities at Madras in December 1967 to discuss some of the important recommen-

dations made by the Education Commission (1964-66). At a meeting of the Commission with the vice-chancellors' of universities in the States of Bihar,, Haryana, Uttar Pradesh, Jammu & Kashmir and Panjab held in November 1968, the following points, *inter alia*, were emphasized:

- (a) It is necessary at least to double the funds of the UGC as already recommended by the vice-chancellors' conference in September 1967, in order to enable the universities to meet their pressing needs for consolidation and the improvement of academic standards.
- (b) It would be desirable to make provision for institutional cooperation and regional coordination in the development of facilities. This would require the provision of scholarships to enable students to go to the universities or centres offering courses in particular disciplines.
- (c) It would be of benefit and value to associate students in matters of direct concern to them by setting up consultative committees.
- (d) It would be desirable to introduce in the universities a system by which students could earn 'credits' by taking a variety of courses relating to their studies. This could promote a broad-based education and introduce flexibility in the choice of subjects, apart from encouraging interdisciplinary studies and research.

## III. Advisory Panels

It was stated in the report for 1967-68 that advisory panels have been constituted in the physical sciences, including mathematics and statistics, biological sciences, and earth sciences to advise the Commission on such matters as may be referred to them, and also to bring to the notice of the Commission matters considered appropriate for the promotion of teaching and research in the disciplines concerned. The panels met in September 1968, and made several suggestions regarding the improvement of standards of teaching and research in the disciplines concerned. The important issues considered by the panels were inter-disciplinary courses, collaboration between universities and national laboratories, production of quality text books, organisation of postgraduate science instruction in the affiliated colleges, identification of science talent etc. A few sub-committees of these panels were appointed to suggest concrete measures for implementing the programmes recommended by the panels. Steps have already been taken to encourage a coordinated study of botany and zoology in the postgraduate departments of biological sciences in a few universities; and a major research programme for the study of different aspects of the geology, geomorphology, geophysics, geochemistry and mineralogy of the Deccan Trap was sponsored with the collaboration of eight universities and one of the national laboratories. The question of promoting further inter-university research programmes on a collaborative basis is being examined.

A panel of experts in the humanities and social sciences has also been appointed to advise the Commission regarding the development of these areas.

## IV. Committees on Syllabi

One of the most important requisites for the improvement of standards is the reform of existing syllabi and courses of instruction. In view of the rapid advances in various fields of knowledge it is imperative that the existing courses of study be critically reviewed from time to time.

The University Grants Commission had carlier appointed expert committees in a number of important subjects in the physical and biological sciences and the humanities and social sciences, to review and assess the existing facilities, syllabi, and standards of teaching and research, and to make suggestions for their further improvement. The reports of the committees on mathematics, botany, biochemistry, chemistry, geography, English, social work, library science, education, sociology, political science, philosophy, psychology and Arabic and Persian have already been made available to the universities for their consideration. The review committees concerned with anthrophology, history and statistics have also completed their work.

Review committees have been appointed for physics and biological sciences. The latter will, *inter alia*, examine the development of an integrated study of life sciences, including botany, zoology, biophysics, biochemistry, and biometrics. A few universities have already initiated action for organising such courses at the postgraduate level.

A committee has also been constituted to advise the Commission on the development of legal education and research. The committee has issued a questionnaire to the institutions concerned and collected the relevant data and information. The work of the committee is in progress.

The recommendations made by the review committees regarding improvement in syllabi and the level of achievement in various disciplines have been generally helpful to the universities in planning or reorganising their academic programmes.

The existing syllabi are also reviewed in the seminars and academic conferences convened by the universities with the Commission's assistance.

## V. Committee on Visiting Studentships

A UGC committee recommended the institution of visiting studentships to enable students to visit places of interest in the field of national development, culture, history, education etc. The Commission agreed to provide limited assistance to the universities for this purpose with effect from 1969-70.

### VI. Other Committees

- (a) A standing committee was constituted to advise the Commission on matters relating to higher education in engineering and technology.
- (b) A committee has been appointed to review the working and organisational set-up of university libraries and to examine the current techniques of training in library science. The work of the committee is in progress.
- (c) A standing advisory committee on social work education was appointed with the following terms of reference.
  - (i) to review the present position of social work education in different institutions, and to make recommendations regarding the maintenance of adequate standards of training, teaching and research.
  - (ii) to assess personnel requirements in the field of social work and to suggest training programmes to meet this need;
  - (iii) to encourage research in the field of social work; and
  - (iv) to consider the possibility of making use of social welfare agencies for the training of social workers.

The committee held two meetings in 1968-69 and it appointed subcommittees to examine the undergraduate and postgraduate courses in social work with special reference to the needs of rural areas, to work out criteria for estimating manpower requirements in the field of social work, and to prepare a memorandum regarding conditions of affiliation for schools or institutions of social work.

