

## THE UNIVERSITIES OF GREAT BRITAIN: POSITION AND PROSPECTS

TO assist the Treasury in considering the provision which Parliament should be asked to make for the next quinquennium, the University Grants Committee early last year issued an interim report on university development in Great Britain during the four years 1947-51. That interim report largely dispelled misgivings currently entertained as to the effect of economy measures on university development. The complete factual record for the whole quinquennium of the use to which the universities have put the greatly increased financial resources which have been at their disposal now available\* is no less reassuring. Following the lines of earlier reports, the present one reviews the whole of the quinquennium 1947-52 and discusses some of the principal problems of general policy with which the universities are currently confronted. In general, it confirms the impression given by the interim report, material from which is freely repeated, that the main task of the universities during the coming quinquennium will be that of consolidating the ground won by the advances of the past five years.

The broad features of the situation have been made generally familiar not only by the interim report but also by current and continuing discussion on the expansion of technological education, the training of scientists and administrators, the control of public expenditure and the relations between industry and the universities in Britain. The work of the University Grants Committee continues to grow, and it is now concerned with eighteen universities and four separate university colleges, as compared with sixteen and five, respectively, at the beginning of the quinquennium, and two colleges of technology, although the charter as a university obtained by the University College of Southampton did not take effect within the quinquennium under review.

Looking first at student numbers, during 1951-52, the last year of the quinquennium, the number of full-time students enrolled in the universities and colleges was 83,458, compared with 78,507 in 1947-48, 66 per cent greater than in 1938-39, the last year before the Second World War, and only two thousand less than the peak figure (85,421) of 1949-50. Apart from the temporary increase due to the influx of ex-service men and women, assisted by the further education and training scheme, these numbers reflect a permanent increase which indicates the extent to which the universities have already responded to the demands for more graduates formulated in the Barlow and other reports. There were during 1951-52 twice as many students of science and technology as there were during 1938-39. Arts students increased by 60 per cent, students in agriculture by 132 per cent, medical students by 17 per cent, dental students by 94 per cent, and veterinary students were nearly four times as numerous. The expansion in science and technology was thus completed in five years instead of the ten contemplated by the Barlow Committee; but the objective of the Teviot Committee has not been reached, chiefly because numbers of suitable students have not come forward. The consequent changes in the total student body are shown in Table 1.

\* University Grants Committee. University Development, Report on the Years 1947-1952. (Cmd. 8875.) Pp. 93+8 plates. (London: H.M.S.O., 1953.) 3s. 6d. net.

The University Grants Committee pays tribute to the resourcefulness and adaptability which the universities displayed in coping with these increased numbers, and notes that inconveniences of overcrowding were willingly endured in the hope, so far unfulfilled, that a rapid increase in the rate of university building would soon become possible. This still appears to be unlikely, and the experience of these years obviously determines the Committee's attitude to the further expansion of the student population. It is concerned, above all, to maintain standards, and the Chancellor of the Exchequer is reminded very firmly that any increase in the number of students of science and technology involves capital expenditure on buildings and equipment, even if the number of arts students fell at the same time.

The increase in student numbers during the quinquennium was not spread evenly over the universities and colleges. For England as a whole, the figures for 1951-52 were 70 per cent above those for 1938-39; but at Oxford and Cambridge the increases were only 41 per cent and 34 per cent, respectively, and at London no more than 39 per cent, compared with an average of 127 per cent for the remaining English universities and university colleges. In Wales the increase was 75 per cent, and in Scotland 49 per cent. Students with homes in the United Kingdom increased in number by 71 per cent, the number from overseas increasing by 33 per cent (from 5,213 to 6,960), or just over 8 per cent of the student population, compared with 10 per cent in 1938-39, more than half still coming from countries within the British Commonwealth and 57 per cent going to Oxford, Cambridge or London, compared with about 66 per cent before the War.

