

UNIVERSITY GRANTS COMMISSION

REPORT FOR THE YEAR

1969-70

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

NEW DELHI

UNIVERSITY GRANTS COMMISSION

1969-70

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UNIVERSITY GRANTS COMMISSION

ANNUAL REPORT

April 1969 to March 1970

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 1969-70 to be laid before Parliament.

A few changes occurred in the membership of the Commission during the period under review. Dr. D.S. Reddi, Vice-Chancellor, Osmania University, retired on 30th April, 1969, and Professor A.B. Lal, Vice-Chancellor, Allahabad University, was appointed member of the Commission in his place on 2nd August, 1969. Professor V.K. Gokak, Vice-Chancellor, Bangalore University, retired on 10th October, 1969, and Dr. A.S. Adke, Vice-Chancellor, Karnatak University, was appointed member of the Commission in his place with effect from 13th January, 1970.

We are grateful to Dr. D.S. Reddi and Professor V.K. Gokak for the valuable help and advice they gave to the Commission during their tenure as members.

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INTRODUCTION

The pace of growth and expansion in the field of higher education has in recent years been extremely rapid. This is indicated by the following facts and figures :

Year	No. of Universities	No. of Institutions deemed to be Universities (Section 3 of UGC Act.)	No. of Colleges	Student enrolment*
1961	46	3	1,783	11,55,380
1966	68	9	2,749	19,49,012
1969	79	10	3,297	27,92,630

*This includes enrolment in the intermediate classes under the Board of High School and Intermediate Education, U.P.

There were only 46 universities and three institutions deemed to be universities under Section 3 of the UGC Act in 1961. The number of universities rose to 79* by 1970, and of institutions deemed to be universities to 10**. A chronological list of universities and institutions deemed to be universities, with their student enrolment, is given in appendix I.

The number of colleges rose from 1,783 in 1961 to 2,749 in 1966 and to 3,297 in 1969. The distribution of colleges according to courses of study during the period 1965-66 to 1969-70 is shown in appendix II.

The student enrolment in the field of higher education rose from 11.55 lakhs in 1961-62 to 19.49 lakhs in 1966-67, and to 27.93 lakhs in 1969-70. The average rate of increase during the last 4 years was about 13% per annum. There has been a significant increase in the enrolment in science, medicine and agriculture. The statements given in appendices III to V indicate the annual increase in enrolment as well as the trends in student enrolment, faculty-wise and according to stages of instruction. At the postgraduate level, the student enrolment rose from 67,610 in 1961-62 to 1,01,798 in 1966-67 and to 1,46,804 in 1969-70. The enrolment for research increased from 5,249 in 1961-62 to 9,668 in 1966-67, and to 12,474 in 1969-70.

The total strength of the teaching staff*** in the university departments and colleges rose from 63,053 in 1961-62 to 93,251 in 1966-67, and to 1,19,052 in 1969-70. The strength and distribution of teaching staff, according to designation, in the universities and colleges, are shown in appendices VI and VII.

In recent years, the percentage increase in the output of graduates was significant in the field of science, commerce, education, medicine, engineering and technology. A statement showing the degrees awarded in the different faculties during the period 1964-65 to 1966-67 is given in appendix VIII.

There has been a notable increase in the volume and diversity of educational effort at various levels. The extraordinary tempo of growth and expansion has necessitated a large extension of the existing facilities, alongside endeavours to maintain and improve the quality and standards

* By November, 1970, the number of universities in the country rose to 83.

** The number is now 9 since the Indian School of International Studies, New Delhi, which was an institution deemed to be university has become a constituent unit of the Jawaharlal Nehru University, New Delhi.

*** Excluding the teaching staff for the intermediate classes affiliated to the Board of High School and Intermediate Education, U.P.

of higher education. Within the resources available, the Commission has made planned and concerted efforts, to meet the challenge of an unprecedented expansion, as well as the need for raising the level and quality of academic achievement. Information about the policies formulated and programmes implemented by the Commission during the year is given below.

2. NEW UNIVERSITIES

The Commission's policy regarding the establishment of new universities was described in detail in the report for the year 1968-69. The Commission has been of the view, that the establishment of a new university has to be considered in relation to the availability of the essential resources, and the contribution that the proposed university is likely to make in raising the quality and standards of education. 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.

In 1969-70, the Commission received some proposals for setting up new universities which were examined in the light of the relevant facts and considerations. The proposals for the establishment of a university at Amritsar, and a university in Himachal Pradesh, were accepted.

The Commission received a proposal from the Government of Jammu & Kashmir for the establishment of a separate university at Jammu, in addition to that at Srinagar. An ordinance was subsequently issued by the State Government regarding the establishment of a separate university at Jammu.

The proposal of the Government of Madhya Pradesh for establishing a university at Bhopal was considered by the Commission. It was felt that the funds provided for the universities in Madhya Pradesh for their maintenance were very inadequate, and they could not function properly without larger resources. It was, therefore, suggested that the Government of Madhya Pradesh may consider raising the allocation of maintenance grants to the existing universities to about Rs. 1 crore, which in the course of a five-year period, should be enhanced to Rs. 1.5 to Rs. 2 crores. This was communicated to the Government of India, and brought to the notice of the State Government.

3. INSTITUTIONS DEEMED TO BE UNIVERSITIES

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. In 1969-70 there were ten institutions deemed to be universities under Section 3 of the UGC Act, 1956.

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 work of the Gujarat Vidyapith, Ahmedabad and the Tata Institute of Social Sciences, Bombay, were sent to the Vidyapith and the Institute for their comments. In 1969-70, committees were appointed to review the working of the Birla Institute of Technology and Science, Pilani, and the Gurukul Kangri Vishvavidyalaya, Hardwar.

As regards the proposal for declaring the School of Planning and Architecture, New Delhi, as an institution deemed to be a university, the Commission was of the view that, in the first instance, the possibility of associating the School with the Jawaharlal Nehru University may be explored.

4. UNIVERSITY CENTRES OF POSTGRADUATE STUDIES

The Commission supports the development of postgraduate studies at suitable places, under the auspices of the universities concerned, and in collaboration with the colleges located in the neighbourhood. Such centres, it is expected, would help in maintaining and improving standards at the postgraduate level.

The Commission has already accepted proposals for the establishment of centres of postgraduate studies at Anantpur (Sri Venkateswara University), Guntur (Andhra University), Mangalore (Mysore University), Rohtak and Simla (Panjab University), and Warangal (Osmania University). The proposals of the Madras and Karnatak Universities for the establishment of postgraduate centres at Coimbatore, Tiruchirapalli and Gulbarga were accepted in 1969-70, and the Commission agreed to provide grants, amounting to Rs. 20 lakhs for each of these centres, for the current plan period ending 1973-74. The Commission regretted its inability to accept the proposal of the Mysore University for the establishment of a postgraduate centre at Devangere, and requested the university to develop the existing centre at Mangalore, in the first instance.

5. EXAMINATION REFORM

The steps taken by the Commission to promote reforms in the system of examinations were described at length in the report for 1968-69. A number of universities have already 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. 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 bring about a radical change in the educational system, including methods of teaching and learning.

The problem of examination reform was discussed at the Conference of Vice-Chancellors held in April, 1969. Some of the important recommendations made by the conference in this regard are as follows :

- (a) The introduction of sessional work and internal assessment in the evaluation and grading of student performance would be a step in the right direction, and is likely to have an impact on learning habits. If a university does not find it possible to introduce this change forthwith, a beginning may be made by maintaining a proper record of sessional tests. Even if performance in these tests is not given any weightage in the final result, it could be mentioned in the certificate of marks.
- (b) It would be an advantage if some problem-oriented questions are introduced in place of information and memory-oriented questions.
- (c) Universities may consider arranging the examinations in parts and spacing them conveniently.
- (d) The semester system does not imply the fragmentation of courses into units. It necessarily involves restructuring of courses. The semester system gives an opportunity for reviewing and modernising syllabi.

The Commission generally agreed with these recommendations. The recommendations were communicated to the universities for their consideration.

A conference of student representatives held in May, 1969, made the following recommendations, *inter alia*, regarding changes in the examination system :

- (a) Under the existing system, there is an emphasis on formal lectures. The lecture method should be used most sparingly, and should give place to guided reading and discussions. Classroom lectures should change into round table discussions.

- (b) Individual and group assignments should be given, evaluated, and discussed frequently.
- (c) The system of examination should be so modified as to discourage selective studies.
- (d) The evaluation of the progress of a student should be comprehensive and continuous.
- (e) The practice of dictating notes, which encourages cramming, should be dispensed with, and lectures should be carefully planned and co-ordinated. cyclostyled synopses of lectures, including suggestions for further reading, should be supplied to students in advance.
- (f) The quality of question papers should be improved. More emphasis should be given to objective tests and problem-oriented questions.
- (g) Examinations should be properly spaced out, and provision made for continuing assessment through periodical tests.
- (h) A proper scheme of diversified and job-oriented courses should be introduced.
- (i) A machinery should be devised to check partiality or favouritism in the examinations. Fictitious roll numbers may be given on scripts before these are sent for evaluation.
- (j) The system of assessment by grading, rather than numerical marking of student performance, may be tried out at selected centres.
- (k) The *viva voce* test may be introduced, particularly in language courses.

Many of the recommendations made in the conference have already been engaging the attention of the universities. A report on the deliberations of the conference was circulated to the universities and State Governments.

6. MEDIUM OF EDUCATION

The question of the medium of education was considered at length by a Conference of Vice-Chancellors held on September 11-13, 1967. The

recommendations of the conference regarding the medium of education, which the Commission generally agreed with, were as follows :

- (a) The conference considered the question of the place of regional languages in higher education, and affirmed its conviction, that energetic development of Indian languages and literature is vital for the promotion of higher education and national culture generally.
- (b) The conference was in general agreement with the recommendations of the Education Commission (1964-66) with regard to changeover in the medium of education. The conference recognised that the change-over in the medium of education, if properly carried out, would be a major step towards improvement of higher education, and towards strengthening its roots in our soil. The programme should be pursued in a sustained and systematic manner.
- (c) The conference felt that at the undergraduate stage, the change-over in the medium of education to regional languages, could be carried through in about five to ten years, depending on the degree of preparatory work already done, the nature of the subject, and other relevant factors. In the programme of change-over, the importance of English should be fully recognised, and adequate arrangements made for its study at the undergraduate level.
- (d) At the postgraduate and research level the question of 'medium of education' loses its usual meaning, as students will have to depend, for instance in science, medicine and technology, on books and journals in English and other important world languages (because of the universality and rapid growth of knowledge).
- (e) In the case of all-India institutions, the present arrangements regarding the medium of education may continue, as recommended by the Education Commission.
- (f) In the case of large cities, with multi-lingual population, the medium of education may continue to be English, in addition to the regional languages which the university would provide.

The Commission, while concurring with the recommendations regarding the medium of education, emphasised the need for adequate preparatory work in this regard, and stressed that the manner and pace of the

change in the medium should be left to the universities, and it should be a part of the general programme of improvement of standards.

According to the information available, 57 universities have allowed an Indian language as medium of education for a number of courses at the undergraduate/postgraduate level. A major programme for the production of university-level textbooks in Indian languages, has been undertaken in the various States, with financial assistance from the Ministry of Education and Youth Services.

7. GRANTS TO UNIVERSITIES

DEVELOPMENT PROGRAMMES

The programmes for the development of teaching and research formulated by the universities have already been examined and discussed with the universities by visiting committees appointed by the Commission. In the light of the recommendations made by the visiting committees, grants amounting to Rs. 47.26* crores were allocated to sixty universities and seven institutions deemed to be universities for the period ending 1973-74. Initially, in view of the limited funds available, the universities were requested to limit the outlay to 70 per cent of the allocations made to them, including the cost of the continuing schemes. Subsequently, it was found possible to restore the balance of 30 per cent, and to make the total allocations approved by the Commission, available to the universities for their development programmes. It was also agreed to extend assistance for schemes involving recurring expenditure up to 1973-74. The total allocations to the universities and institutions deemed to be universities, in respect of assistance for their development programmes from the Commission, amounts approximately to Rs. 54 crores for the period 1966-67 to 1973-74.

The programmes for which the universities are being assisted include the expansion and diversification of the courses of study, extension and development of research facilities, and the provision of additional staff building accommodation, library and laboratory facilities, books and equipment etc.

The emphasis during the Fourth Plan is largely on consolidation and improvement of the quality of higher education, development of centres of research and postgraduate studies, strengthening of science education, particularly the newly emerging inter-disciplinary fields, provision of

*Inclusive of the expenditure to be incurred on capital projects continuing from the earlier Plan period.

library and laboratory facilities. and requisite amenities for the student community.

The development grants provided to the universities and institutions deemed to be universities during the period 1966-67 to 1969-70 were as follows :

(Rs. in lakhs)

<i>Grants paid</i>				
<i>Purpose</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
1	2	3	4	5
Science subjects	239.20	257.35	260.93	360.56
Humanities and social sciences	131.13	115.00	119.71	171.74
Engineering & technology	155.08	203.65	242.72	268.14
Miscellaneous schemes*	456.55	359.47	292.90	334.68

The expenditures on the development of teaching and research in the humanities and social sciences, science subjects, engineering & technology have increased significantly, and are indicative of a growing tempo of improvement in these fields.

Developmental expenditure on teaching and research in science subjects has risen from Rs. 2.39 crores in 1966-67 to Rs. 3.60 crores in 1969-70. This shows an increase of about 50 per cent. The expenditure on science subjects, under major heads, during the last four years was as follows :

(Rs. in lakhs)

<i>Grants paid</i>				
<i>Items of expenditure</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
1	2	3	4	5
Staff	45.52	25.91	28.78	55.73
Equipment	76.79	67.68	62.57	99.65
Books & journals	12.17	26.92	31.37	74.25
Laboratories and other buildings	55.49	83.67	90.70	85.50
Centres of advanced study	49.23	53.17	47.51	44.85
Miscellaneous	—	—	—	0.58
Total	239.20	257.35	260.93	360.56

*Provision of residential accommodation for staff and students, library buildings, amenities for students etc.

In the allocations and expenditure on science education, there is a significantly greater emphasis on the provision of equipment and additional staff. The number of senior positions, *i.e.*, professors and readers, has been substantially increased, and provision has been made for workshop facilities, needed for fabrication as well as maintenance and servicing of equipment.

The break-up of expenditure on the development of teaching and research in the humanities and social sciences during the period 1966-67 to 1969-70 was as follows :

(Rs. in lakhs)

<i>Items of expenditure</i>	<i>Grants paid</i>			
	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
1	2	3	4	5
Staff	56.47	49.14	39.06	44.70
Equipment	6.13	1.88	4.38	5.59
Books & journals	14.75	22.05	35.70	62.21
Buildings	35.05	20.56	17.36	30.47
Centres of advanced study	18.73	20.01	20.44	24.56
Area studies programme	—	1.36	2.77	4.21*
Total	131.13	115.00	119.71	171.74

The Education Commission (1964-66) observed that the current expenditures on research in the universities were low, and needed to be increased substantially. During 1969-70, grants ranging from Rs. 50,000 to Rs. 1,00,000 were placed at the disposal of each university, in addition to the normal provisions made for teaching and research, for giving direct support to research. These grants could be utilized for meeting expenditure connected with research, not ordinarily covered under other development schemes approved by the Commission. The question of increasing this special allocation for research will be examined by the Commission in due course.

The Commission has been giving high priority to the development of library facilities in the universities, in the light of the growing and

*Includes a sum of Rs. 33,000 for the teacher's training programme.

diversified needs of teaching and research, and the rising enrolments. During the second and third plan periods, grants totalling Rs. 2.67 crores were paid to the universities for construction of library buildings. On the recommendations of the fourth plan visiting committees, further grants amounting to Rs. 78.88 lakhs have been allocated, for the construction or extension of library buildings in the universities. The grants provided for books and journals during the period 1966-67 to 1969-70 amounted to Rs. 1.45 crores for science subjects and Rs. 1.35 crores for the humanities and social sciences. In 1969-70, additional financial allocations, amounting to Rs. 1.41 crores, were placed at the disposal of 65 universities and 8 institutions deemed to be universities, for books and journals.