- (d) An advisory committee was appointed to consider measures for qualitative improvement of teacher education. The committee recommended the development of schools of education in selected universities, provision of scholarships and fellowships, organisation of summer schools on a planned basis, and assistance to university departments of education and teacher training colleges for the improvement of their academic and physical facilities.
- (e) A committee was set up to consider the need for suitable arrangements in the universities for giving assistance and guidance to the affiliated colleges on various matters, including the utilisation of grants.
- (f) The UGC advisory committee of vice-chancellors at its meeting held in September 1968 noted that the resolution of the Government of India on the national policy of education issued in July, 1968 was broadly in conformity with the recommendations of the Education Commission (1964-66), and expressed the opinion that it should be the basis of the development of higher education in the country. A committee appointed to suggest measures for implementing the recommendations regarding higher

education in the aforesaid resolution made the following suggestions:

- (i) The Commission should evolve a policy with regard to the opening of new colleges and for enforcing of regulations for admissions in the universities on an all-India basis. The location of the colleges should be planned by the universities in consultation with the State Government and the local community.
- (ii) The development of colleges should be given a high priority.
- (iii) No institution of higher education should be started outside the university. The university system should be flexible so that institutions can attempt innovation and experimentation.
- (iv) There is need for organising orientation courses for teachers.
- (v) An adequate number of scholarships should be provided to needy and meritorious students. It would be an advantage to associate student representatives with the machinery for the selection of students for the award of these scholarships.

### **PUBLICATIONS**

The Commission has been bringing out publications from time to time giving statistical and other information about the development of university and collegiate education in the country. The reports of various committees, conferences, and seminars convened to consider important problems relating to teaching, research and allied matters in the field of higher education have also been made available in print. These are distributed to the universities and other institutions concerned. A selected list of the UGC publications is given in appendix XI.

In collaboration with the Ministry of Education and Youth Services, the Commission has been promoting the publication of low-priced editions of standards works (in science, the humanities and social sciences) originally printed in the USA, UK and USSR. The titles to be published are evaluated by experts in the subjects concerned and suitable recommendations are made to the Ministry for this purpose. Up to 1968, over 1,000 books were brought out in low-priced editions. In 1968-69, 230 titles were recommended by the Commission for publication under this programme.

The policies formulated and the programmes implemented by the Commission within the financial allocation made available to it, have already been described, The expenditure for plan and non-plan programmes

While planned and coordinated efforts have been undertaker in the crucial sectors of higher education, it has to be recognised that unless the effort on specific programmes is above a certain critical size, wor hwhile results are not likely to be achieved. The rapidly changing and dyna-

under major heads, incurred during 1968-69 is shown in appendix XII.

\* \*

mic situation in the field of higher education calls for a commensurate investment of effort and resources. It cammot be gainsaid that the universities and colleges need much bigger resources than those currently available to them for the maintenance and improvement of educational standards.

It may also be stated in this connection that the financial allocations provided to the Commission do not cover all sectors of higher education. Funds for the development of higher education in agriculture, medicine, engineering and technology (in institutions not maintained directly by the universities) are not available to the Commission. A planned and coherent development of the whole system of higher education is necessary in view of the need for coordination and maintenance of standards. There is close interrelation between different sectors of higher education (liberal arts, natural sciences, social sciences, agriculture, medicine etc.), particularly in the context of the progress and advances in various fields of knowledge, and any fragmentation or division of responsibility as regards the general policy and coordination of standards is likely to be confusing and harmful to the best interests of education and to the efficient utilisation of our limited resources.

It may be emphasised that prior consultation with the Commission is desirable when new universities are proposed to be established, and when legislation about universities is undertaken. In dealing with university structure, organisation and policy, it is necessary to maintain coordination on an all-India level, and full consideration should be given to the views of the Commission, which is specially concerned with the coordination of higher education on a national basis.

The Commission is grateful to the universities and colleges for their continued cooperation, and to the teachers and educationists who have worked as members of the various UGC committees. The Commission also places on record its appreciation of assistance and cooperation received from the State Governments, from various Ministries of the Government of India, from the Planning Commission and from other agencies associated with the Commission's work and activities.

P.J. Philip Secretary D.S. Kothari
Chairman

A.S. Adke
G.K. Chandiramani
Indumati Chimanlal
S. Dhawan
P. B. Gajendragadkar
A. B. Lal
Tapas Majumdar
P. Govindan Nair

## APPENDIX II

## INDIAN UNIVERSITIES AND INSTITUTIONS DEEMED TO BE UNIVERSITIES : 1968-69

## ARRANGED CHRONOLOGICALLY

Year of Estab- lishment	Estab- No. Universities ishment		Total Student En <del>r</del> olment
1	2	3	4
1857	(1)	Calcutta University	1,91,539
	(2)	Bombay University	81,365
	(3)	Madras University	1,07,680
1887	(4)	Allahabad University	13,918
1916	(5)	Banaras Hindu University (Varanasi)	12 <b>,69</b> 4
	(6)	Mysore University	53,020
1917	(7)	Patna University	12 <b>,43</b> 4
1918	(8)	Osmania University (Hyderabad)	49,014
1921	(9)	Aligarh Muslim University	7,297
	(10)	Lucknow University	2 <b>3,</b> 148
1922	(11)	Delhi University	50,705
1923	(12)	Nagpur University	58,645
1926	(13)	Andhra University (Waltair)	57,726
1927	(14)	Agra University	41,601
1929	(15)	Annamalai University (Annamalamagar)	6,173
1937	(16)	Kerala University (Trivandrum)	1,06,178
1943	(17)	Utkal University (Bhubaneswar)	25 <b>,9</b> 45
1946	(18)	Saugar University	14,470
1947	(19)	Rajasthan University (Jaipur)	49,087
	(20)	Panjab University (Chandigarh)	1,52,961
1948	(21)	Gauhati University	51,264
	(22)	Jammu & Kashmir University (Srinagar)	20,039
1949	(23)	Roorkee University	2,305
	(24)	Poona Universiy	53,601
	(25)	M.S. University of Baroda	15,375
	(26)	Karnatak University (Dharwar)	50,850
1950	(27)	Gujarat University (Ahmedabad)	59,894
1951	(28)	S.N.D.T. Women's University (Bombay)	8,098
	(29)	Visva-Bharati (Santiniketan)	1,218
19 <b>5</b> 2	(30)	Bihar University (Mu <b>z</b> affarpur)	45,13 <b>6</b>
19 <b>54</b>	(31)	Sri Venkateswara University (Tirupati)	<b>25,470</b>
1955	(32)	Sardar Patel University (Vallabh Vidyanagar)	10,350
	(33)	Jadavpur University (Calcutta)	<b>5,4</b> 59
1956	(34)	Kuruksetra University (Kurukshetra)	3,779
	(35)	Indira Kala Sangit Vishvavidyalaya (Khairagarh)	99
1957	(36)	Vikram University (Ujjain)	27,594
	(37)	Gorakhpur University	29,765
	(38)	Jabalpur University	17,962

## APPENDIX I (Contd.)

1	2	3	4
1958	(39)	Varanaseya Sanskrit Vishvavidyalaya (Varanasi)	909
	(40)	Marathwada University (Aurangabad)	23,995
1960	(41)	U.P. Agricultural University (Nainital)	1,460
	(42)	Burdwan University	36,447
	(43)	Kalyani University	2,109
	(44)	Bhagalpur University	35,338
	(45)	Ranchi University	31,988
1961	(46)	K.S. Darbhanga Sanskrit Vishvavidyalaya	
1962	<b>(47</b> )	Punjab Agricultural University (Ludhiana)	3,199
	(48)	Punjabi University (Patiala)	7,957
	(49)	Orissa University of Agriculture & Technology	
		(Bhubaneswar)	1,113
	(50)	North Bengal University (Siliguri)	16,699
	(51)	Rabindra Bharati (Calcutta)	1,703
	(52)	Magadh University (Gaya)	36,537
	(53)	Jodhpur University	8,366
	(54)	Udaipur University	6,689
	(55)	Shivaji University (Kolhapur)	37,534
1964	(56)	Indore University	16,215
	(57)	Jiwaji University (Gwalior)	17,514
	(58)	Ravi Shankar University (Raipur)	18,783
	(59)	University of Agricultural Sciences (Bangalore)	1,696
	(60)	Andhra Pradesh Agricultural University (Hyderabad)	2 <b>,</b> 57 <b>6</b>
	(61)	Bangalore University	31,423
	(62)	Jawaharlal Nehru Krishi Vishvavidyalaya	
		(Jabalpur)	1,591
1965	(63)	Dibrugarh University	19,791
1966	(64)	Kanpur University	29,674
	(65)	Meerut University	37,698
	(66)	Madurai University	48,477
	(67)	Saurashtra University (Rajkot)	21,394
	(68)	South Gujarat University (Surat)	16,635
1967	(69)	Berhampur University	5,835
	<b>(70)</b>	Sambalpur University	9,595
1968	(71)	Gujarat Ayurveda University (Jamnagar)	1,901
	(72)	Jawahar Lal Nehru University (New Delhi)	_
	(73)	Maharashtra Krishi Vidyapeeth* (Poona)	5,209
	(74)	Calicut University	44,544
	(75)	Awadhesh Pratap Singh University (Rewa)	9,004
	(76)	Assam Agricultural University (Jorhat)	

<sup>\*</sup> Since renamed as Mahatma Phule Krishi Vidyapeeth.

## APPENDIX I (Contd.)

Year of S. Recogni- No. tion*			Total student Enrolment
1	2	3	4
1958	(1)	Indian Institute of Science (Bangalore)	868
	(2)	Indian Agricultural Research Institute (New Delhi)	517
1961	(3)	Indian School of International Studies (New Delhi)	157
1962	(4)	Gurukul Kangri Vishvavidyalaya (Hardwar)	241
	(5)	Jamia Millia Islamia (New Delhi)	1,027
1963	(6)	Gujarat Vidyapith (Ahmedabad)	472
	(7)	Kashi Vidyapith (Varanasi)	1,717
1964	(8)	Tata Institute of Social Sciences (Bombay)	146
	(9)	Birla Institute of Technology & Science (Pilani)	2,246
1967	(10)	Indian School of Mines (Dhanbad)	417
		Total	21,43,264

- Note; 1. The Universities have been arranged according to the year in which the respective Acts were adopted.
  - 2. The enrolment figures generally indicate the position as on August 15, 1968 and include the enrolment in constituent/affiliated colleges of the universities concerned. For Indira Kala Sangit Vishvavidyalaya, Rabindra-Bharati & Varanaseya Sanskrit Vishvavidyalaya, figures relate to the university campuses only. Information about enrolement in K.S. Darbhanga Sanskrit Vishvavidyalaya is not available. For the colleges which did not send the statistics for 1967-68, the data of the previous year has been used.
  - The total does not include the enrolment in intermediate classes of the colleges affiliated to the Board of High School and Intermediate Education, Uttar Pradesh.