The Commission has been providing assistance to the universities for the development and consolidation of higher education and research in engineering and technology. This is intended for university departments and institutions maintained by the universities. The development expenditure incurred by the commission for engineering and technology during the years 1966-67 to 1969-70 was as follows :

<i>Year</i>	<i>(Rs. in lakhs)</i> <i>Grants paid</i>
1966-67	155.08
1967-68	203.65
1968-69	242.72
1969-70	268.14
Total	869.59

Assistance was provided, *inter alia*, for the 5-year integrated courses, specialised postgraduate courses and research programmes, courses in chemical engineering, pharmacy, and business administration, improvement of existing facilities, fellowships etc. During the year 1969-70, the Commission agreed to the establishment of a women's polytechnic at the SNT Women's University, Bombay, and the introduction of a part-time postgraduate diploma course in business management at the Aligarh Muslim University and the South Gujarat University, and a one-year part-time postgraduate course in marketing, sales management, and personnel management at the Delhi University.

CENTRES OF ADVANCED STUDY

A major programme, undertaken by the Commission, for encouraging the pursuit of excellence in specific fields, and raising the level and quality of academic achievement at the postgraduate and research stage, is the development of centres of advanced study in the universities.

The Education Commission (1964-66) observed :

“What is needed most to bring about a radical improvement in the present situation is a vigorously *selective approach*, a concentration of efforts to build centres or peaks of excellence to serve as pace-setters and ‘breeders’ of more centres of excellence...When resources are scarce and problems formidable, the principle of concentration and selectivity becomes all the more imperative”.

Under a programme approved by the Commission in the third plan period, special assistance is being provided to a number of university departments, carefully selected on the basis of their existing facilities and achievements, 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 for advanced study and research to scholars from various parts of the country.

The selection of a university department as a centre of advanced study is made after careful and meticulous screening, in accordance with the procedure explained in the Commission’s report for the year 1968-69. The recognition given is a privilege, that has to be continually earned and deserved, on the basis of the quality of work done, and the performance and achievements of the centre. The centres 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.

A list of centres of advanced study and their area of specialization is given in appendix IX. So far, 30 university departments have been recognised as centres of advanced study—17 in science subjects and 13 in the humanities and social science subjects. The recognition and development of new centres of advanced study in various disciplines depends on the academic achievements and potentialities of various departments, as well as the availability of resources, personnel and the essential equipment.

On the recommendations of the standing committee on centres of advanced study, the Commission has agreed to give special assistance to 27 university departments for their programmes of postgraduate specialisation and research. Expert committees have been appointed to screen the achievements and potentialities for development of these departments. A number of the departments concerned have already been visited by these committees.

Provision has been made at the existing centres of advanced study for research scholarships, fellowships and national scholarships which

have enabled them to attract talented students and teachers from various parts of the country. Visiting fellowships have also been made available to the centres to enable them to invite scientists and scholars from within and outside the country. Funds have also been provided for seminars and symposia, and for publication of dissertations and research papers. An additional academic staff of 51 professors, 83 readers, 76 research associates, 100 senior and 153 junior research fellows, has been approved for the centres, to enable them to strengthen their teaching and research programmes.

During 1969-70, over 700 scholars were engaged in research at the different centres of advanced study, and more than 600 research publications were produced by the academic staff associated with the centres. A number of seminars and symposia in specified fields were organised during the year. Some of the centres continued their training programme, extending over an academic year, for teachers in mathematics.

The centres of advanced study have made sustained progress over the years. They have been visited by distinguished foreign scholars and scientists, who have commended the academic programmes being implemented in these centres.

As in previous years, the UNESCO continued to give assistance to the centres of advanced study for their academic programmes. This assistance came mainly from the USSR in the shape of equipment, services of experts, and training of Indian scholars in the USSR. Under the UNESCO programme, 13 experts from the USSR visited India in 1969-70, and six scholars from India went for advanced study to the USSR. Soviet technicians helped in setting up a liquid helium plant and an electron microscope at the Delhi University and the Bombay University respectively. A few senior teachers from the centres also visited the USSR for short periods during the year. In pursuance of the recommendation made by the UNESCO Evaluation Mission which earlier visited the centres, a proposal was made for setting up small liaison groups, for promoting closer collaboration between centres of advanced study in India and the institutions of the USSR Academy of Sciences. This is being considered by the UNESCO authorities. A proposal has also been made for a co-operative research programme with the Kapitza Institute, Moscow.

Indents have been placed for the supply of equipment against the convertible currency allocated by the UNESCO to the centres of advanced study. The UNESCO has also been requested to increase the allocation.

The Government of the United Kingdom has also been giving assistance to some centres of advanced study. Under the programme of British

assistance, seven consultants from the United Kingdom visited India during the year 1969-70 and eight Indian teachers went to the United Kingdom. Equipment worth £ 82,391 was also received by the centres from the United Kingdom. This programme of assistance was earlier limited to 10 centres of advanced study in science subjects and eight centres in the humanities and social sciences. It has been agreed to extend the programme to four more centres, viz., the departments of botany, chemical technology bio-chemistry and mathematics in the Delhi University, Bombay University, Indian Institute of Science, Bangalore, and Panjab University respectively.

OTHER PROGRAMMES

(i) *Book Production*

In collaboration with the Ministry of Education and Youth Services, the Commission has been promoting the publication of low-priced editions of standard works originally printed in the USA, UK and USSR. The books or titles to be published are evaluated by experts in the subjects concerned, and suitable recommendations are then made by the Commission to the Ministry for this purpose. Up to 1968-69, over 1,200 titles were recommended by the Commission for publication under this programme. In 1969-70, 165 more titles were recommended for publication in low-priced editions. The Commission has also been collaborating with the National Book Trust in bringing out subsidised editions of books in the English language.

In consultation with the Ministry of Education & Youth Services, the University Grants Commission has decided to award some fellowships, each of the value of Rs. 500 per month, with a grant of Rs. 2,000 per annum for meeting expenditure on contingencies, to enable the production of quality books at the university level. It is expected that outstanding young scholars would undertake the production of such books in association with distinguished university teachers. The essential purpose of the programme is to bring out books, monographs, and translations of high quality which could be used by a number of universities and colleges in the country, either as text-books or reference books. This will incidentally create a pool of young, competent scholars actively interested in writing books of high quality. These books could be written in English or any of the Indian languages. The proposals invited from university teachers for participating in this programme will be scrutinized by an expert committee. It is expected that in 1970-71 about 100 teachers will be invited to participate in the programme.

(ii) Area Studies

There is a growing awareness of the value and importance of developing a gradually expanding programme of area studies at suitable centres in the country. India has close social, political and economic relations with several countries, and there is a pressing need for Indian scholars with specialised knowledge of the life, institutions, culture and languages of various regions. Under the programme of area studies, it is intended to develop a few centres in the universities for undertaking specialised studies and research on specific areas.

The Commission has appointed a standing advisory committee, to develop the programme of area studies and examine the proposals received in this regard from the universities. The committee has formulated a perspective plan for the development of such studies during the next decade, keeping in view the available facilities and the relative importance of the regions selected for intensive study. The programme envisages intensive courses in the languages of the areas concerned, and interdisciplinary collaboration, specially in the field of social sciences.

The following centres have already been selected for the Commission's assistance under the programme :

<i>University</i>	<i>Area of Specialization</i>
Aligarh Muslim University	West Asian Studies
Bombay University	Studies relating to East Africa and the Soviet Union
Delhi University	(a) Studies relating to Pakistan (b) Chinese & Japanese Studies (c) African Studies
Jadavpur University	Studies relating to South-East Asia and Pakistan
Madras University	South Asian Studies
Rajasthan University	South Asian Studies
Sri Venkateswara University	Studies relating to Indo-China

Financial assistance required for promoting the above programmes is being provided to the universities concerned.

(iii) Correspondence Courses

An expert committee on correspondence courses and evening classes, appointed by the Ministry of Education, Government of India, in August 1961, expressed the opinion that without correspondence courses, in one form or the other, it would be difficult to meet the large-scale educational

needs of the country. The correspondence system helps in widening educational opportunities, and economising educational costs. It does not suffer from limitation of class-room accommodation and time-table difficulties, and to some extent, helps to overcome the shortage of competent teachers. The Education Commission (1964-66) observed that correspondence courses were "a well-ried and tested technique", and should be extended as widely as possible.

A correspondence course for the B.A. (Pass) degree was first introduced by the University of Delhi in 1962-63. The university has recently introduced a correspondence course for the B.Sc. (General-Group 'A') also. The Punjabi University, Patiala and the Mysore University have correspondence courses for the pre-university class and the B.A. degree. The Meerut university has introduced such a course for its B.A. degree. The Rajasthan University has a correspondence course for the B.Com. degree.

(iv) *Publication Grants*

Grants have been placed at the disposal of the universities for the publication of research works and doctoral theses. These are available on a cent per cent basis for a period of five years, and can be utilized by the universities according to their needs and requirements. A sum of Rs. 11.40 lakhs was allocated for the period ending 1970-71 to 67 universities (including institutions deemed to be universities) for this purpose. The allocation was later revised, and an amount of Rs. 29.50 lakhs was provided for 77 universities (including institutions deemed to be universities) for the period ending 1973-74.

(v) *Unassigned Grants*

Grants amounting to Rs. 12.44 lakhs were placed at the disposal of the universities for a number of miscellaneous programmes, and these could be utilized by them according to their needs, without reference to the Commission. unassigned grants are available, *inter alia*, for the following programmes :

- (a) Exchange of teachers ;
- (b) Extension work by university teachers ;
- (c) Travel grants to teachers and research scholars for visiting centres of research in the country ;
- (d) Travel grants for attending seminars and conferences in India ;
and
- (e) Travel grants to teachers for attending international conferences.

The expenditure on the programmes listed from (a) to (d) can be met by the universities, on a cent per cent basis, out of the unassigned grant. Fifty per cent of the expenditure on travel grants for attending international conferences can be debited to the unassigned grant, and the balance has to be met by the university concerned.

(vi) *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 for the year 1969-70 are indicated below :

<i>University</i>	<i>(Rs. in lakhs)</i> <i>Grants paid</i>
Aligarh Muslim University	197.50
Banaras Hindu University	259.75
Delhi University	120.00
Visva-Bharati	54.00
Total	631.25

Apart from maintenance grants, a sum of Rs. 9.32 lakhs was made available to the central universities, during 1969-70, for projects relating to campus development.

8. ASSISTANCE TO COLLEGES

The need for improving the quality and standards of education in the colleges is obvious and pressing. The number of colleges has risen rapidly in response to the growing demand for higher education. The total number of colleges in 1961-62 was 1,783. By the end of the third Plan period, *i.e.*, in 1965-66, the number rose to 2,572. In 1969-70, the number of colleges functioning in the country was 3,297. This indicates that the number of colleges has nearly doubled over a period of about nine years.

The student enrolment in the university colleges and departments in 1969-70 was 2,98,080 as against 21,34,550 in the affiliated colleges. Thus, 87.7 per cent of the student population was receiving instruction in the affiliated colleges in that year. Over 90 per cent of the students receiving instruction in science, commerce and medicine were in the affiliated colleges. Statements showing the faculty-wise and stage-wise enrolment in the universities and colleges are given in appendices X and XI.

About 48 per cent of the postgraduate students and 13 per cent of the research scholars in various faculties were enrolled in the colleges in 1969-70. The number of teachers in the affiliated colleges in 1969-70 was 99,295 as against 19,757 in the university colleges and departments. This indicates that about 83 per cent of the total academic staff was in the affiliated colleges.

Colleges represent an important sector of higher education in the country, and the Commission has been of the view that the quality of higher education in India will largely depend on the standards maintained by the colleges.

Within the available resources, the Commission has been providing assistance to colleges under various programmes of development approved by it. A total grant of Rs. 1.49 crores was made available to the colleges in 1966-67. In 1969-70, payments to the colleges amounted to Rs. 3.55 crores. This shows that the Commission's assistance to colleges has increased more than two-fold. A statement of development grant paid to colleges in 1969-70 is given in appendix XII.

Advisory Committee on Colleges

The Commission has constituted a standing advisory committee on matters relating to development of colleges. The committee, *inter alia*, made the following recommendations for the Commission's consideration :

- (i) Colleges may be assisted, on a sharing basis, for the provision of cycle sheds, tube-wells and over-head tanks, and workshops for science departments ;
- (ii) The Commission's assistance for the construction of non-resident student centres to colleges having a big enrolment may be enhanced ;
- (iii) Assistance for the purchase of books, on cent per cent basis may be given to colleges every year ; and
- (iv) Affiliating universities may be helped to have a small cell or unit for ensuring expeditious implementation of the proposals accepted by the Commission.

The Commission has accepted the above recommendations of the committee, and has agreed to provide assistance to colleges for cycle sheds, tube-wells, and over-head tanks and workshops for science departments, within the revised financial ceiling of grants to colleges for the current plan

period ending 1973-74. It has also been agreed to raise the grant for a non-resident student centre to a college, with a student enrolment exceeding 1,000 from Rs. 35,000 to Rs. 70,000. It has been decided to provide book grants to colleges, on a cent per cent basis, for 1970-71. The grants to be provided have also been raised.*

It has been agreed that the development officers or inspectors of colleges appointed by the universities may in addition to their other duties be requested to assist colleges in the implementation of their development programmes. It has been decided to provide some financial assistance to the affiliating universities for obtaining the services of chartered accountants/engineers needed in connection with grants paid to colleges.

Visits to Colleges

The non-professional colleges of the Rajasthan, Kerala and Calicut universities were earlier visited by the UGC committees, which included representatives of the universities and the State Governments concerned. The Rajasthan University has considered the report of the committee which visited its colleges, and the recommendations regarding courses of study, methods of instruction, orientation courses for teachers, library facilities, affiliation of colleges for science course, student participation in college affairs, setting up of a consultative committee of staff and students etc., have been accepted.

The report of the committee which visited the colleges in Kerala is being considered by the Calicut University. The Kerala University has *inter alia*, taken the following decisions :

- (i) A machinery for periodical inspection of colleges, as suggested by the UGC committee, may be devised immediately.
- (ii) Co-operative teaching at the postgraduate level should be tried at Trivandrum, Quilon, Changanacherry and Ernakulam. To start with, the experiment may be conducted in a few selected disciplines at these centres.
- (iii) Refresher courses and orientation programmes will be conducted in collaboration with the affiliated colleges.
- (iv) During vacations, library and laboratory facilities and hostel accommodation would be provided to college teachers at the university headquarters.

*The book grants to colleges for 1970-71 range from Rs. 4,500 to Rs. 6,500, on the basis of student enrolment, as against Rs. 3,000 to Rs. 5,000, provided in 1969-70.

- (v) Inspection commissions for various postgraduate courses will be appointed.
- (vi) Correspondence courses may be started at the pre-degree and undergraduate levels.
- (vii) The appointment of qualified librarians in the affiliated colleges would be insisted on.

The syndicate of the university has constituted an expert committee to examine the financial and other implications of the report, and to suggest concrete proposals for implementation.

In consultation with the Government of Orissa and the Utkal, Berhampur and Sambalpur Universities, a committee was appointed by the Commission to visit the arts, science and commerce colleges in Orissa, for making a study of their problems and difficulties, and suggesting the steps that might be taken for the improvement of collegiate education in the State. The committee has submitted its report and made several suggestions regarding the provision of essential facilities, and steps to be taken for improving the quality and standards of education in the affiliated colleges. The report of the committee was sent for consideration to the universities of Utkal, Berhampur and Sambalpur, and the Government of Orissa.