<sup>\*</sup> Year of recognition as an institution deemed to be a university under Section 3 of the UGC Act, 1956.

APPENDIX II

CENTRES OF ADVANCED STUDY

S. No.	University	Department Recognised as Centre of Advanced Study	Major Field of Specialisation
1	2	3	4
		I. SCIENCES	
1.	Annamalai	Marine Biology	Marine Biology
2.	Bombay	Mathematics	Pure Mathematics
		Chemical Technology	Applied Chemistry
3.	Calcutta	Mathematics	Applied Mathematics
		Radiophysics and	Radiophysics and
		Electronics	Electronics
4,	$\mathbf{D}$ elhi	Physics	Theoretical Physics
		Chemistry	Chemistry of Natural
			Products
		Botany	Plant Morphology
			and Embryology
		Zoology	Cell Biology and
			Endocrinology
5.	Indian Institute	Bio-Chemistry	Proteins, Lipids
	of Science,		and Vitamin <b>s</b>
	Bangalore.		
6.	Madras	Physics Physics	Crystallography &
			Biophysics
		Botany	Plant Pathology &
			Mycology
		Mathematics	Pure Mathematics
7.	Osmania	Astronomy	Astronomy
8.	Panjab	Geology	Himalayan Geology
			& Palaeontology
		Mathematics	Pure Mathematics
9.	Saugar	Geology	Structural Geology
			and Geomorphology
	II. SOC	IAL SCIENCES AND HUN	MANITIES
1.	Aligarh	History	Medieval Indian
			History
2.	Annamalai	Linguistics	Dravidian
			Linguistics
3.	Baroda	Education	Education
4.	Banaras	Philosophy	Indian Philosophy
5.	Bombay	Economics	Public Finance &
			Industrial Economics

## APPPENDIX II (Contd.)

1	2	3	4
6.	Calcutta	Ancient Indian History	Ancient Indian
		and Culture	History & Culture
7.	$\mathbf{Delhi}$	Economics	Economic Development
			& Economic History
		Sociology	Sociology
8.	Madras	Philosophy	Advaita & allied
			System of Philosophy
9.	Poona	Economics	Agricultural
		(Gokhale Institute)	Economics
		Linguistics	Applied Linguistics
		(Deccan College)	•
		Sanskrit	Sanskrit Literature
10.	Visva-Bharati	Philosophy	Metaphysics

APPENDIX III

DISTRIBUTION OF COLLEGES ACCORDING TO COURSES OF STUDY
1966-67 to 1968-69

		Num	ber of Colleg	ges	
Course of Study		1966-67	1967-63	1968-69	
1	40	2	3	4	
Arts, Science & Commerce		1,915	2,054	2,219	
Engineering and Technology		105	106	105	
Medicine, Pharmacy, Ayurveda, Nursing and Dentistry		137	141	157	
Law		69	66	77	
Agriculture		54	54	53	
Veterinary Science		20	21	21	
Education		200	2 <b>02</b>	224	
Oriental Learning		177	179	179	
Others (Physical Education and Music/Fine Arts)		72	76	77	
	Total	2,749	2,899	3,112	

APPENDIX IV

FACULTY-WISE ENROLMENT\*: UNIVERSITIES AND AFFILIATED

COLLEGES

1968-69

Faculty	University	Affiliated	Total	% in Affilia	ated Colleges
	Departments: University Colleges	Colleges		1968-69	1967-68
1	2	3	4	5	6
Arts	1,17,028	7,98,809	9,15,837	87.2	86.9
Science	65,741	5,96,440	6,62,181	90.1	89.8
Commerce	20,726	2,14,819	2,35,545	91.2	91,7
Education	5,861	42,675	48,536	87.9	88,1
Engineering/ Technology	28,023	73,357	1,01,380	72.4	71.6
Medicine	7,958	82,512	90,470	91.2	90.6
Agriculture	15,578	12,800	28,378	45.1	62.5
Veterinary Science	3,718	2,872	6,590	43.6	52.6
Law	18,978	30,542	49,520	61.7	60.2
Others	2,227	2,600	4,827	53.9	55.7
Total	2,85,838	18,57,426	21,43,264	86.7	86.5

<sup>\*</sup> Excluding enrolment of intermediate classes affiliated to the Board of High School and Intermediate Education, Uttar Pradesh.

APPENDIX V
DEVELOPMENT GRANTS PAID TO COLLEGES: 1968-69

S. No.	Scheme	Amount (Rupees)
1.	Construction of Hostels	23,85,348
2.	Laboratory and Library Facilities	58,47,098
3.	Construction of Staff Quarters	9,04,780
4.	Development of Postgraduate Studies in Science	9,57,016
5.	Development of Postgraduate Studies in Humanities and Social	
	Sciences	4,96,578
6.	Books and Journals	37,12,330
7.	Welfare Schemes:	
	(i) Students Aid Fund	27,04,894
	(ii) Non-Resident Student Centres	3,01,000
	(iii) Hobby Workshops	32,770
	(iv) Water Coolers	1,17,117
	(v) Students Welfare Programme	27,64,500
8.	Grants to Constituent/Affiliated Colleges of Delhi University	
	for Specific Purposes	30,22,583
9.	Centenary Grants	85,000
10.	Construction of Shooting Ranges	16,063
11.	Scholarships etc.	
	(i) Research Fellowships	
	(a) Humanities	1,08,010
	(b) Science	1,20,987
	(ii) Utilisation of Services of Retired Teachers	3,56,518
	(iii) Financial Assistance to Research Workers	. ,
	(a) Humanities	81,537
	(b) Science	1,62,699
	(iv) Scholarships in Arabic and Persian	15,789
	(v) Research Training Scholarships	1,12,347
	(vi) Hill Area Scholarships	10,316
12.	Revision of Salary Scales	12,954
13.	Chalk Boards	1,74,257
14.	Travel Grants for attending Conferences	26,309
15.	Grants to Colleges for Miscellaneous Schemes	28,558
	Total	2,45,57,388

APPENDIX VI
STRENGTH AND DISTRIBUTION OF TEACHING STAFF IN

UNIVERSITY DEPARTMENTS UNIVERSITY COLLEGES
1966-67 to 1968-69

Year	Professors	Readers	Lecturers*	Tutors   Demonstra- iors	Total
1	2	3	4	5	6
1966-67	1,401 (9.4)	2,320 (15.6)	1 <b>0</b> ,264 (68.9)	915 (6.1)	14,900
1967-68	1,606 (9.2)	2 <b>,57</b> 5 (14.8)	12,110 (69.3)	1,165 (6.7)	17,456
1968-69	1,872 <sub>3</sub> 9.8}	2,834 ( <b>14.9</b> )	1 <b>2,99</b> 1 (68.2)	1,361 [7.1]	19,058

Note:—Figures within brackets indicate the percentage of cadre to the total staff in that year.

<sup>\*</sup> Including assistant professors and assistant lecturers.

## APPENDIX VII

## DISTRIBUTION OF TEACHING STAFF IN AFFILIATED COLLEGES ACCORDING TO DESIGNATION

1966-67 to 1968-69

Year	Senior Teachers*	Lecturers**	Tutors  Demonstrators	Total
1	2	3	4	5
1966-67	11,095 (14.2)	<b>56,</b> 164 (71.6)	11 <b>,09</b> 2 (14.2)	78,351
1967-68	11,655 (13.7)	61,861 (72.8)	11,482 (13.5)	84,998
1968-69	12,167 (13.2)	67,320 (73.3)	12,398 (13.5)	91,885

Note: Figures within brackets indicate the percentage of the cadre to the total staff in that year.

<sup>\*</sup> Including principals.

<sup>\*\*</sup> Including assistant lecturers.

APPENDIX VIII

GROWTH OF STUDENT ENROLMENT: 1958-59 to 1968-69

Year	Total Enrolment*	Increase over the preceding year	Percentage increase
1	2	3	4
1958-59	9,28,622	1,01,281	12,2
1959-60	9,97,137	68,515	7.5
1960-61	10,34,934	37,797	3.8
1961-62	11,55,380	1,20,446	11.6
1962-63	12,72,666	1,17,286	10.2
1963-64	13,84,697	1,12,031	8.8
1964-65	15,28,227	1,43,530	10.4
1965-66	17,28,773	2,00,546	13.1
1966-67	19,49,012	2,20,239	12.7
1967-68	22,18,972	2,69,960	13.9
1968-69	24,73,264	2,54,292	11.5

<sup>\*</sup>Including enrolment of intermediate classes under the Board of High School and Intermediate Education, Uttar Pradesh.