Postgraduate Studies

Financial assistance is being given to colleges for the development of postgraduate studies. This is available for the provision of additional staff, teaching accommodation, library and laboratory facilities etc., on a sharing basis, within prescribed ceilings. The Commission's assistance under this programme has been raised substantially. For the development of postgraduate studies in the humanities and social sciences, the assistance from the Commission to a college during the Fourth Plan Period (inclusive of payments made in respect of continuing projects from earlier plan periods) has been raised from Rs. 1,00,000 to Rs. 1,50,000. For postgraduate departments in science subjects, the Commission's grant to a college has been raised from Rs. 1,00,000 to Rs. 1,50,000 each for physics and chemistry; from Rs. 75,000 to Rs. 1,00,000 each for botany, biochemistry, home science and zoology; and from Rs. 50,000 to Rs. 75,000 each for anthropology, geography, and mathematics (including statistics). The Commission shares 50 per cent of the approved cost on buildings and additional teaching staff, and 75 per cent for equipment and books. An assurance is required that the additional posts created under the scheme will be continued and maintained by the college concerned, when assistance from the Commission for this purpose ceases.

During the period 1966-67 to 1969-70, grants amounting to Rs. 68.15 lakhs have been approved for the development of postgraduate studies in science subjects in 88 colleges. These grants will enable the colleges to develop and extend facilities for postgraduate instruction in 218 science departments.

For the development of postgraduate studies in the humanities and social sciences, grants amounting to Rs. 24.25 lakhs were sanctioned to 62 colleges up to 1969-70.

The proposals received from colleges for the development of postgraduate studies are usually assessed by expert committees which visit the colleges concerned, for examining the existing facilities, the functioning and achievements of the departments concerned, and the requirements for further development.

General Facilities

Apart from assistance for postgraduate studies, grants are also provided to colleges, on the prescribed sharing basis, for the extension of libraries and laboratories, purchase of books and equipment, and provision of residential accommodation for teachers and students, and for non-resident student centres. The Commission has agreed to raise the ceiling of assistance to a college for this programme, for the period 1966-67 to 1973-74, from Rs. 1,50,000 to Rs. 3,00,000. This is inclusive of grants paid or payable in respect of projects continuing from the earlier plan period. It has been further agreed to give assistance to colleges up to a ceiling of Rs. 3,00,000 under this programme, on the prescribed sharing basis, *inter alia*, for the provision of additional accommodation required for teaching, workshops for science departments, tube-wells and over-head tanks and cycle sheds.

In 1969-70, grants amounting to Rs. 63.15 lakhs were sanctioned to 96 colleges for the extension and improvement of library facilities. For the development of laboratory facilities, grants amounting to Rs. 72.87 lakhs were approved for 102 colleges. The proposals of 56 colleges for the construction of hostels were accepted during the year, and in respect of these the Commission's share of expenditure amounts to Rs. 70.87 lakhs. For the construction of staff quarters and teachers' hostels, grants amounting to Rs. 34.08 lakhs were sanctioned to 40 colleges. The proposals of 31 colleges for the construction of non-resident students centres were accepted. The Commission's assistance for this purpose was limited to Rs. 11.20 lakhs.

Assistance for the projects mentioned above is at present not available to colleges of agriculture, engineering and technology, and medicine.

Assistance to teachers' training colleges is provided under a separate scheme. For the non-government affiliated/constituent colleges of the Delhi University, the Commission has approved separate grant-in-aid rules.

College Science Improvement Programme

A new programme for a qualitative improvement of teaching in the physical, biological and mathematical sciences in predominantly undergraduate colleges has been initiated. The programme has been undertaken at two levels as under :

- (a) Assistance to selected colleges, *inter alia*, for (i) better methods of instruction ; (ii) facilities for student participation in discussions, seminars and project work ; (iii) refresher courses for teachers ; (iv) laboratory equipment and demonstration apparatus etc. ; (v) workshop facilities ; and (vi) for encouraging average science students to develop their powers of reasoning and spirit of enquiry, as well as for providing special training programmes for gifted science students.
- (b) Assistance to selected university departments for undertaking responsibility for the improvement of teaching in specified subjects in the colleges affiliated to that university. This, *inter alia*, includes (i) an assessment of the existing syllabi, methods of instruction and evaluation, and physical facilities available; (ii) development of improved courses of study and curriculum material ; (iii) organisation of orientation courses for college teachers intended to improve their professional competence and to initiate new methods of teaching ; (iv) development of workshop facilities, teaching aids etc. ; (v) inviting selected teachers to spend an academic year with the university department and encouraging teachers to undertake research ; and (vi) establishing fruitful channels of communication between the university and college departments concerned.

In the first phase, the programme will extend over three years, *i.e.* 1970-73. It will include about 15 projects in science subjects to be undertaken by the universities, and special assistance to about 100 colleges, selected on the basis of well-defined criteria. A number of proposals received from the colleges and universities under this programme have already been accepted by the Commission.*

*Up to November, 1970, grants amounting to Rs. 80.68 lakhs have been approved for projects of selected colleges, and Rs. 72.04 lakhs for selected science departments in nine universities.

Teachers' Training Colleges

The Commission has decided to provide separate assistance to teachers' training colleges during the fourth plan period. The ceiling of assistance to a college providing the B.Ed. courses is Rs. 1,50,000 and to a college providing both B.Ed. and M.Ed. courses Rs. 2,50,000. The Commission's assistance is available to B.Ed. colleges, on the prescribed sharing basis, for the extension of library and laboratory facilities, purchase of books and equipment, provision of additional staff, and construction of non-resident student centres and residential accommodation for students and teachers. The Commission's assistance to colleges conducting M.Ed. courses is available for buildings (including class-rooms), books, equipment and additional teaching staff. Assistance for building programmes is generally limited to Rs. 50,000. For schemes like the preparation of teaching aids and reading materials, experimental work, publication of research materials etc., the Commission's assistance is available on a cent per cent basis.

A grant of Rs. 10,000 each to B.Ed. colleges and Rs. 15,000 to M.Ed. colleges, on a cent per cent basis, was provided in 1969-70 for the purchase of books and journals.

Grants for Books and Journals

The Commission has been giving high priority to the development of library facilities in the colleges. In earlier years, assistance was given to colleges, on a cent per cent basis, for building up text-book libraries. In 1968-69, a similar grant was made available to the colleges for improving library facilities. In 1969-70, a further cent per cent grant, ranging from Rs. 3,000 to Rs. 5,000, according to student enrolment, was given to arts, science and commerce colleges for purchase of books and journals. Colleges were requested to utilise this grant for text-books, books for general or departmental libraries, reference books and journals, according to their needs.

A grant of Rs. 10,000 each was also paid to the medical colleges, on a cent per cent basis, for library books and journals.

Grants to Delhi Colleges

The Commission continued to provide maintenance grants to the non-government constituent/affiliated colleges of the Delhi University. The Commission meets 95 per cent of the approved deficit of these colleges. In addition, assistance is given for approved non-recurring expenditure for various projects, on a prescribed sharing basis. The maintenance grants

to the colleges concerned in 1969-70 amounted to Rs. 2.43 crores. The number of colleges, including university colleges/institutions, receiving maintenance grants from the Commission rose to 37 in 1969-70.

For meeting the increasing needs for admission, approval was given for introducing additional courses of study in 26 colleges.

Grants amounting to Rs. 44.76 lakhs were provided to the colleges concerned during 1969-70 for capital projects

9. PROGRAMMES FOR TEACHERS

The success of all plans of development largely depends on the ability and devotion of teachers. The Education Commission (1964-66) stated :

“Of all the different factors which influence the quality of education and its contribution to national development, the quality, competence and character of teachers are undoubtedly the most significant”.

It is necessary to attract an adequate proportion of our men and women of high intellectual ability to the teaching profession, and to provide them with the best possible professional preparation, as well as satisfactory conditions of work in which they can be fully effective. The provision of essential amenities and incentives for the teaching profession is an important factor in the maintenance and improvement of standards of education and research.

As stated in the Commission's report for 1968-69, the recommendations regarding the revision of the scales of pay for university and college teachers, during the Fourth Plan period, were accepted by the Government of India. Financial assistance for the revised scales of pay is being provided by the Ministry of Education & Youth Services.

SUMMER INSTITUTES, SEMINARS AND REFRESHER COURSES

The Commission has undertaken a major programme relating to summer institutes, seminars and refresher courses to expose teachers to new concepts, perspectives and techniques in various disciplines, with a view to improving their professional competence and effectiveness in the educational process. In the context of the so-called 'explosion of knowledge,' a competent teacher has to be a continuing student.

The programme of summer institutes and orientation courses is designed to pave the way for a change in the stereotyped courses and instructional techniques. It has made sustained progress and grown in dimensions over the years, and has been widely welcomed.

Summer Institutes for School Teachers

In 1969-70, 60 summer institutes were organised in science subjects for school teachers. The United States National Science Foundation and the 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 these institutes. Four of these institutes, one each in Biology, Chemistry, Mathematics and Physics, were organised in collaboration with the British Council. The summer institutes for school teachers are financed by the National Council for Educational Research and Training. The total number of participants in these summer institutes in 1969-70, was 2,321.

Up to 1969-70, 293 institutes were organised in science subjects and more than 11,000 teachers from schools attended these institutes. The number of institutes held so far and the enrolment in these institutes are as shown in the following table :

Summer Institutes for School Teachers : 1963-69

(Figures within brackets indicate the number of institutes organised)

<i>Year</i>	<i>Number of Participants</i>				<i>Total</i>
	<i>Mathe- matics</i>	<i>Phy- sics</i>	<i>Chemi- stry</i>	<i>Biology</i>	
1963	34(1)	43(1)	38(1)	39(1)	154(4)
1964	169(4)	170(4)	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)
1969	600(16)	551(14)	734(18)	436(12)	2321(60)
Total	3302(79)	2886(77)	2986(79)	2129(58)	11303(293)

As a follow-up programme, in-service summer institutes for school teachers were organised in chemistry and mathematics at the Poona and Delhi Universities respectively. A six-week training course in science subjects was also held in 1969-70 for teachers of Laccadive Islands. The Delhi University organised a certificate course for school teachers of mathematics.

Summer Institutes for College Teachers

Summer institutes for college teachers are organised by the Commission in collaboration with the United States National Science Foundation and the Agency for International Development. During 1969-70, 56 summer institutes were organised for college teachers. These were attended by 1,928 teachers from colleges. Up to 1969-70, 246 summer institutes were organised in science subjects for college teachers and 8,850 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 : 1964-1969

(Figures within brackets indicate the number of institutes organised)

Year	Number of Participants					Food & Nutrition	Total No. of Institutes
	Mathe- matics	Phy- sics	Chemis- try	Bio- logy	Geology		
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(11)	522(14)	410(11)	—	—	1867(50)
1968	627(18)	508(14)	449(14)	525(15)	—	—	2109(61)
1969	500(14)	524(17)	457(13)	372(10)	35(1)	40(1)	1928(56)
Total	2445(66)	2139(63)	2182(61)	2009(54)	35(1)	40(1)	8850(246)

Summer Institute in English Language Teaching

Eleven summer institutes for college teachers on teaching the English language were organised in 1969-70, in collaboration with the Central Institute of English, Hyderabad, and the British Council. The Institute and the Council, and the Australian Government, provided the services of experts for these institutes. The British Council also provided books and reading materials. So far, forty summer institutes on teaching the English language have been held, and 2,068 college teachers have participated in them.

Six fellowships, each of the value of Rs. 300 per month, were made available in 1969-70 for outstanding participants of the summer institutes, for specialized training at the Central Institute of English, Hyderabad. Follow-up programmes of the summer institutes in the

English language were held at the Universities of Madras and Madurai. The participants worked on projects relating to English language teaching, and demonstrations were organised on remedial teaching, in addition to study sessions on linguistics etc.

Summer Institute in French

A summer institute for college teachers on the teaching of French was organised under the auspices of the Poona University in 1969-70, in collaboration with the French Embassy. This was attended by 24 teachers from colleges.

Research Participation Programme

This programme has been sponsored by the Commission to initiate selected teachers into the methodology and techniques of research, and to provide them with opportunities and requisite facilities for acquiring creative academic experience through research, under the guidance of qualified staff. Seventy-four proposals were accepted under this programme during 1969-70.

The benefit of the research participation programme is also available to outstanding postgraduate students in mathematics, physics, chemistry and biology. The programme is intended to foster and develop the spirit of enquiry and research among selected students. During 1969-70, 86 proposals in this regard were accepted under this programme.

Orientation Courses

Twelve orientation courses were organised under the auspices of different universities for the benefit of junior teachers from colleges. These courses are intended to familiarise new teachers with instructional techniques, evaluation of student performance, the organisation of class tests and tutorials, planning of the teaching programme etc.

Conferences, Seminars and Refresher Courses

The Commission has been providing assistance to the universities and colleges for academic conferences, symposia, refresher courses, seminars, etc. wherein the participants have an opportunity of discussing important problems relating to the improvement of the standards of teaching and research in various disciplines. During 1969-70, 121 proposals for organising such conferences, seminars, etc. were accepted.

A conference on education and research in chemistry, sponsored by the University Grants Commission, National Council for Science Education, United States National Science Foundation and the Agency for Inter-

national Development, was held at Srinagar and Bangalore in 1969. This was attended by leading chemists from India and the USA. The Conference reviewed the study and teaching of chemistry, and made important recommendations regarding the development of new areas of specialisation, indigenous production of equipment, preparation of textbooks and monographs, etc. A report on the deliberations of the conference was sent to the universities for their consideration.

The Commission had earlier accepted the suggestion made by Professor J.M. Ziman,* FRS, that a short-term course in solid state physics be organised. The details of the programme have been worked out and it has been decided to organise the course during May-June, 1971, at the Delhi University in collaboration with the National Physical Laboratory, the Solid State Physics Laboratory, and the Indian Institute of Technology, Delhi.

Assessment

The programmes mentioned above have been generally helpful in paving the way for an improvement in teaching and research. They have provided opportunities to teachers for acquainting themselves with new developments in their fields of work, modern curricula, and techniques of instruction. The summer institutes, seminars, refresher courses etc., organised with the Commission's assistance are complementary to the steps taken to improve the curricula, and the efficiency of the educational process, through the provision of the requisite physical and academic facilities.

The assessment of the summer institutes is carried out every year through evaluation conferences which are attended by the directors of the summer institutes and other experts. The reports submitted by the directors are discussed, and steps taken, wherever necessary, to improve the effectiveness of the programme. An appreciable number of teachers are already utilising their summer institutes experience and training, and a number of universities have introduced new syllabi or modified the existing courses. The response to the summer institutes programme has, on the whole, been very enthusiastic and gratifying, and new concepts, approaches and techniques are being gradually initiated in a number of institutions. The Education Commission (1964-66) described the programme of summer institutes "as a major instrument in the country's effort towards improvement of science education in schools and colleges".

*Who visited India in 1968 to deliver the Rutherford Memorial Lecture at the Delhi University.

Assistance to Teachers for Research and Learned Work

Since 1963-64, the Commission has been providing financial assistance to university and college teachers, for books, chemicals, equipment, field work, etc., required in connection with the research work undertaken by them, in case these facilities are not available in the institutions where they work. The Commission's grant under this scheme to a teacher is limited to Rs. 5,000 in a year. This scheme has helped a large number of teachers in the universities and colleges to meet expenditure on the necessary equipment and literature needed specifically by them.

During 1969-70, 187 projects in the humanities and social sciences, and 429 in science subjects, were approved for assistance under this programme. Since the institution of the scheme, 1,234 teachers in the humanities & social sciences and 2,229 in science subjects, have received assistance for research or learned work undertaken by them.

National Lectureships

In pursuance of the recommendations made by the advisory panels in the physical sciences, biological sciences and earth sciences, earlier constituted by the Commission, it has been agreed to institute a number of national lectureships in science subjects and the humanities and social sciences, for a period of two years, in the first instance. Under the scheme outstanding teachers and research workers would be selected every year as national lecturers for visiting a number of universities and colleges, to lecture on recent developments in their specialized fields, and to participate in programmes of advanced studies or research in the institutions concerned. This, it is expected, will provide useful opportunities for the staff and students engaged in advanced studies to contact outstanding scholars and experts in various fields of knowledge, besides helping to develop a corporate intellectual climate in the system of higher education. During the first phase of the programme, thirty national lectureships will be instituted annually. Each lecturer would visit at least three universities or institutions, and spend not less than a week at each of them, in order to participate in the advanced work in progress in the department concerned, besides giving a series of at least two lectures on selected topics. The Commission will provide an honorarium of Rs. 1,000 and travel expenses to a national lecturer and a grant of Rs. 250 for the preparation of lecture aids etc. On the basis of the nominations received from the universities and the recommendations of an expert committee appointed by the Commission, 30 scientists and scholars were invited to participate in the programme during 1970, and steps were taken to finalise the programme of their visits.