APPENDIN IX

STUDENT ENROLMENT : FACULTY-WISE

1966-67 to 1968-69

	1966	-67	1967	-68	1968	-69
Faculty	Enrolm.ent	% of Total	Enrolment 9	% of Total	Enrolment	% of Total
1	2	3	4	5	6	7
Arts (including Oriental Learning)	7,86,124	40.3	9,18,345	41.4	10,55,238	42.7
Science	6,54,899	33.6	7,37,858	33.3	8,02,369	32.4
Commerce	1,84,452	9.5	2,19,831	9.9	2,55,568	10.3
Education	38,241	2 0	43,102	1,9	48,536	2.0
Engineering & Technology	95,422	4.9	1,04,266	4.7	1,01,380	4.1
Medicine	77,286	4,0	83,422	3.8	90,470	3.7
Agriculture	52,935	2 7	51,639	2.3	53,120	2.1
Veterinary Science	<b>6,</b> 553	0.3	6,610	0.3	6,590	0.3
Law	44,970	2.3	44,581	2.0	49,520	2.0
Others	8,130	0.4	9 <b>,3</b> 18	0.4	10,473	0.4
Total	19,49,012	100.0	22,18,972	100.0	24,73,264	100.0

APPENDIX X

STUDENT ENROLMENT : STAGE-WISE
1966-67 to 1968-69

Stage	1966-67		1967-68		1968-69	
	Enrolment	% of Total	Enrolment	% of Total	Enrolment	% of Total
1	2	3	4	5	6	7
Pre-						
University	4,30,954	22.1	4,85,271	21.9	5,17 <b>,0</b> 21	20.9
Intermediate	3.08,485	15.8	3,43,807	15.5	3,75,558	15,2
Pre-						
Professional	18,860	0,1	19,633	0.9	14,582	<b>0</b> .6
Graduate	10,53,750	54.1	12,11,083	54.5	13,88,335	<b>56</b> .1
Postgraduate	1,01,798	5.2	1,17,250	5.3	1,35,459	5.5
Research	9,668	0.5	11,479	0,5	12,145	0-5
Diploma						
Gertificate	25,497	1.3	30,449	1.4	3 <b>0,164</b>	1.2
Total	19,49,012	100.0	22,18,972	100.0	24,73,264	100.0

### APPENDIX XI

#### SELECTED LIST OF UGC PUBLICATIONS

#### **Annual Reports**

- 1. Report for 1953-57
- 2. Report for 1957-58
- 3. Report for 1958-59
- 4. Report for 1959-60
- 5. Report for 1960-61
- 6. **R**eport for 1961-62
- 7. Report for 1962-63
- 8. Report for 1963-649. Report for 1964-65
- 10. Report for 1965-66
- 11. Report for 1966-67
- 12. Report for 1967-68

## Reports of Review Committees

- 13. Mathematics in Indian Universities (1962)
- 14. Botany in Indian Universities (1963)
- 15. Biochemistry in Indian Universities (1963)
- 16. Chemistry in Indian Universities (1963)
- 17. Report of the English Review Committee (1965)
- 18. Social Work Education in Indian Universities (1965
- 19. Library Science in Indian Universities (1965)
- 20. Report of the Review Committee on Education (1966
- 21. Sociology in Indian Universities (1966)
- 22. Philosophy in Indian Universities (1966)
- 23. Report of the Mathematics Reform Committee (1966)
- 24. Political Science in Indian Universities (1967)
- 25. Psychology in Indian Universities (1968)
- 26. Arabic and Persian Studies in Indian Universities (1968)
- 27. Geography in Indian Universities (1968)

#### Reports of other Committees

- 28. Report on General Education (1961)
- 29. Report on Examination Reform (1962)
- 30. Report of the UGC Building Advisory Committee on Teachers' Hostels (1964)
- 31. Report of the Panel on University Buildings (Hostels)
- 32. Report of the Committee on Residential Accommodation for Students and Teachers (1965)
- 33. University and College Libraries (1965)
- 34. Report on Standards of University Education (1965;
- 35. Report of the Committee on setting up a University for the North Eastern Region of India (1965)
- 36. Education as an Elective Subject at the Undergraduate Stage (1966

- 37. Report of the Committee on Colleges (1967)
- 38. Report of the Committee on Student Welfare & Allied Matters (1967)
- 39. Report of the Committee on Health Services for Students and Staff in Universities and Colleges (1967)
- 40. Report of UGC Delegation to the USSR (1968)
- 41. Development of Library Facilities in Universities and Colleges (1968)
- 42. Report of the Committee on Physical Education (1968)
- 43. Report of the Committee of Audio-Visual Aids in Higher Education (1969)
- 44. Report of the Committee on a Model Act for Universities (Reprinted in (1969)
- 45. Examination Reform in Central Universities (1969)
- Report of the UGC Delegation on Evening and Correspondence Courses in the USSR (1969)

## Reports of Conferences and Seminars

- 47. Evaluation in Higher Education (1961)
- 48. Proceedings of Vice-Chancellors Conference 1961 (1962)
- 49. Proceedings of Vice-Chancellors Conference 1962 (1963)
- 50. Report of the Seminar on Postgraduate Teaching and Research in History (1964)
- 51. Report of the Conference of Principals, May 1964 (1965)
- 52. Summer Institute for Teachers in Medical Colleges 25th October—20th November, 1965 (1966)
- 53. Proceedings of Vice-Chancellors Conference (1967)
- 54. Statement adopted at Vice-Chancellors Conference (1967)
- 55. Proceedings of Vice-Chancellors Conference (1969)
- 56. Proceedings of the Conference of Student Representatives (1969)