Exchange of Teachers

The Commission has been providing financial assistance to the universities, on a cent per cent basis, to enable them to invite reputed teachers and experts from other universities or institutions of learning in the country, to deliver lectures, conduct seminars or guide research workers. The persons to be invited are selected by the universities themselves, and the duration of their visits depends on the nature of their assignments, and the time for which the visiting teachers or experts can be spared by their parent institutions. The scheme enables the universities to utilise the services of talented academic personnel in various institutions of higher learning as widely as possible. Expenditure on this account can be met by the universities out of the unassigned grants placed at their disposal, without a reference to the Commission.

Travel Grants

Funds are available to the 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 account can be met by the universities, on a cent per cent basis, out of the unassigned grants provided to them by the Commission.

Financial assistance is also given to teachers selected for attending international conferences abroad. Such assistance is given 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 per cent of the expenditure on travel.

Retired Teachers

Since 1962-63, the Commission has been helping universities and colleges to utilise the services of outstanding teachers after 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, related to the work undertaken, are provided to a teacher for continuing his work.

During 1969-70, 48 teachers were selected for participation in this scheme. At the end of the year, 151 retired teachers—95 in humanities & social sciences, and 56 in science subjects—were working at different institutions in the country.

Residential Accommodation for Teachers

There is an urgent and pressing need for suitable residential accommodation for teachers in universities and colleges. The Education Commission (1964-66) observed :

“General experience has been that the universities which provide residential accommodation for teachers have been able to obtain the services of eminent teachers and to retain them. The target to be reached over the next 20 years should be to provide residential accommodation to 50 per cent of the teachers in the universities and to 25 per cent in affiliated colleges”.

The committee on residential accommodation for students and teachers appointed by the Commission some years ago observed as follows :

“Through the provision of residential accommodation it should be possible to attract good teachers in the profession and to retain them, thus building up a corporate life in the university and college campuses. Wherever possible, residential accommodation for teachers, near the libraries or laboratories in the campus, can be a great boon not only for the teachers, but for the students as well. Where teachers live away from the campus, their usefulness necessarily diminishes and the contacts between them and their students become necessarily restricted”.

The number of teachers in the universities (including university colleges) has risen from 14,900 in 1966-67 to 19,757 in 1969-70. In the affiliated colleges, the number has increased from 78,351 to 99,295 over the same period. The resources required for providing residential accommodation to teachers as recommended by the Education Commission (1964-66) are not available to the Commission. Limited assistance is, however, being provided to the universities and colleges by the Commission, for the construction of staff quarters and teachers' hostels.

During the Third Plan period, the Commission accepted the proposals of 45 universities for the construction of teachers' hostels at an estimated cost of Rs. 1.75 crores and agreed to provide grants amounting to Rs. 1.50 crores, on the usual sharing basis. The proposals of 42 universities for the construction of staff quarters estimated to cost Rs. 3.42 crores were accepted during the third plan period. The Commission's share of the expenditure in this regard was limited to Rs. 2.14 crores. The total payment to the universities for staff quarters and teacher's hostels amounted to Rs. 2.25 crores only by 1965-66.

The grants provided to the universities and colleges for the construction of staff quarters and teachers' hostels during the last four years are indicated below :

<i>Year</i>	<i>(Rs. in lakhs)</i>	
	<i>Grants paid</i>	
	<i>Universities</i>	<i>Colleges</i>
1966-67	92.15	4.15
1967-68	45.79	2.17
1968-69	27.16	9.05
1969-70	20.95	16.90

In 1969-70, the proposals of 40 colleges were accepted for the provision of staff quarters and teachers' hostels against which the Commission's share of expenditure will amount to Rs. 34.08 lakhs.

It is obvious that resources of a magnitude, far beyond those currently available to the Commission, have to be found for the construction of staff quarters and teachers' hostels, if the targets suggested by the Education Commission (1964-66) are to be reached.

10. STUDENT AFFAIRS

The Education Commission (1964-66) was of the opinion that "a major weakness of the existing system of education is the failure to provide adequately for student welfare". The University Grants Commission has taken an active and sustained interest in the programme of student services and welfare, and recognises that this is an integral part of educational development. The improvement of the conditions in which students live and work, and the provision of essential services and amenities for the student community, significantly affect the academic atmosphere, and have a salutary influence on academic performance. Problems relating to student welfare and allied matters have already been carefully examined, and high priority is being given, within the resources available, to extending and improving the essential facilities for the student community.

In view of the rapid increase in student enrolment, which has doubled in less than 10 years, the need for adequate resources for programmes of student welfare has become extremely urgent and pressing.

The Commission has emphasised the necessity of a careful and sympathetic consideration of the genuine requirements and difficulties of students, and has already suggested that joint committees of teachers and students should be set up to ascertain and redress the real difficulties and

grievances of students expeditiously. A university or college is an academic fellowship of equal, and any symptoms of polarisation between teachers, students and administration should be promptly attended to and removed.

The question of student participation in the academic and administrative affairs of universities and colleges was discussed at length by the Conference of Vice-Chancellors, as well as the Conference of Student Representatives, which were convened by the Ministry of Education & Youth Services and the University Grants Commission, on April 21-23 and May 23-25, 1969 respectively.*

Opinion is generally unanimous on effective student participation in the management of hostels, student homes, non-resident student centres, canteens, libraries and reading rooms, co-curricular programmes etc., as well as on the need for active student co-operation in the maintenance of discipline. The question of student participation in the academic and administrative affairs of the universities and colleges is, however, being further examined by a UGC committee.

Information about the programmes undertaken by the Commission for the provision of essential facilities for the student community is given below.

Scholarships and Fellowships

With the rapid increase in enrolments at the postgraduate and research levels, and the volume and diversity of specialised studies now being undertaken in the universities and colleges, there is a growing need for an adequate provision for research scholarships and fellowships. In addition to the scholarships and fellowships specially created for centres of advanced study and those provided for approved programmes of research, the University Grants Commission awards a specific number of scholarships and fellowships every year for promoting advanced studies and research in different fields. Senior and junior fellowships in the humanities, social sciences, science subjects, engineering and technology are awarded for advanced work in various universities, on an all-India basis, on the recommendations of committees constituted for the purpose. Research scholarships are also placed at the disposal of the universities every year to meet their needs for promoting research.

Information about the fellowships awarded by the Commission in 1969-70 is given below :

*A reference to the deliberations of these two conferences has been made separately in this report.

<i>Fields/Disciplines</i>	<i>Fellowships</i>		<i>Value & Duration</i>
	<i>Senior</i>	<i>Junior</i>	
Humanities and Social Sciences	21	55	Senior and Junior research fellowships are of the value of Rs. 500 per month and Rs. 300 per month respectively.*
Science subjects	33	124	
Engineering and Technology	47	—	Each of the value of Rs. 400 per month.**

At the end of the year 1969-70, 174 scholars in the humanities and social sciences, 229 in science subjects and 47 in engineering and technology were working under the fellowships awarded by the Commission. A grant of Rs. 22.52 lakhs was paid to the universities and colleges for the scholars holding the fellowships awarded by the Commission.

In addition to the fellowships mentioned above, which are awarded on an all-India basis, on the recommendations of selection committees, the Commission placed 600 research scholarships,*** each of the value of Rs. 250 per month for a period of three years, at the disposal of 70 universities. It was decided to provide a grant of Rs. 500 per annum with each scholarship for meeting expenditure on contingencies. The universities were requested to award about $\frac{2}{3}$ of the scholarships allocated to them in science subjects, and to set apart some scholarships for encouraging research work in their affiliated colleges, wherever the requisite facilities are available. The total amount disbursed to the universities and colleges for the above scholarships in 1969-70 was Rs. 29.72 lakhs.

The Commission continued to provide assistance to the universities concerned for awarding junior fellowships, each of the value of Rs. 250 per month, for promoting postgraduate studies in engineering and technology. Grants amounting to Rs. 32.11 lakhs were paid to the universities in 1969-70 for this purpose.

*The senior fellowships are meant for those who have obtained a doctoral degree or have equivalent published work to their credit, and have shown aptitude for original work, and their tenure is two years. It may be extended by one year in special cases. Junior fellowships are generally intended for those who have at least one year's research experience after the Master's degree, and their normal tenure is three years. A sum of Rs. 1000 per annum is provided with each fellowship, senior or junior, for meeting expenditure on contingencies related to the research work undertaken. Wherever necessary, an additional amount of Rs. 2000 is also provided during the tenure of the fellowship for field work and publication of the research work undertaken and completed.

**In addition, a grant of Rs. 1000 for contingencies and an additional sum of Rs. 2000 for field work and publication of research work is available with each fellowship. These fellowships are available to persons who have obtained a Master's degree in Engineering & Technology, and are provided for advanced study and research in these fields.

***In 1968-69, the number of such scholarships was 500 only.

Twenty two scholarships (each of the value of Rs. 120) per month for postgraduate studies, were made available to students of the hill areas of north-east India. Nineteen scholarships (each of the value of Rs. 1,200 per annum) were provided for honours and postgraduate studies in Arabic and Persian.

Residential Accommodation for Students

The Education Commission (1964-66) recognised the pressing need for a considerable extension of residential accommodation for students, and suggested that an effort should be made to provide hostel accommodation for about 25 per cent of the enrolment at the undergraduate stage, and 50 per cent of the enrolment at the postgraduate stage. A committee appointed by the University Grants Commission in 1962 estimated that additional hostels for three lakh students at an estimated cost of Rs. 120 crores would be needed by the end of the fourth plan period, to accommodate 25 per cent of the total student population in the universities and colleges. In view of the rise in the cost of construction, the estimated cost of additional hostel accommodation would be much higher. Funds of this magnitude are not available to the Commission.

During the third plan period, the Commission sanctioned the construction of 119 hostels in various universities at an estimated cost of Rs. 5.59 crores. The grants paid for student hostels to universities and colleges during the last four years are as follows :

Construction of Hostels : 1966-67 to 1969-70

(Rs. in lakhs)

Year	Grants paid	
	Universities	Colleges
1966-67	52.02	29.90
1967-68	58.39	10.58
1968-69	72.95	23.85
1969-70	68.48	34.62

Up to 1969-70, the proposals of 428 colleges for the construction of hostels were accepted by the Commission.

It was agreed to give limited assistance to universities for the improvement of facilities in the existing hostels. Proposals were invited from the universities for the improvement of dining halls, kitchens, common rooms, sanitary arrangements and canteens. During 1969-70, grants amounting to Rs. 4.10 lakhs were made available to the universities for this purpose.

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In pursuance of the recommendations made by the Banaras Hindu University Enquiry Committee, the question of providing special assistance to the Banaras Hindu University for student amenities was examined by a UGC committee. On the recommendations of this committee, the Commission agreed to provide a grant of Rs. 9.27 lakhs for the improvement of hostel facilities etc. A sum of rupees five lakhs was made available to the university for this purpose during 1969-70. It has also been decided that the requirements of other central universities relating to student amenities may be examined by the committee which visited the Banaras Hindu University for this purpose.

Sports and Physical Education

The Commission agreed to provide assistance to universities and colleges, for the development of play fields and purchase of accessories for games and sports provision of gymnasia, sports pavilions/tracks and swimming pools. Proposals were invited from the universities and colleges.

A committee was appointed to consider the proposals received from the universities and colleges. As the funds available to the Commission for implementing this programme were limited, compared to the total requirements of the universities and colleges, the committee recommended that, in the first instance, assistance may be given to 12 universities and 81 colleges for the construction of gymnasia. The recommendations of the committee have been accepted, and the question of allocating some funds for the improvement of play fields, will be further examined.

Student Homes/Non-Resident Student Centres

A large proportion of students living in their own homes or rented accommodation do not have facilities and conditions congenial for serious studies. The Commission has been assisting universities and colleges for the construction of student homes and non-resident student centres which, *inter-alia*, are intended to provide facilities for academic work to day-scholars during their leisure hours. The Commission's assistance to a university for a student home, providing reading-room facilities for 100 students at a time, with a stack room for about 5,000 books, a cafeteria and a dining hall, is limited to Rs. 1,00,000 against an estimated cost of Rs. 1,25,000. 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 addition to the financial allocations for its fourth plan development schemes. If a university needs an additional student home, the expenditure has to be accommodated within the fourth plan allocation already approved.

The Commission has so far accepted the proposals of 59 universities for setting up students homes*.

The Commission's assistance to a college for establishing a non-resident student centre, is limited to Rs. 35,000. On the recommendation of the standing advisory committee on colleges, it has now been agreed to provide a grant upto Rs. 70,000 for a big non-resident students centre or two such small centres, to a college with a student enrolment of 1,000 or above. Up to 1969-70, the proposals of 306 colleges were accepted by the Commission for the construction of non-resident student centres.

Health Centres

The Commission has been helping universities to establish health centres, intended for medical examination and treatment of simple ailments. The assistance for a health centre to a university with a student population of 5,000 is limited to Rs. 50,000. For a larger student community, the Commission may provide a grant of Rs. 1,00,000 to a university. The proposals of 40 universities have so far been accepted for the provision of health centres.

The question of providing health centres in a few selected colleges has been examined by a committee, and proposals in this regard have been invited.

Students' Aid Fund

The Commission continued to make contributions to the students' aid fund in the universities and colleges wherefrom students are given financial assistance for paying their tuition or examination fees, purchasing books and meeting other expenses related to their studies. Limited assistance may also be given by universities and colleges from this fund for meeting hostel dues, mess expenses, expenditure on clothing or medicine. 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 students' aid fund, on the basis of student enrolment. During 1969-70, grants amounting to Rs. 25.06 lakhs were paid to the universities and colleges on this account.

*This includes proposals for large non-resident students centres also.

**From 1970-71 onward the Commission's maximum contribution to a university has been raised from Rs. 10,000 to Rs. 15,000: For colleges, the Commission's assistance will range from Rs. 750 to Rs. 3,250.

Students Services Programme

The Commission earlier sanctioned grants ranging from Rs. 2,000 to Rs. 7,000, on the basis of student enrolment, to arts, science, commerce, teachers' training and law colleges, for the improvement of facilities in the existing hostels (including sanitary facilities), and students common rooms and canteens. The payments made to the colleges on this account in 1969-70 amounted to Rs. 17.07 lakhs*.

Visiting Studentships

On the recommendations of a committee, the Commission agreed to provide limited assistance to the universities for visiting studentships, to enable students to visit places of interest in the field of national development, cultural, history, education etc. The maximum assistance available to a university under this programme is Rs. 5,000. Grants amounting to Rs. 36,297 were made available to the universities under this programme.

Limited assistance was also made available for student tours to departments/institutions of engineering and technology, maintained by the universities.

11. COMMITTEES AND CONFERENCES

The Commission normally obtains the guidance and advice of expert committees appointed to examine problems related to the development of teaching and research. Academic opinion is ascertained and consulted as far as possible before decisions are taken. The composition of UGC committees is made as representative as possible. Standing committees are reconstituted from time to time.

Information about some of the important committees constituted and conferences convened by the University Grants Commission during 1969-70 is given below.

Conference of Vice-Chancellors

The sixth conference of vice-chancellors convened by the Ministry of Education and Youth Services and the UGC, was held on April 21-23, 1969. The conference was attended by the members of the University Grants Commission, member (Education) of the Planning Commission, vice-chancellors of the universities and institutions deemed to be universities,

*During 1970-71 the Commission has decided to provide grants ranging from Rs. 5,000 to Rs. 12,000, on the basis of student enrolment, for the students services programme.

and directors of the Indian Institutes of Technology, and All India Institute of Medical Sciences. The main items discussed at the conference were :

- (a) National Policy on Education ;
- (b) Curriculum and Examination Reform ;
- (c) Participation of Students in University Affairs ; and
- (d) Production of Books at the University Level.