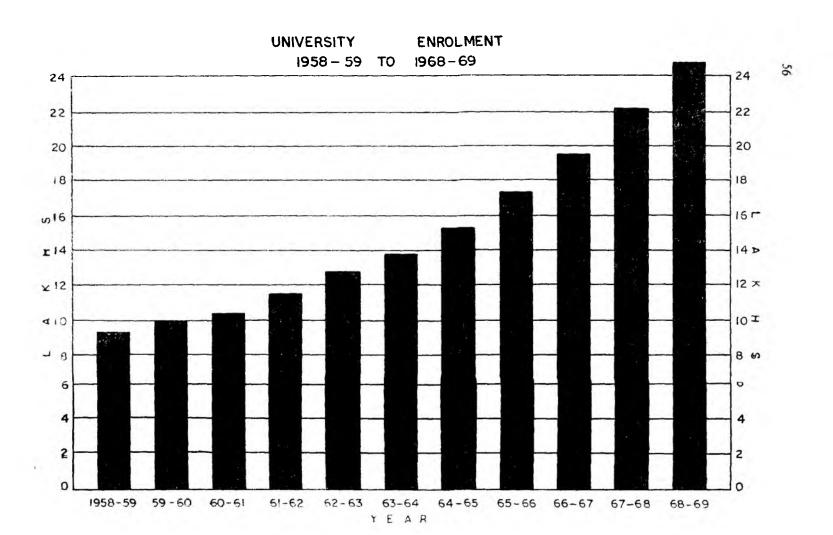
### Statistics and Information

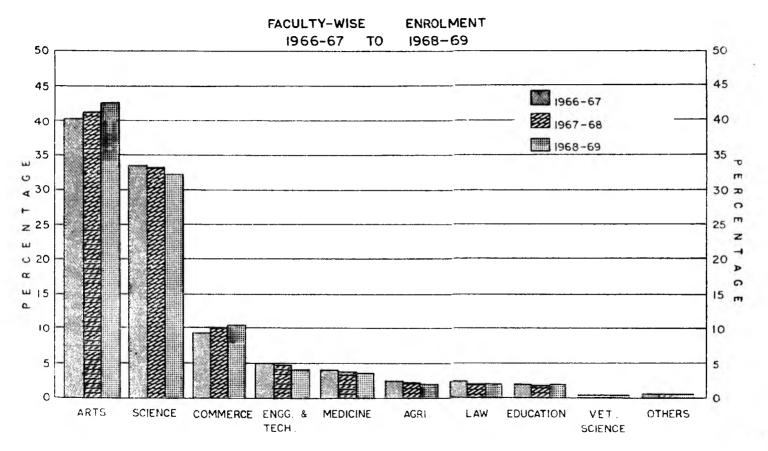
- 57. University Development in India 1961-62
- 58. University Development in India 1962-63
- 59. University Development in India 1963-64
- 60. University Development in India 1964-65
- 61. University Development in India 1965-66
- 62. University Development in India 1966-67
- 63. Handbook of Universities in India 1963 (1964)
- 64. Three Studies in Examination Technique (1964)
- 65. Studies in Examination Results (1966)
- 66. Centres of Advanced Study in Indian Universities (1967)
- 67. Some Problems of University Administration (1967)
- 68. Schemes of Assistance (1968)
- 69. UGC Occasional Notes Volume 1, No. 1 (1968)
- 70. India Pocket Book of University Education (1967)
- 71. India Pocket Book of University Education (1969)
- 72. List of Colleges under Section 2 (f) of the UGC Act, 1956 as on 1, 1, 1969
- 73. UGC Occasional Notes Volume 1, No. II (1969)
- 74. UGC Rules for Student Aid Fund in Colleges (1969)