The conference made a number of significant recommendations regarding priorities and programmes in the field of higher education, enrolments in relation to manpower needs, admission policy, reforms in the existing curricula and system of examinations, teacher education, governance of universities, including student participation in university affairs, the production of university-level books, national service corps, national sports organisation and adult education. The Commission generally agreed with the recommendations made, and these were brought to the notice of the universities for their consideration. The conference emphasised that the genuine needs and difficulties of the student community must be carefully and sympathetically considered, and a consultative machinery devised, 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 effective and meaningful student participation should be secured in the management of hostels, student homes, canteens, libraries and reading rooms, sports and games, cultural programmes etc., and that student opinion should be consulted regarding the provision of the essential facilities for the student community. The authorities in the universities and colleges should endeavour to secure the active cooperation of students in the maintenance of discipline. The conference suggested that the Commission may appoint a working group which may, *inter alia*, study the problems relating to the governance of universities, with special reference to the structure and composition of various university bodies, the relationship of universities with affiliated colleges, including the conditions of affiliation and the constitution of the governing bodies, and the question of student participation in the statutory bodies of universities and colleges. In pursuance of this recommendation, the Commission appointed a committee under the chairmanship of Dr. P.B. Gajendragadkar, to consider issues relating to the governance of universities and colleges. A number of groups have been constituted by the committee to examine the issues in detail. The work of the committee is in progress.

On the recommendation of the conference, a committee has also been appointed to study the problem of rationalising and economising

expenditure, and the cost of university administration, as well as effective utilisation of physical facilities.

Conference of Student Representatives

A conference of student representatives, convened by the Ministry of Education & Youth Services, and the University Grants Commission, was held in the Delhi University on May 23-25, 1969. The conference was attended by student representatives from 51 universities and nine institutions deemed to be universities, three institutes of technology and the All India Institute of Medical Sciences. The conference recommended effective student participation in the academic and administrative affairs of universities and colleges. Recommendations were also made regarding employment opportunities, the role of student organisations and advisory and guidance bureaux, and reform of curricula and examinations.

The suggestions made by the conference were brought to the notice of the universities and State Governments for their consideration.

Advisory Committee of Vice-Chancellors

An advisory committee of vice-chancellors was earlier set up to advise the Commission on matters relating to the development of higher education in the country. The committee normally meets two to three times a year. The present membership of this committee is indicated at appendix XIII.

Some of the important recommendations made by the advisory committee at its meetings held on 7th August and 4th December, 1969, were as follows :

- (i) Additional funds may be provided to the Commission by the Government of India, so that the tempo in the implementation of the development programmes may be maintained, and the total amount allocated by the Planning Commission for the development of higher education for the current plan period may be fully utilised.
- (ii) The summer institutes programme may be organised in the humanities and social sciences, in addition to science subjects.
- (iii) The financial ceilings of assistance to colleges for the development of postgraduate studies may be reviewed.
- (iv) The value of research scholarships allocated by the Commission to the universities may be raised.

- (v) The facilities for the teaching of foreign languages, particularly the languages of Asia and Africa, may be improved.
- (vi) The universities may consider making education more employment-oriented, so as to link it with the developmental requirements of the country.

Regional Conferences of Vice-Chancellors

It was earlier decided to convene regional conferences of vice-chancellors' which would give an opportunity to the Commission to discuss problems relating to the development and coordination of higher education and research with the vice-chancellors of the universities in the regions concerned. Accordingly, a meeting of the Commission and the vice-chancellors of the universities including institutions deemed to be universities in the States of Maharashtra and Gujarat, was held on 21st March, 1970 at Bombay. The following points, *inter alia*, were emphasised :

- (a) In matters like the representation of students on university bodies, no decision should be taken by the State Governments without prior consultation with the universities concerned.
- (b) Students should have adequate knowledge of English for using library facilities.
- (c) The State Governments may be requested to consider the question of fixing adequate block grants for the universities, after taking into account the normal expenditure of the universities, and continuing rise in prices.
- (d) The questions relating to the development of postgraduate education in the region may be reviewed.

The State Governments concerned have been requested by the Commission to consider the recommendation regarding block grants.

Committee on Development of Computer Facilities

The Commission appointed an expert committee to review the needs for computer facilities in the universities and to suggest a plan for the development of such facilities. The Committee has submitted its report and has emphasised the manifold advantages of installing computer facilities in carefully selected universities on a regional basis. It has been pointed out that such regional centres could provide academic programmes in computer science and computational facilities for research, as well as

consultancy services to the neighbouring industries. The Committee has recommended that the regional computer centres should be linked with education and training in the computer sciences and technology, and specialised programmes in this field at the postgraduate level.

Committee on Legal Education

A committee was earlier constituted to advise the Commission on the development of legal education and research. A comprehensive survey of existing facilities in this regard has been made. A scheme of scholarships and fellowships is being formulated for the consideration of the Bar Council of India. A proposal for the revision of scales of pay of full-time teachers in law colleges has been accepted by the Commission on the recommendation of the committee. The recommendations in this regard have been sent to the Ministry of Education & Youth Services for their consideration. The Commission agreed to provide assistance to the Kerala University for organising a refresher course in methods of legal education.

Advisory Committee on Social Work Education

A standing advisory committee on education and training in social work was set up in July 1969 to assess the existing facilities and standards in this field, as well as the personnel requirements for programmes of social welfare. The committee has finalised its report on undergraduate courses in social work, with special reference to the needs of rural areas, and on standards maintained by schools of social work. A proposal for the survey of manpower needs in the field of social welfare is under consideration.

Committee on Adult Education

The Commission appointed a committee on adult education to suggest measures for involving the universities in the programme of adult education. A report on the role of the universities in adult education has been finalised. It deals with the methods and objectives of adult education and also contains suggestions regarding the organisational set-up of centres for adult education in the universities. It is proposed to print and circulate the report to the universities for their information and guidance.

Committee on Population Studies

A committee was constituted by the Commission to examine the question of organising and promoting population studies at selected university centres in India. The proposals of the universities of Bombay

and Madurai and the Tata Institute of Social Sciences, Bombay, for setting up interdisciplinary research centres on population studies are under consideration.

Other Committees

Standing committees have been constituted to advise the Commission on the following subjects :

- (i) Centres of advanced study,
- (ii) Higher education in engineering and technology,
- (iii) Development of colleges,
- (iv) Programmes of cultural exchange,
- (v) Teacher education,
- (vi) Area studies,
- (vii) Scholarships and fellowships, and
- (viii) College Science Improvement Programme.

Questions relating to the central universities are considered by the standing committee of Vice-Chancellors of these universities.

Apart from the above, *ad hoc* committees are constituted from time to time, to advise the Commission on various problems.

Committee on Syllabi

In view of the rapid advances in various fields of knowledge, there is a pressing need for a critical review of the existing syllabi and courses of instruction from time to time. The Commission earlier appointed expert committees in a number of 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 the following subjects have already been made available to the universities for their consideration :

- | | |
|------------------|-------------------------|
| (1) Mathematics | (8) Library Science |
| (2) Botany | (9) Education |
| (3) Biochemistry | (10) Sociology |
| (4) Chemistry | (11) Political Science |
| (5) Geography | (12) Philosophy |
| (6) English | (13) Psychology |
| (7) Social Work | (14) Arabic and Persian |

A review committee has been appointed in biological sciences.

The recommendations made by the review committees have been generally helpful to the universities in planning or re-organising their academic courses.

There is now a growing appreciation of the value and importance of inter-disciplinary studies in the field of life sciences. Steps have been taken to encourage an integrated study of the life sciences in the post-graduate departments of biological sciences in a few universities.

Advisory Panels

Advisory panels have been constituted by the Commission in the physical sciences, including mathematics and statistics, biological sciences and earth sciences, for considering matters relating to the promotion of teaching and research in various disciplines. A number of such panels have also been constituted for the humanities and social sciences.

The panels in science subjects have made significant recommendations regarding interdisciplinary studies, production of quality textbooks, development of research, institution of national lectureships etc. The panels in the humanities and social sciences have started functioning recently, and their recommendations are awaited.

12. INTERNATIONAL COLLABORATION AND FOREIGN AID

The Commission has been promoting programmes involving international collaboration, and helping universities to obtain assistance from the UNESCO and some foreign countries. Such collaboration and assistance have enabled the universities concerned to develop their programmes of teaching and research in important fields. Programmes relating to international collaboration and foreign aid are operated by the Commission in consultation with the Department of Economic Affairs, Ministry of Finance, and other Union Ministries concerned. During 1969-70, a number of universities received assistance from the UNESCO, the USSR, the UK, the USA and some other foreign countries. This assistance was made available to the universities under specific agreements entered into by the Government of India with the countries and agencies concerned.

A description of the assistance given by the UNESCO, the USSR, and the UK for centres of advanced study has been given earlier in this

report. A reference has also been made to the support given by the United States Agency for International Development and the National Science Foundation, USA, for the programme of summer institutes.

Information about some other important programmes of foreign aid made available to the universities from various sources and agencies is given below.

United States PL-480 Programme

Assistance was provided from the rupee funds of the United States PL-480 programme to a number of university departments and other institutions for research in agricultural, physical and biological sciences. The national screening committee, constituted by the Government of India, recommended 26 proposals, estimated to cost Rs. 75,00,000 for financial support from the United States PL-480 funds. At the end of 1969-70, 29 research proposals estimated to cost Rs. 73,00,000 were in operation in the universities and colleges under this programme.

Cultural Exchange Programmes

The Commission arranges exchange of visits by educationists, teachers and scholars between India and other countries, under the purview of programmes of cultural exchange, finalised by the Government of India with the governments of the countries concerned. During 1969-70, exchange programmes were being implemented between India and the following countries :

Bulgaria, Czechoslovakia, France, German Democratic Republic, Federal Republic of Germany, Hungary, Poland, Romania, United Arab Republic, the USSR and Yugoslavia.

The Commission also agreed to implement cultural exchange programmes, on an *ad hoc* basis, with the Latin American countries, Mexico, Greece, Norway, Turkey, Iran and the Morocco.

In 1969-70, 50 Indian teachers visited different countries under the various cultural exchange programmes, and 25 foreign educationists came to India. In addition the Commission received the Pro-Vice-Chancellors of the Leipzig University, German Democratic Republic, and the University of Szeged, Hungary, the Director of the Department of Sociology, Martin Luther University, GDR, the Director of the Institute of Special Botany, Humboldt University, Berlin, and the Deputy Director of the Institute of Far East Asia, the USSR Academy of Sciences, Moscow. The

Commission also agreed to receive two Vice-Chancellors from Turkey, two teachers from Iran and two experts from the Latin American countries, on an *ad hoc* basis. The Commission would send an equal number of teachers or educationists to these countries.

The selections for participation in the cultural exchange programmes are made on the basis of the recommendations of a standing advisory committee for the implementation of these programmes. The foreign participants are selected by the countries concerned, and their placement and programmes in India are arranged by the Commission, in consultation with the universities and other institutions in the country.

The Commission will nominate 54 Indian teachers for visits to the USSR and other countries, for giving lectures or carrying on further studies or research during 1970-71. Nominations for this purpose have been invited from the universities in the country.

Indo-UK Exchange Programme

The programme of exchange of visits by young scientists between India and the UK was commenced in 1963. This has helped in promoting contacts between young scientists in the Indian and British universities. In 1969-70, seven Indian scientists visited the UK and four British scientists came to India.

The question of expanding the scope of the programme is under consideration. Fifteen Indian teachers have been nominated for visits to the United Kingdom in 1970-71. Eight nominations for visits by scientists from the United Kingdom to India in 1970-71 have been accepted by the Commission.

Other Programmes

It was stated in the report for the year 1968-69, that a centre for exploration in geophysics would be set up at the Osmania University, with Soviet collaboration, under the Indo-USSR Agreement of Economic and Technical Cooperation. The Ministry of Education and Youth Services has already signed contracts with the Soviet authorities for the services of consultants, training of teachers in the USSR, and the supply of equipment required for the centre. The USSR will provide the necessary long-term credit for the purpose. Under this programme, three Soviet consultants visited India. Three teachers from the centre left for the USSR for advanced training. Some equipment has also been received. The centre is assisted by an advisory committee which plans and reviews the academic programmes undertaken,

The calendar year 1970 was named by the UNESCO as the 'International Educational Year'. In this connection, the Commission has agreed to institute ten international scholarships to enable scholars and scientists from other countries to visit India for advanced study and research, particularly in the university departments recognised as centres of advanced study. The scholarships are of the value of Rs. 750 per month each. In addition, a grant of Rs. 1,000 per annum would be provided to each scholar for expenditure on contingencies related to the research undertaken. The Ministry of External Affairs has brought this to the notice of the countries concerned.

Nominations were made for the Commonwealth Academic Staff Fellowships available under the Commonwealth Scholarships Scheme.

The Commission continued to collaborate with the Indian National Commission for Cooperation with the UNESCO, and the information received from the UNESCO regarding seminars, conferences and training programmes was circulated to the universities. The nominations received from the universities for participation in such programmes were recommended to Indian National Commission.

13. FOREIGN EXCHANGE

It was emphasised in the report for 1968-69 that the needs of the universities and colleges for adequate foreign exchange, particularly for sophisticated equipment which cannot at present be fabricated within the country, have been growing apace in view of the requirements for specialised courses and research programmes. It was estimated that foreign exchange worth Rs. 9.94 crores would be needed during the fourth plan period for the development of higher education and research.

During the licensing year 1969-70 foreign exchange worth Rs. 31.23 lakhs from the free resources area, and Rs. 21.55 lakhs from the rupee payment area was provided by the Government of India to the universities and colleges. The exchange in respect of the free resources area was largely available for maintenance and replacement required for existing equipment. A portion of the foreign exchange provided could also be used for the import of new equipment, required for strengthening facilities for research.

The foreign exchange made available to the universities and colleges for import of specialised equipment from the United States, under a loan agreement entered into by the Government of India with the United States Agency for International Development, referred to in the report for

1968-69, helped to meet, to some extent, the pending requirements of exchange. The equipment indented for is being received by the universities and colleges.

As in previous years, the Indian National Commission for Co-operation with UNESCO made available UNESCO coupons worth \$ 50,026 which were allocated by the UGC for use by some university departments and colleges. These were helpful to teachers in furthering their programmes of teaching and research. The present allocation of UNESCO coupons is inadequate for meeting the growing needs of the institutions concerned. A request for enhancing the allocation was earlier made to the National Commission.

14. CONCLUSION

The programmes undertaken by the University Grants Commission in the field of higher education, and the policies approved for assistance to the universities and colleges, have already been described. The expenditure incurred by the Commission during 1969-70 for plan and non-plan programmes under major heads is shown in appendix XIV. The grants paid to the universities and colleges for development projects and the expenditure for non-plan purposes during the last four years were as indicated below :

(Rs. in crores)

<i>Head</i>	<i>Expenditure</i>			
	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Non-Plan*	4.94	7.52	8.08	9.06
Plan**	11.56	11.45	12.55	15.55

Within the resources available to the Commission, planned efforts have been made for the provision of physical and academic facilities required for advanced studies and research, and for improving the quality and standards of higher education. The development grants disbursed by the Commission have helped the universities and colleges to provide facilities for the courses being conducted and for programmes of research undertaken. The existing syllabi and facilities for advanced studies in various subjects have been reviewed by expert committees, and suggestions made for their improvement and modernisation. Various aspects of the examination system have been carefully examined, and recommendations made for improving the procedures of assessment. Questions relating to

*Includes maintenance grants to central universities and the constituent/affiliated colleges of the University of Delhi.

**Includes expenditure on all development programmes of universities and colleges.

student welfare have been examined, and steps taken to improve the conditions in which students live and work. The programme of summer institutes, seminars and orientation courses, for acquainting teachers with new developments in their respective fields of work, has yielded gratifying results. Centres of advanced study have been established and developed to encourage the pursuit of excellence at the postgraduate and research levels. Financial assistance has been made available to the institutions concerned for additional staff, library and laboratory facilities etc. Grants have been provided to teachers for research and learned work. The services of selected teachers are being utilised after their superannuation under a scheme approved by the Commission. Travel grants are made available to teachers and research workers, to enable them to visit and work at centres of research or advanced study in the country, and for attending conferences abroad. Research scholarships and fellowships are also being provided to promote advanced studies and research. New programmes for the improvement of science teaching in colleges, and appointment of national lecturers have been initiated.

The Commission functions with the help and assistance of expert committees. Academic opinion is regularly consulted, and standing committees have been constituted to advise the Commission in important sectors of higher education. The development programmes being implemented are reviewed and evaluated from time to time by committees appointed by the Commission, and suggestions made for further improvement.

Educational reconstruction needs ideas, but they are not in short supply. What is needed is adequate resources, and concentration of effort exceeding a certain critical size. The rapidly changing and dynamic situation in the field of higher education calls for a commensurate investment of effort and resources. In view of the pressing requirements of the universities and colleges for essential facilities, the determination of priorities between competing programmes becomes extremely difficult. Moreover, in view of the rapid rate of growth and expansion, it becomes difficult to achieve worthwhile results, unless the investment on a particular programme is adequate. In this connection, the Education Commission (1964-66) observed that : "The absolute amount per capita spent by us on education is about one-hundredth of that spent by a highly industrialised country like the USA. Japan and the USA and the USSR are spending considerably more than 6 per cent of the GNP on education, about twice as much as India."

In view of the magnitude of the problems facing the country in the field of higher education, it cannot 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.

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 the assistance and cooperation received from the State Governments, from various Ministries of the Government of India, from the Planning Commission and from agencies associated with the Commission's work and activities.

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Secretary

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Chairman
A.S. Adke
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S. Dhawan
P.B. Gajendragadkar
A.B. Lal
Tapas Majumdar
P. Govindan Nair

APPENDIX I

INDIAN UNIVERSITIES AND INSTITUTIONS DEEMED TO BE
UNIVERSITIES : 1969-70

<i>Year of Estab- lishment</i>	<i>S. No.</i>	<i>University</i>	<i>Total Enrolment</i>
1	2	3	4
1857	(1)	Calcutta University	2,09,203
	(2)	Bombay University	87,300
	(3)	Madras University	1,22,740
1887	(4)	Allahabad University	15,393
1916	(5)	Banaras Hindu University (Varanasi)	12,273
	(6)	Mysore University	65,699
1917	(7)	Patna University	12,747
1918	(8)	Osmania University (Hyderabad)	60,572
1921	(9)	Aligarh Muslim University	7,634
	(10)	Lucknow University	23,720
1922	(11)	Delhi University	56,283
1923	(12)	Nagpur University	65,101
1926	(13)	Andhra University (Waltair)	72,512
1927	(14)	Agra University	46,751
1929	(15)	Annamalai University (Annamalainagar)	6,837
1937	(16)	Kerala University (Trivandrum)	1,16,721
1943	(17)	Utkal University (Bhubaneswar)	28,872
1946	(18)	Saugar University	20,741
1947	(19)	Rajasthan University (Jaipur)	53,097
	(20)	Panjab University (Chandigarh)	1,65,683
	(21)	Gauhati University	54,446
1948	(22)	Kashmir University (Srinagar)	14,498
	(23)	Rorkee University	2,085
1949	(24)	Poona University	61,420
	(25)	M.S. University of Baroda	15,605
	(26)	Karnatak University (Dharwar)	58,460
1950	(27)	Gujarat University (Ahmedabad)	66,934
1951	(28)	S.N.D.T. Women's University (Bombay)	8,879
	(29)	Visva-Bharati (Santiniketan)	1,210
1952	(30)	Bihar University (Muzaffarpur)	47,466
1954	(31)	Sri Venkateswara University (Tirupati)	32,114

APPENDIX I (Contd.)

1	2	3	4
1955	(32)	Sardar Patel University (Vallabh Vidyanagar)	11,501
	(33)	Jadavpur University (Calcutta)	5,312
1956	(34)	Kuruksetra University (Kurukshetra)	4,518
	(35)	Indira Kala Sangit Vishvavidyalaya (Khairagarh)	104
1957	(36)	Vikram University (Ujjain)	36,738
	(37)	Gorakhpur University	36,840
	(38)	Jabalpur University	19,099
1958	(39)	Varanaseya Sanskrit Vishvavidyalaya (Varanasi)	1,492
	(40)	Marathwada University (Aurangabad)	27,506
1960	(41)	U.P. Agricultural University (Nainital)	1,621
	(42)	Burdwan University	41,258
	(43)	Kalyani University	2,211
	(44)	Bhagalpur University	32,647
	(45)	Ranchi University	34,841
1961	(46)	K.S. Darbhanga Sanskrit Vishvavidyalaya	—
1962	(47)	Punjab Agricultural University (Ludhiana)	3,218
	(48)	Punjabi University (Patiala)	23,338
	(49)	Orissa University of Agriculture & Technology (Bhubaneswar)	1,125
	(50)	North Bengal University (Siliguri)	18,979
	(51)	Rabindra Bharati (Calcutta)	1,794
	(52)	Magadh University (Gaya)	40,906
	(53)	Jodhpur University	8,596
	(54)	Udaipur University	7,089
	(55)	Shivaji University (Kolhapur)	43,587
1964	(56)	Indore University	19,461
	(57)	Jiwaji University (Gwalior)	23,920
	(58)	Ravi Shankar University (Raipur)	24,102
	(59)	University of Agricultural Sciences (Bangalore)	1,769
	(60)	Andhra Pradesh Agricultural University (Hyderabad)	2,629
	(61)	Bangalore University	36,881
	(62)	Jawaharlal Nehru Krishi Vishvavidyalaya (Jabalpur)	1,506
1965	(63)	Dibrugarh University	20,364
1966	(64)	Kanpur University	35,483
	(65)	Meerut University	42,745
	(66)	Madurai University	55,689
	(67)	Saurashtra University (Rajkot)	27,734
	(68)	South Gujarat University (Surat)	17,544

APPENDIX I (Contd.)

1	2	3	4
1967	(69)	Berhampur University	5,921
	(70)	Sambalpur University	10,754
1968	(71)	Gujarat Ayurveda University (Jamnagar)	2,014
	(72)	Jawaharlal Nehru University (New Delhi)	79
	(73)	Maharashtra Krishi Vidyapeeth* (Ahmednagar)	2,658
	(74)	Calicut University	49,863
	(75)	Awadesh Pratap Singh University (Rewa)	14,217
	(76)	Assam Agricultural University (Jorhat)	729
1969	(77)	Guru Nanak University (Amritsar)	—
	(78)	Jammu University (Jammu)	8,474
	(79)	Panjabrao Krishi Vidyapith (Akola)	3,115
<i>Year of Recog- nition**</i>	<i>S. No.</i>	<i>Institutions Deemed to be Universities</i>	<i>Total Student Enrolment</i>
1958	(1)	Indian Institute of Science (Bangalore)	944
	(2)	Indian Agricultural Research Institute (New Delhi)	605
1961	(3)	Indian School of International Studies (New Delhi)	165
1962	(4)	Gurukul Kangri Vishvavidyalaya (Hardwar)	299
	(5)	Jamia Millia Islamia (New Delhi)	903
1963	(6)	Gujarat Vidyapith (Ahmedabad)	492
	(7)	Kashi Vidyapith (Varanasi)	1,716
1964	(8)	Tata Institute of Social Sciences (Bombay)	132
	(9)	Birla Institute of Technology & Science (Pilani)	2,090
1967	(10)	Indian School of Mines (Dhanbad)	317
		Total	24,32,630

- 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, 1969 and include the enrolment in constituent/affiliated colleges of the universities concerned. For Indira Kala Sangit Vishvavidyalaya, Rabindra-Bharati and Varanaseya Sanskrit Vishvavidyalaya, figures relate to the university campuses only. Information about enrolment in K.S. Darbhanga Sanskrit Vishvavidyalaya is not available. For the colleges which did not send the statistics for 1969-70, the data of the previous year has been used.
3. 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.

*Since renamed as Mahatma Phule Krishi Vidyapeeth.

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

APPENDIX II
DISTRIBUTION OF COLLEGES ACCORDING TO
COURSES OF STUDY
1965-66 to 1969-70

<i>Course of Study</i>	<i>Number of colleges</i>				
	1965-66	1966-67	1967-68	1968-69	1969-70
Arts, Science & Commerce	1,769	1,915	2,054	2,219	2,361
Engineering & Technology	103	105	106	105	106
Medicine, Pharmacy & Ayurveda, Nursing and Dentistry	123	137	141	157	167
Law	70	69	66	77	85
Agriculture	54	54	54	53	54
Veterinary Science	20	20	21	21	23
Education	193	200	202	224	235
Oriental Learning	169	177	179	179	188
Others (Physical Education, Music and Fine Arts)	71	72	76	77	78
Total	2,572	2,749	2,899	3,112	3,297

APPENDIX III
GROWTH OF STUDENT ENROLMENT
1959-60 to 1969-70

<i>Year</i>	<i>Total Enrolment*</i>	<i>Increase over the preceding year</i>	<i>Percentage increase</i>
1	2	3	4
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
1969-70	27,92,630	3,19,366	12.9

*Including enrolment in intermediate classes under the Board of High School and Intermediate Education, Uttar Pradesh.

APPENDIX IV
STUDENT ENROLMENT : FACULTY-WISE
1967-68 to 1969-70

Faculty	1967-68		1968-69		1969-70	
	Enrolment*	% of Total	Enrolment*	% of Total	Enrolment*	% of Total
1	2	3	4	5	6	7
Arts (including Oriental Learning)	9,18,345	41.4	10,55,238	42.7	12,18,022	43.6
Science	7,37,858	33.3	8,02,369	32.4	9,14,739	32.8
Commerce	2,19,831	9.9	2,55,568	10.3	2,96,325	10.6
Education	43,102	1.9	48,536	2.0	51,854	1.8
Engineering & Technology	1,04,266	4.7	1,01,380	4.1	97,889	3.5
Medicine	83,422	3.8	90,470	3.7	95,017	3.4
Agriculture	51,639	2.3	53,120	2.1	43,415	1.6
Veterinary Science	6,610	0.3	6,590	0.3	6,131	0.2
Law	44,581	2.0	49,520	2.0	56,240	2.0
Others	9,318	0.4	10,473	0.4	12,998	0.5
Total	22,18,972	100.0	24,73,264	100.0	27,92,630	100.0

*Including enrolment in intermediate classes under the Board of High School and Intermediate Education, Uttar Pradesh.

APPENDIX V
STUDENT ENROLMENT : STAGE-WISE
1967-68 to 1969-70

Stage	1967-68		1968-69		1969-70	
	Enrolment*	% of Total	Enrolment*	% of Total	Enrolment*	% of Total
1	2	3	4	5	6	7
Pre-university	4,85,271	21.9	5,17,021	20.9	5,62,947	20.2
Intermediate	3,43,807	15.5	3,75,558	15.2	4,23,174	15.2
Pre-professional	19,633	0.9	14,582	0.6	13,809	0.5
Graduate	12,11,083	54.5	13,88,335	56.1	16,03,898	57.4
Postgraduate	1,17,250	5.3	1,35,459	5.5	1,46,804	5.3
Research	11,479	0.5	12,145	0.5	12,474	0.4
Diploma/Certificate	30,449	1.4	30,164	1.2	29,524	1.0
Total	22,18,972	100.0	24,73,264	100.0	27,92,630	100.0

*Including enrolment in Intermediate classes under the Board of High School & Intermediate Education, Uttar Pradesh.

APPENDIX VI
STRENGTH AND DISTRIBUTION OF TEACHING STAFF IN
UNIVERSITY DEPARTMENTS/UNIVERSITY COLLEGES
1965-66 to 1969-70

<i>Year</i>	<i>Professors</i>	<i>Readers</i>	<i>Lecturers*</i>	<i>Tutors/ Demos- trators</i>	<i>Total</i>
1	2	3	4	5	6
1965-66	1,273 (8.9)	2,115 (14.8)	9,710 (68.0)	1,193 (8.3)	14,291 (100.0)
1966-67	1,401 (9.4)	2,320 (15.6)	10,264 (68.9)	915 (6.1)	14,900 (100.0)
1967-68	1,606 (9.2)	2,575 (14.8)	12,110 (69.3)	1,165 (6.7)	17,456 (100.0)
1968-69	1,872 (9.8)	2,834 (14.9)	12,991 (68.2)	1,361 (7.1)	19,058 (100.0)
1969-70	1,903 (9.6)	2,944 (14.9)	13,449 (68.1)	1,461 (7.4)	19,757 (100.0)

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

*Including assistant professors and assistant lecturers.

APPENDIX VII
DISTRIBUTION OF TEACHING STAFF IN AFFILIATED
COLLEGES ACCORDING TO DESIGNATION
1965-66 to 1969-70

<i>Year</i>	<i>Senior* Teachers</i>	<i>Lecturers**</i>	<i>Tutors/ Demos- trators</i>	<i>Total</i>
1	2	3	4	5
1965-66	10,211 (14.5)	50,837 (72.2)	9,337 (13.3)	70,385 (100.0)
1966-67	11,095 (14.2)	56,164 (71.6)	11,092 (14.2)	78,351 (100.0)
1967-68	11,655 (13.7)	61,861 (72.8)	11,482 (13.5)	84,998 (100.0)
1968-69	12,169 (13.2)	67,320 (73.3)	12,398 (13.5)	91,885 (100.0)
1969-70	12,838 (12.9)	73,360 (73.9)	13,097 (13.2)	99,295 (100.0)

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

*Including principals.

**Including assistant lecturers.

APPENDIX VIII
DEGREES AWARDED
1964-65 to 1966-67

<i>Faculty</i>	<i>Number of Recipients</i>			<i>Percentage increase</i>	
	1964-65	1965-66	1966-67	1965-67	
1	2	3	4	5	
Faculty of Arts					
B.A.*	94,257	90,928	1,14,353	21.3	
M.A.	26,180	27,960	30,726	17.4	
Doctorates	476	541	624**	31.1	
Faculty of Science					
B.Sc.*	38,230	42,437	49,767	30.2	
M.Sc.	7,290	8,009	8,892	22.0	
Doctorates**	520	683	765	47.1	
Faculty of Commerce					
B.Com.*	18,395	20,930	22,611	22.9	
M.Com.	2,864	3,321	3,400	18.7	
Doctorates	23	20	26	13.0	
Faculty of Education					
B.Ed./B.T.	23,346	24,945	29,747	27.4	
M.Ed.	803	810	911	13.4	
Doctorates	22	17	21	(-) 4.5	
Faculty of Law					
LL.B./B.L.	8,691	8,587	10,027	15.4	
LL.M.	100	117	137	37.0	
Doctorates	2	1	3	50.0	
Faculty of Agriculture					
B.Sc. (Agriculture)	5,569	4,902	6,129	10.1	
M.Sc. (Agriculture)	1,140	1,011	892	(-) 21.8	
Doctorates***	127	92	96	(-) 24.4	

*Includes honours.

**Doctorates in Mathematics have been included in the Faculty of Science

***Inclusive of output figures of the Indian Agricultural Research Institute.

APPENDIX VIII (Contd.)