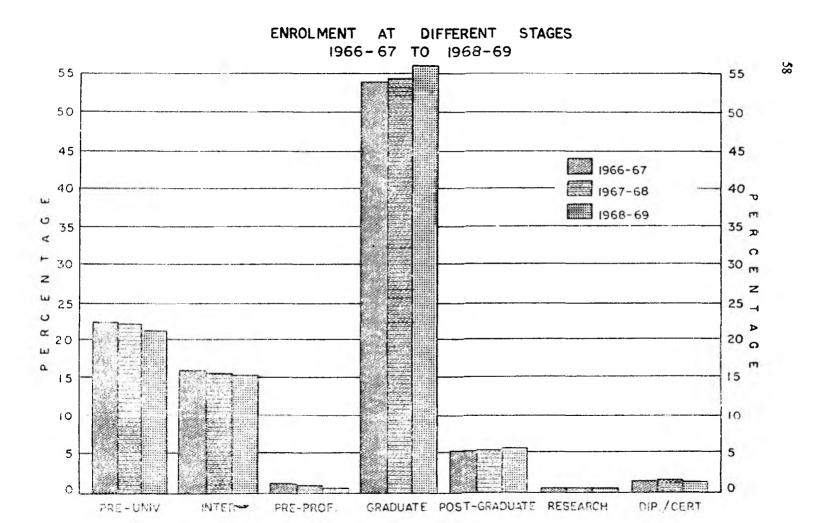
## APPENDIX XII

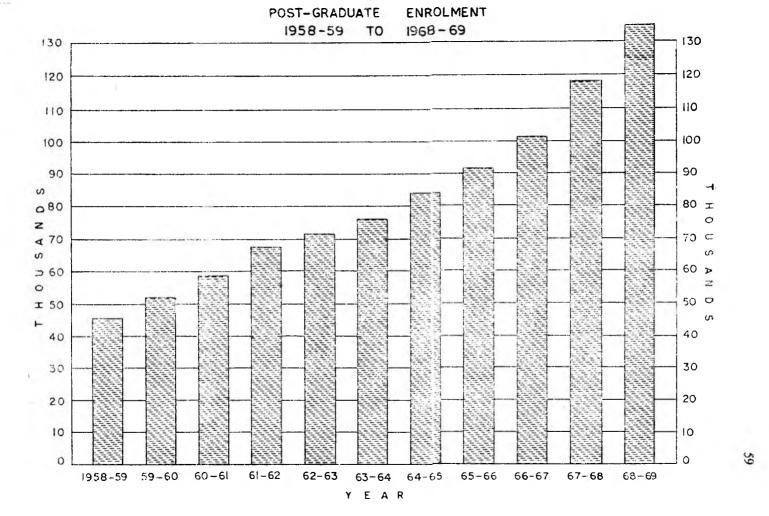
## EXPENDITURE: PLAN AND NON-PLAN PROJECTS 1968-69

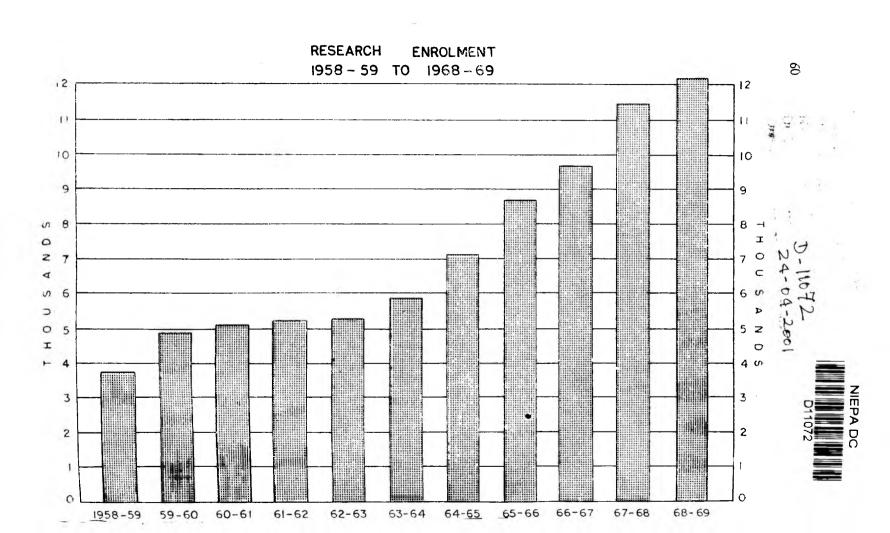
Р	ur pose	Amount (Rupees)	
NON-PL	AN PROJECTS		
1. A	dministrative Charges	29,12,648	
2. B	lock Grants to Central Universities	5,83,83,884	
	Iaintenance Grants to Constituent/ ffiliated Colleges of Delhi University	1,93,34,615	
	rants to Central Universities for chemes not covered under Block Grants	1,21,500	
	Total (Non-Plan Projects)	8,07,52,647	
	ROJECTS		
fc	or Humanities rants to Central and State Universities	1,19,71,016	
	r Science	2,60,93,086	
	rants to Central and State Universities or Engineering and Technology	2,42,72,169	
4. G	rants to Constituent and Affiliated Colleges	2,45,57,388	
N	rants to Central and State Universities for Iiscellaneous Schemes	2,92,90,057	
	Iiscellaneous Expenditure incurred by UGC and Seminars, Conferences etc.	5,46,716	
G	xpenditure from grants received from overnment of India and other Sources		
fo	or Specific Purposes	87,72,683	
	Total (Plan Projects)		
	Grand Total (Plan & Non-Plan)	20,62,55,762	



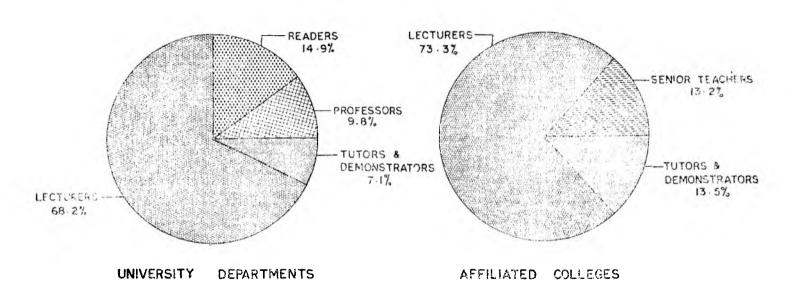








# DISTRIBUTION OF STAFF ACCORDING TO DESIGNATION 1968 - 69



FACULTY-WISE DISTRIBUTION OF STAFF 1968-69