1	2	3	4	5
Faculty of Vet. Science				
B.V.Sc.	1,030	855	1,120	8.7
M.V.Sc.	151	104	174	15.2
Doctorates	3	3	9	200.0
Faculty of Medicine				
M.B.B.S.	4,635	5,516	6,317	36.3
M.D./M.S.	940	1,049	1,115	18.6
Doctorates	21	39	5	(-) 76.2
Faculty of Engg./Technology				
B.E./B.Sc.(Engg.)/ B.Sc. (Tech.) etc.	9,739	12,710	14,001	43.8
M.E./M.Sc. (Engg.)/ M.Sc. (Tech.) etc.	576	520	628	9.0
Doctorates	32	39	33	3.1

APPENDIX IX
CENTRES OF ADVANCED STUDY

<i>S. No.</i>	<i>University</i>	<i>Department Recognised as Centre of Advanced Study</i>	<i>Major Field of Specialisation</i>
1	2	3	4

I. SCIENCE

1.	Annamalai	Marine Biology	Marine Biology
2.	Bombay	Mathematics Chemical Technology	Pure Mathematics Applied Chemistry
3.	Calcutta	Mathematics Radiophysics and Electronics	Applied Mathematics Radiophysics and Electronics
4.	Delhi	Physics Chemistry Botany Zoology	Theoretical Physics Chemistry of Natural Products Plant Morphology and Embryology Cell Biology and Endocrinology
5.	Indian Institute of Science Bangalore	Bio-chemistry	Proteins, Lipids and Vitamins
6.	Madras	Physics Botany Mathematics	Crystallography & Bio-physics Plant Pathology & Mycology Pure Mathematics
7.	Osmania	Astronomy	Astronomy
8.	Panjab	Geology Mathematics	Himalayan Geology & Palaeontology Pure Mathematics
9.	Saugar	Geology	Structural Geology and Geomorphology

II. SOCIAL SCIENCES AND THE HUMANITIES

1.	Aligarh	History	Medieval Indian History
2.	Annamalai	Linguistics	Dravidian Linguistics

APPENDIX IX (Contd.)

1	2	3	4
3.	Baroda	Education	Education
4.	Banaras	Philosophy	Indian Philosophy
5.	Bombay	Economics	Public Finance & Industrial Economics
6.	Calcutta	Ancient Indian History & Culture	Ancient Indian History and Culture
7.	Delhi	Economics Sociology	Economic Development & Economic History Sociology
8.	Madras	Philosophy	Advaita & allied System of Philosophy
9.	Poona	Economics (Gokhale Institute) Linguistics (Deccan College) Sanskrit	Agricultural Economics Applied Linguistics Sanskrit Literature
10.	Visva-Bharati	Philosophy	Metaphysics

APPENDIX X

**FACULTY-WISE ENROLMENT* : UNIVERSITIES AND
AFFILIATED COLLEGES
1969-70**

<i>Faculty</i>	<i>University Departments/ University Colleges</i>	<i>Affiliated Colleges</i>	<i>Total</i>	<i>% in Affiliated Colleges</i>		
				1969-70	1968-69	1967-68
1	2	3	4	5	6	7
Arts	1,18,713	9,42,709	10,61,422	88.8	87.2	86.9
Science	70,280	6,77,059	7,47,339	90.6	90.1	89.8
Commerce	23,847	2,58,078	2,81,925	91.5	91.2	91.7
Education	6,111	45,743	51,854	88.2	87.9	88.1
Engineering/ Technology	26,837	71,052	97,889	72.6	72.4	71.6
Medicine	6,763	88,254	95,017	92.9	91.2	90.6
Agriculture	17,077	11,938	29,015	41.1	45.1	62.5
Veterinary Science	3,720	2,411	6,131	39.3	43.6	52.6
Law	22,923	33,317	56,240	59.2	61.7	60.2
Others	1,809	3,989	5,798	68.8	53.9	55.7
Total	2,98,080	21,34,550	24,32,630	87.7	86.7	86.5

*Excluding enrolment in intermediate classes affiliated to the Board of High School and Intermediate Education, Uttar Pradesh.

APPENDIX XI
STAGE-WISE ENROLMENT* : UNIVERSITIES AND
AFFILIATED COLLEGES
1969-70

<i>Stage</i>	<i>University Departments/ University Colleges</i>	<i>Affiliated Colleges</i>	<i>Total</i>	<i>Percentage in Affiliated Colleges</i>		
				<i>1969-70</i>	<i>1968-69</i>	<i>1967-68</i>
Pre-university	25,904	5,37,043	5,62,947	95.4	95.3	95.3
Intermediate	125	63,049	63,174	99.8	99.5	99.6
Pre-professional	1,023	12,786	13,809	92.6	92.5	94.8
Graduate	1,71,522	14,32,376	16,03,898	89.3	88.2	87.9
Postgraduate	75,919	70,885	1,46,804	48.3	46.4	45.3
Research	10,889	1,585	12,474	12.7	10.7	10.1
Diploma/Certificate	12,698	16,826	29,524	57.0	56.6	52.9
Total	2,98,080	21,34,550	24,32,630	87.7	86.7	86.5

*Excluding enrolment in intermediate classes affiliated to the Board of High School & Intermediate Education, Uttar Pradesh.

APPENDIX XII
DEVELOPMENT GRANTS PAID TO COLLEGES
1969-70

<i>S. No.</i>	<i>Scheme</i>	<i>Amount (Rupees)</i>
1.	Construction of Hostels	34,62,475
2.	Laboratory and Library Facilities	84,03,511
3.	Construction of Staff Quarters	16,90,226
4.	Development of Postgraduate Studies in Science	11,84,769
5.	Development of Postgraduate Studies in Humanities and Social Sciences	5,80,463
6.	Books and Journals	80,82,727
7.	Welfare Schemes :	
	(i) Students Aid Fund	22,84,154
	(ii) Non-Resident Student Centres	6,59,500
	(iii) Hobby Workshops	45,251
	(iv) Water Coolers	1,65,722
	(v) Students Welfare Programme	17,07,202
8.	(i) Grants to Constituent/Affiliated Colleges of Delhi University for Specific Purposes	42,20,530
	(ii) Maintenance Grants to New Colleges	2,55,000
9.	Centenary Grants	1,60,000
10.	Construction of Shooting Ranges	17,941
11.	Scholarships etc.	
	(i) Research Fellowships Humanities and Sciences	2,19,766
	(ii) Utilisation of Services of Retired Teachers	3,62,890
	(iii) Financial Assistance to Research Workers Humanities and Sciences	2,60,905
	(iv) Scholarships in Arabic and Persian	19,181
	(v) Research Scholarships	48,299
	(vi) Hill Area Scholarships	6,055
12.	Revision of Salary Scales	2,189
13.	Chalk Boards	2,19,798
14.	Travel Grants for attending Conferences	62,750
15.	Grants to Colleges for Miscellaneous Schemes	73,942
16.	Training Colleges	12,97,589
Total		3,54,92,877

APPENDIX XIII

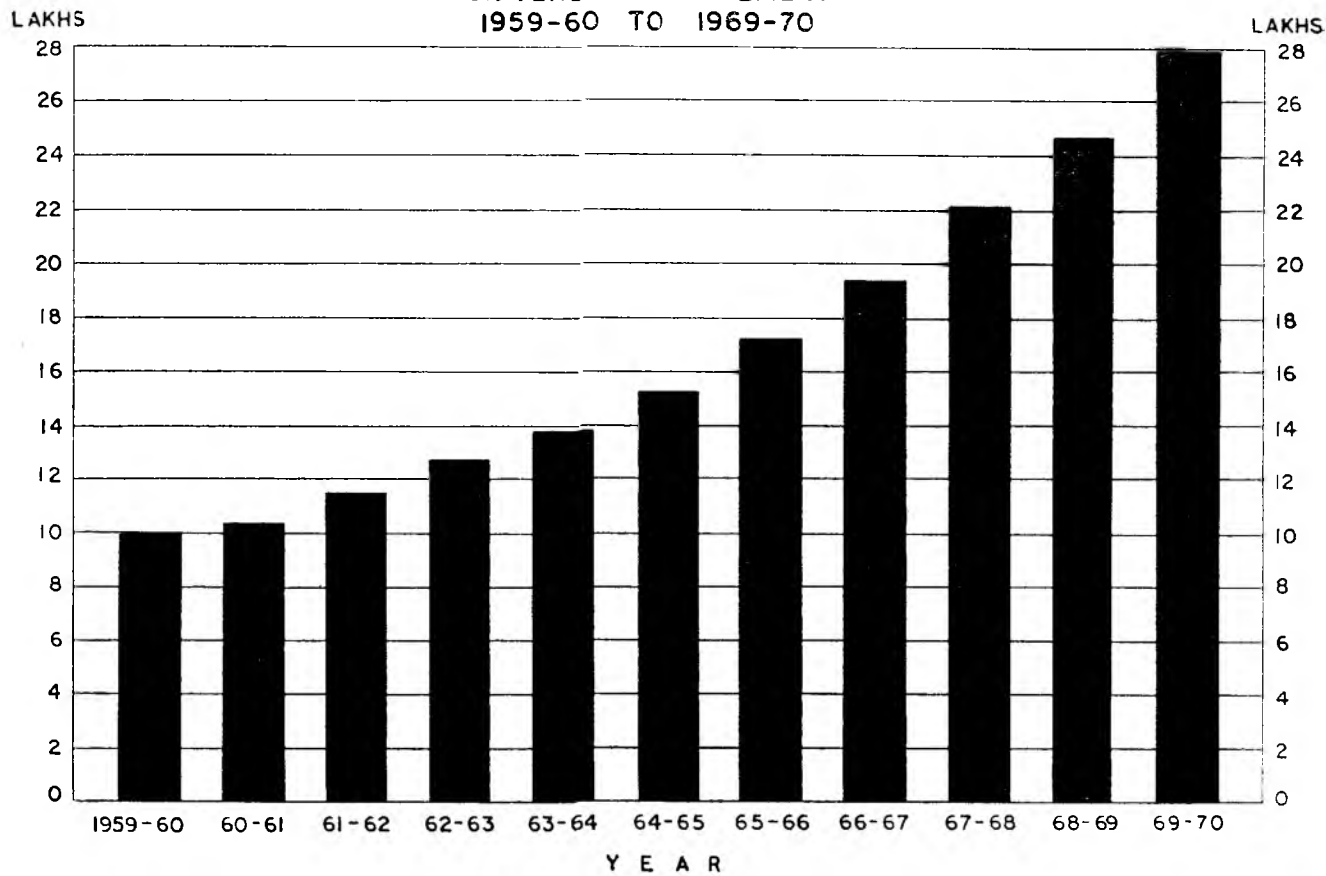
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Vice-Chancellor,
Delhi University. |
| 7. Dr. M.S. Swaminathan,
Director,
I.A.R.I., New Delhi. | 8. Dr. M.N. Goswami,
Vice-Chancellor,
Gauhati University. |
| 9. Shri N.D. Sundaravadivelu,
Vice-Chancellor,
Madras University. | 10. Dr. P.L. Bhatnagar,
Vice-Chancellor,
Rajasthan University. |
| 11. Dr. R.K. Singh,
Vice-Chancellor,
Himachal Pradesh University. | 12. Professor R. Satyanarayan,
Vice-Chancellor,
Osmania University. |
| 13. Dr. S. Misra,
Vice-Chancellor,
Utkal University. | 14. Dr. S.N. Sen,
Vice-Chancellor,
Calcutta University. |
| 15. Shri S.S. Bhandarkar,
Vice-Chancellor,
Jiwaji University. | 16. Shri Suraj Bhan,
Vice-Chancellor,
Panjab University. |
| 17. Dr. Umashankar J. Joshi,
Vice-Chancellor,
Gujarat University. | |

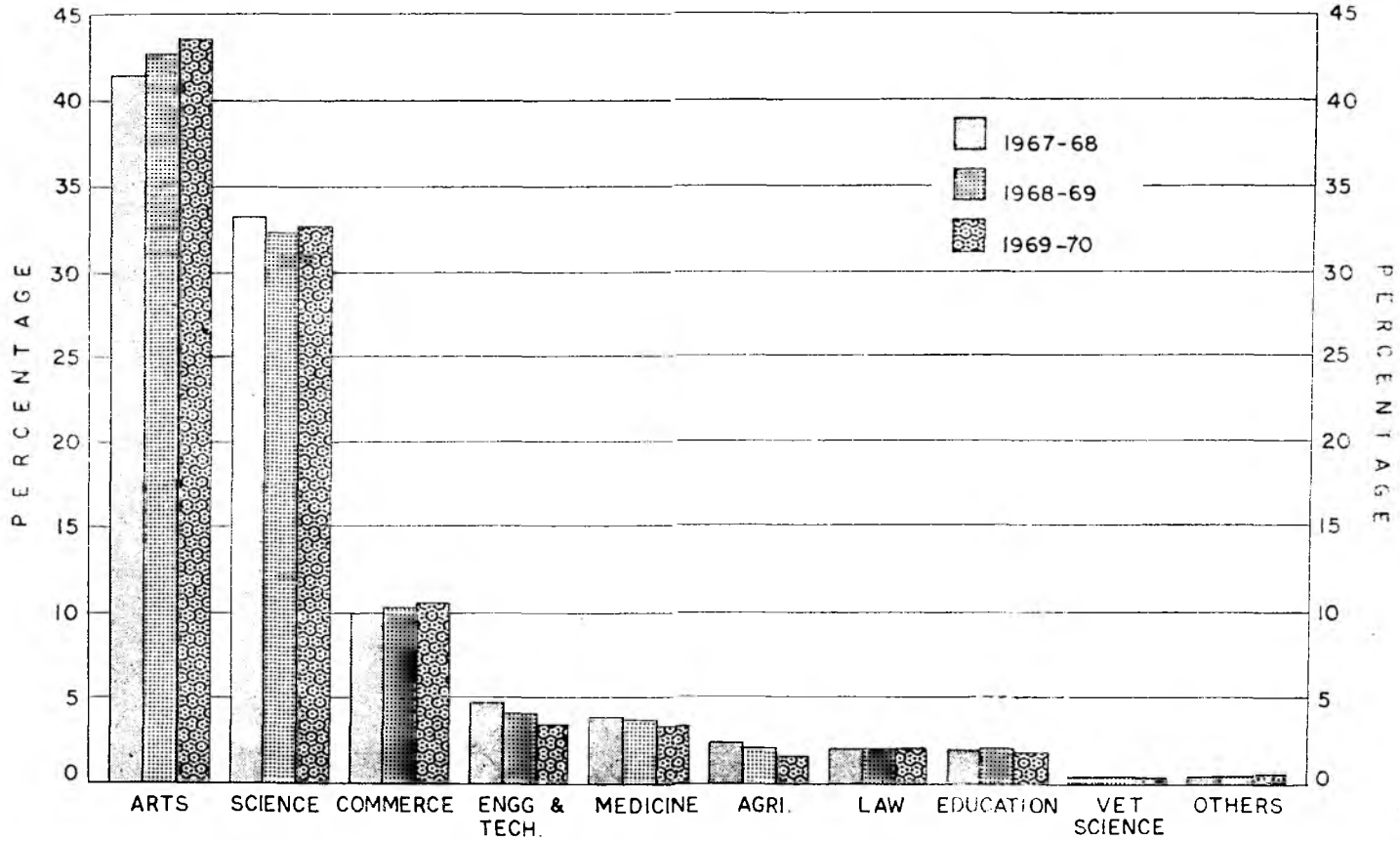
APPENDIX XIV
EXPENDITURE : PLAN AND NON-PLAN PROJECTS
1969-70

<i>Purpose</i>	<i>Amount (Rupees)</i>
NON-PLAN PROJECTS	
1. Administrative Charges	31,53,288
2. Block Grants to Central Universities	6,31,25,000
3. Maintenance Grants to Constituent/Affiliated Colleges of Delhi University	2,43,00,000
Total (Non-Plan Projects)	9,05,78,288
PLAN PROJECTS	
1. Grants to Central and State Universities for Humanities	1,71,74,100
2. Grants to Central and State Universities for Science	3,60,56,319
3. Grants to Central and State Universities for Engineering and Technology	2,68,13,687
4. Grants to Constituent and Affiliated Colleges	3,54,92,877
5. Grants to Central and State Universities for Miscellaneous Schemes	3,34,67,781
6. Miscellaneous Expenditure incurred by UGC on Seminars, Conferences etc.	4,58,949
7. Expenditure from grants received from Government of India and other Sources for specific purposes	60,04,651
Total (Plan Projects)	15,54,68,364
Grand Total (Plan and Non-Plan)	24,60,46,652

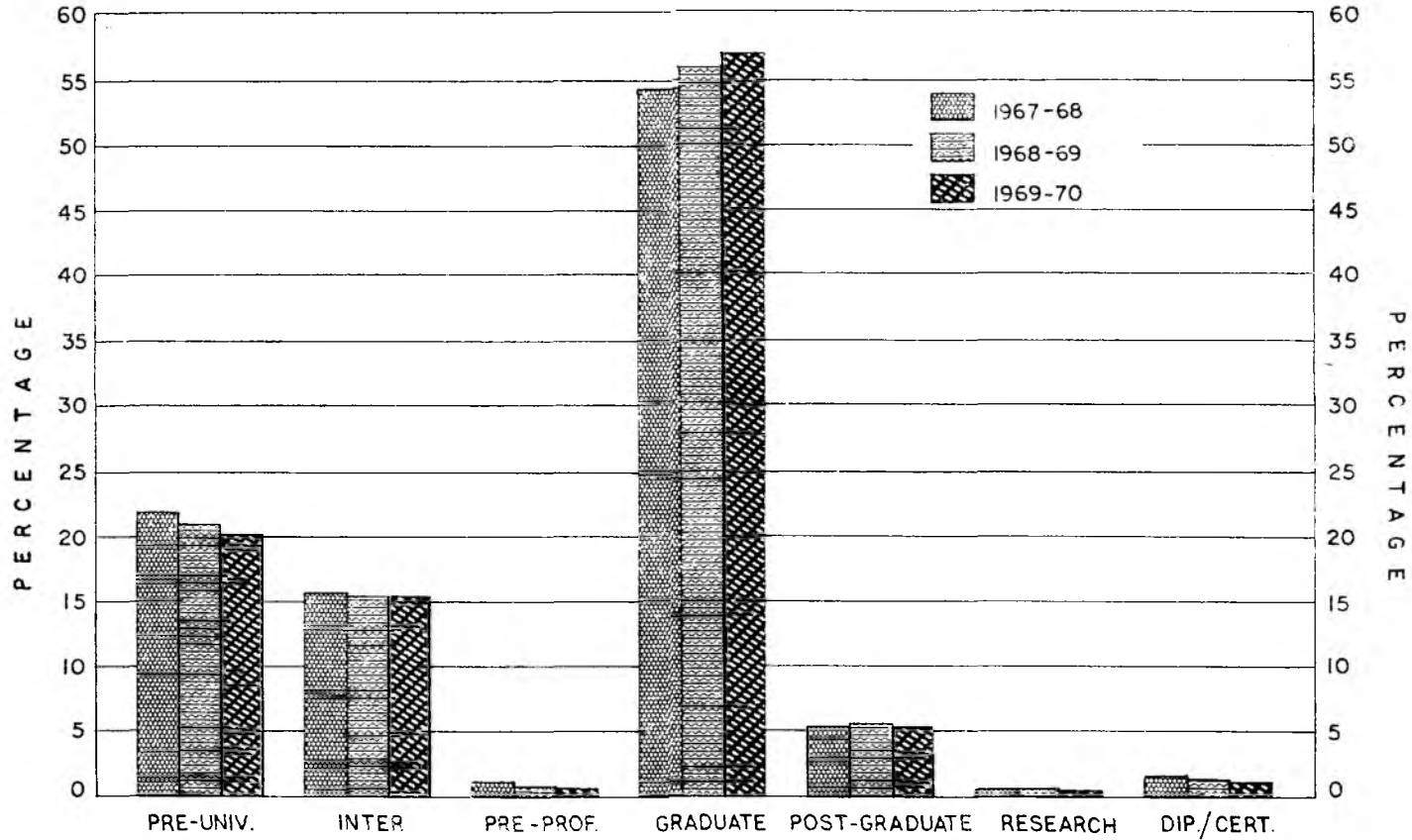
UNIVERSITY ENROLMENT
1959-60 TO 1969-70



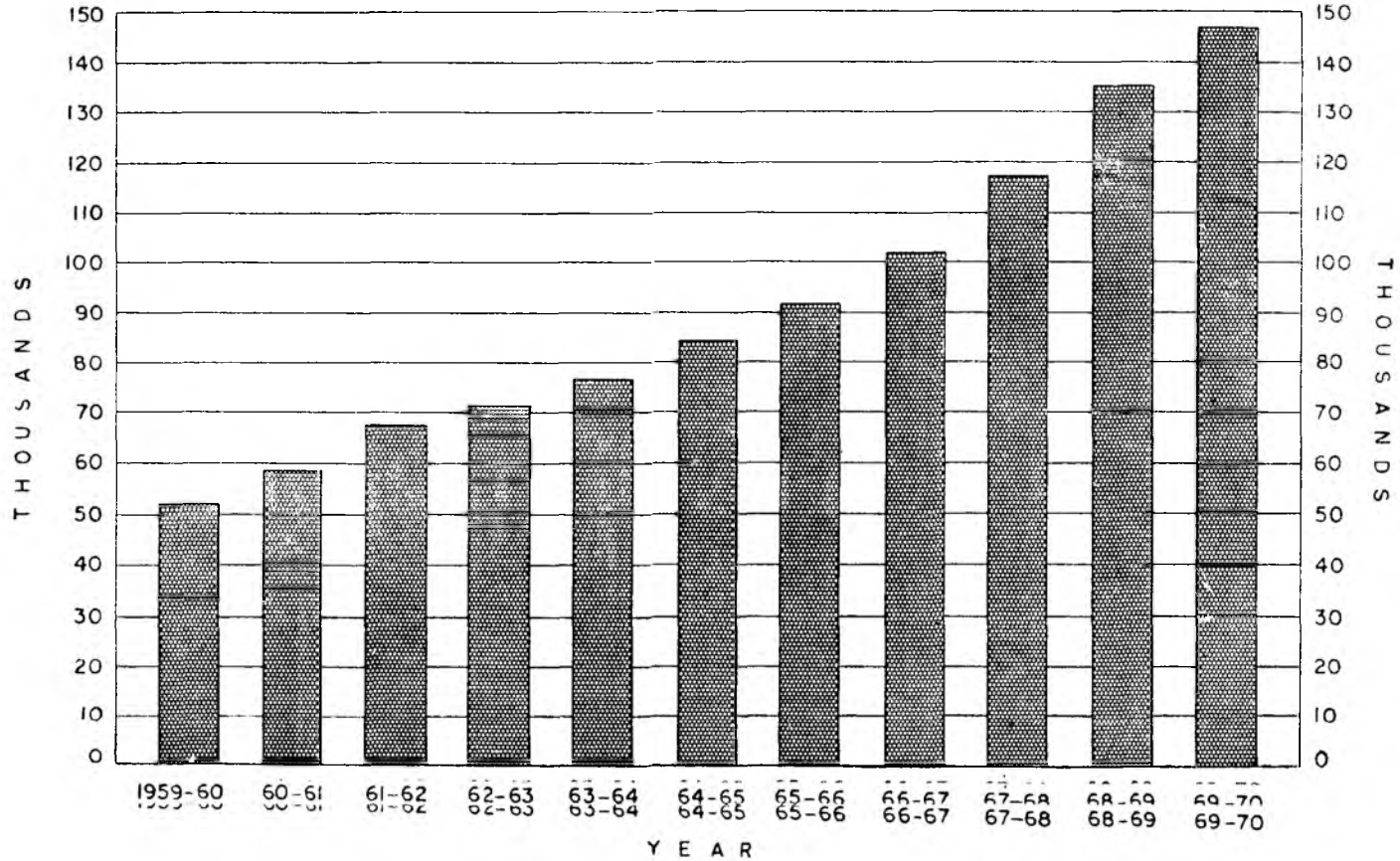
FACULTY-WISE ENROLMENT 1967-68 TO 1969-70



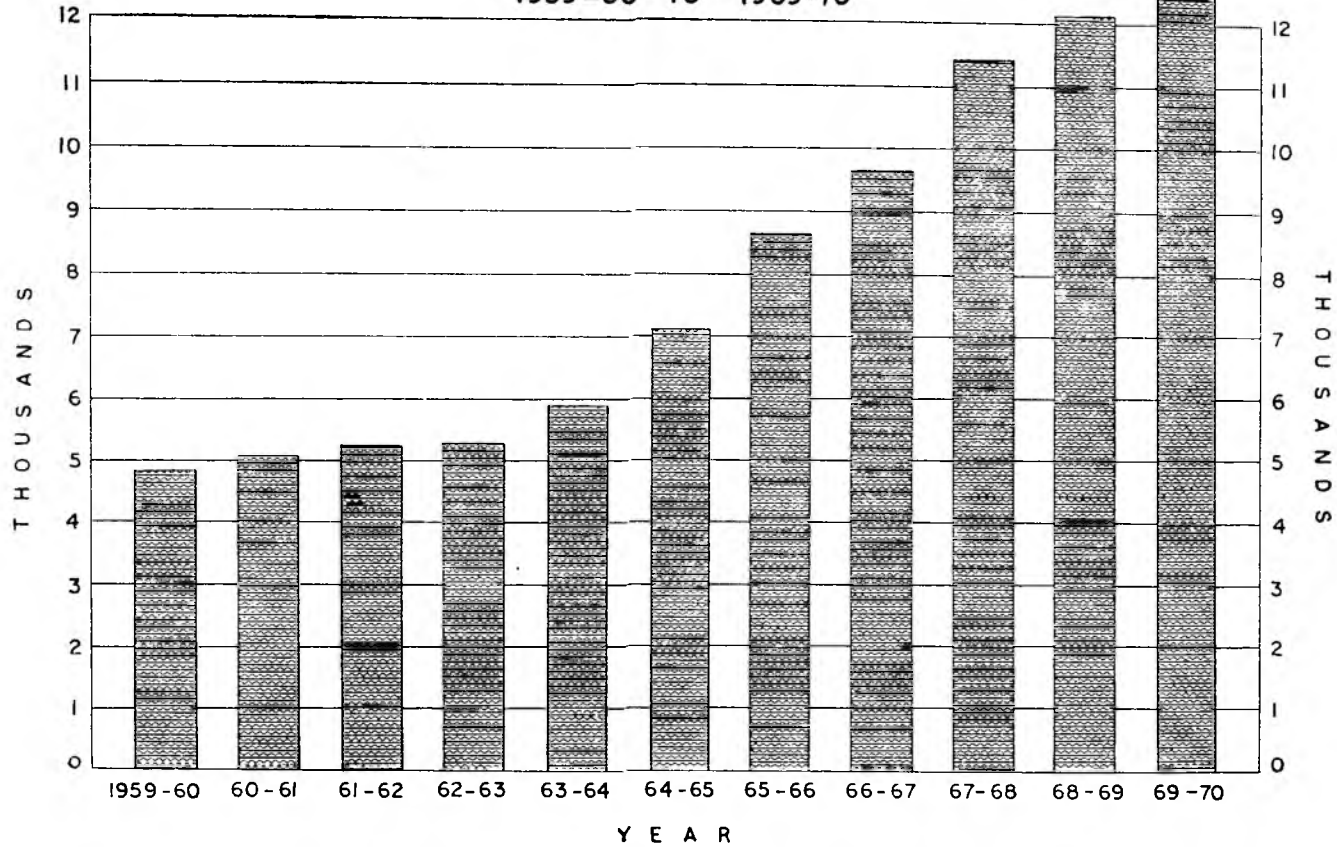
ENROLMENT AT DIFFERENT STAGES 1967-68 TO 1969-70



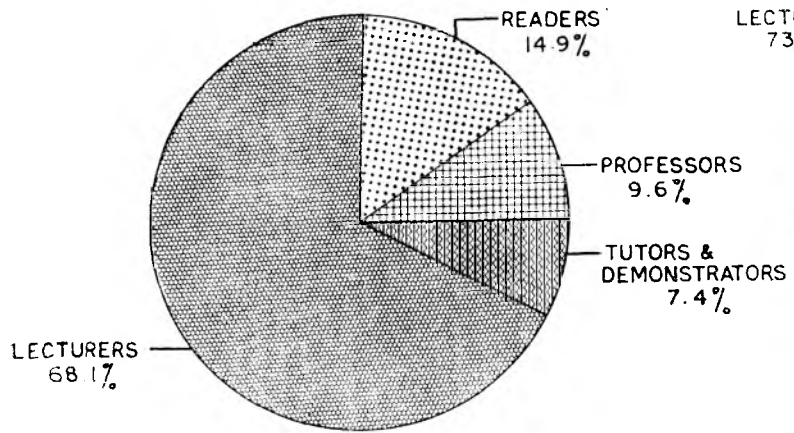
POST-GRADUATE ENROLMENT
1959-60 TO 1969-70



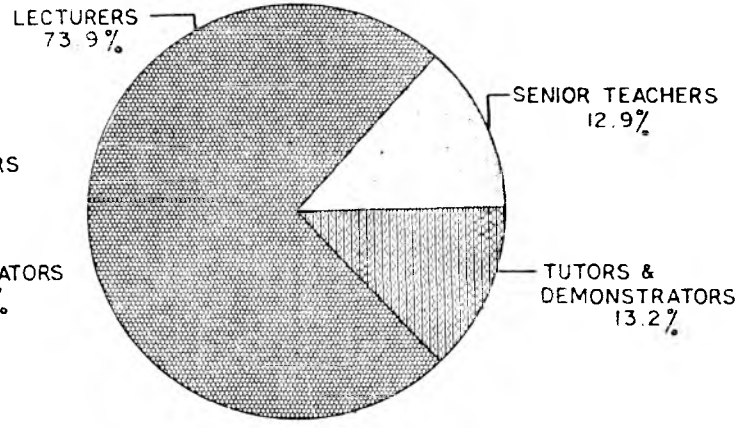
RESEARCH ENROLMENT
1959-60 TO 1969-70



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UNIVERSITY DEPARTMENTS



AFFILIATED COLLEGES

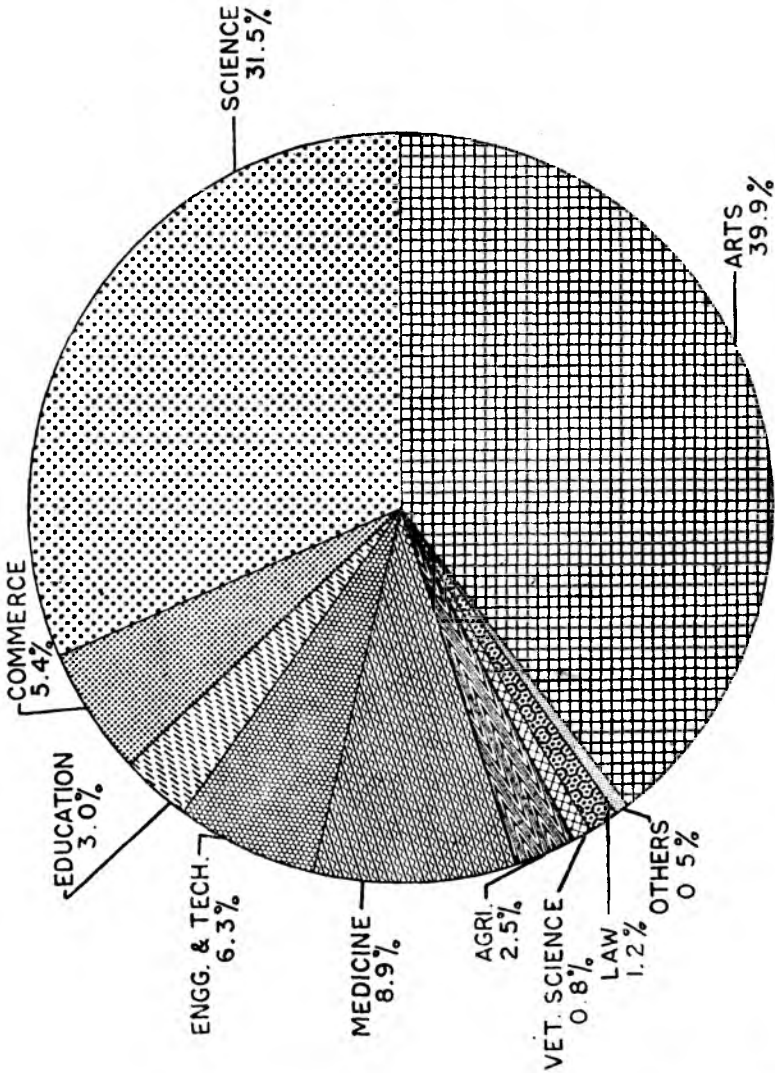
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