The University Grants Committee thinks that there are good reasons for assuming that the rapid rate of increase in total student numbers which marked the immediate post-war period is likely to be followed by a slight fall during the next few years. Practically every university institution has been full to, or beyond, its reasonable physical capacity, and even if university institutions were themselves willing to accept any substantial increase in student numbers without the addition of new buildings on a scale unlikely to be possible immediately, the University Grants Committee is clearly and rightly opposed. "The quality of education cannot but be affected by the surroundings in which it is given and it would not be in the interest of university education that the discomforts and handicaps of overcrowded and makeshift accommodation should be endured for an indefinite period." It appears to lean rather to the view that the right policy at the present juncture may be to relieve congestion by contracting slightly the intake of students, particularly if it is true that

Table 1. FULL-TIME STUDENTS IN FACULTIES

	1938-39		1951-52	
	Number	Per cent	Number	Per cent
Arts	22,512	44.8	35,936	43.1
Science	7,767	15.5	17,053	20.4
Technology	6,288	10.5	10,215	12.2
Medicine	11,883	23.6	13,910	16.7
Dentistry	1,488	3.0	2,889	3.5
Agriculture	1,043	2.1	2,418	2.9
Veterinary science	265	0.5	1,037	1.2

few school-leavers who desire, and are capable of profiting by, a university education, would fail to gain admission, provided they are prepared to go to an institution other than that of their first preference. That policy is supported by other considerations noted in the report, and implies that any further increase in the student population of the universities should wait on an increase in the output of suitable pupils from the secondary schools.

The University Grants Committee does not, however, rule out the desirability of changes in distribution between faculties. It is doubtful whether the future demand for arts students will be sufficient to absorb the entire output of the universities at its present rate, and there are certain fields of vocational training, notably science teachers, dentists and some categories of scientists and technologists, from which a substantially higher output is urgently desirable in the national interest. It infers accordingly that, during the next quinquennium, the proportion of students engaged in scientific and technological studies will tend to grow at the expense of the proportion of arts students. Reference has already been made to the financial implications of such a transfer; but so far as recurrent expenditure is concerned, the Committee is reasonably confident that such adjustments of the balance of the faculties as the needs of the next few years may dictate will not be unduly hampered by lack of income. Furthermore, the Committee, pointing to the difficulty of assessing demand for specialized fields like the branches of biology, where in any one year the demand may be very small, suggests that employers requiring men with this kind of training should consider selecting them before they commence post-graduate training, paying the selected individuals' salary and fees for that training. Moreover, figures indicating the pressure to enter the various faculties afford little support for the view that men choose the faculty in which they would propose to read mainly by reference to the salaries to be expected on completion of training.

Reviewing the numbers of students in relation to population, the report notes that, assuming the survival of 90 per cent of live births to age eighteen, the proportion of any age-group which reaches the university is now about 1 in 31 compared with about 1 in 60 before the War. As the annual number of live births in Great Britain began to rise steeply in the latter part of the War, reaching a peak average of 932,000 in 1946-48, a marked increase in student numbers will be required from about 1960 onwards if the proportion of each age-group which reaches the university is to be maintained. Broadly, it appears to be true to say that the differences between England, Wales and Scotland in the proportion of any age-group which reaches the university have greatly diminished. While the Committee thinks that to aim at raising the university student population to the American scale by lowering entrance standards to that of the American college would be unwise and would alter the whole character of our universities, it would welcome an increase in the student population subject to three conditions: first, there should be no increase in any faculty that would lead to difficulties in finding satisfactory employment for its graduates; secondly, the necessary additions to accommodation and equipment should be forthcoming; and third, it should involve no decline in the standard reached by students when they obtain their first degree.

This last condition probably means that if the other two were satisfied and the time were ripe, until the rise in the birth-rate takes effect, the increase could only come through the retention in the grammar schools of a greater proportion of the more intelligent pupils who now leave prematurely. The report also directs attention to the change in the economic and social background of the students which has occurred during the past two or three decades. Whereas the percentage of all full-time students receiving assistance in the way of scholarships, exhibitions or other awards from public or private funds in 1938-39 was 41.1, in 1951-52 it was 72.4, and at one stage the proportion at Oxford and Cambridge rose as high as 82.2 and 79.8 per cent, respectively. The position is further displayed in Table 2, and it should be further noted that the number of unassisted students has declined absolutely, as well as relatively, from 29,456 in 1938-39 to 23,006 in 1951-52, almost entirely in Oxford, Cambridge and London.

Table 2. ASSISTED STUDENTS AS A PERCENTAGE OF ALL FULL-TIME STUDENTS

	1938-39	1951-52
England		
Cambridge	39.0	67.8
London	26.0	67.7
Oxford	55.2	71.7
Other universities and university colleges	44.4	79.5
Total		
England	38.5	73.8
Wales	61.4	88.3
Scotland	45.1	61.6

One consequence has been that a much higher proportion of students than formerly are young men and women who have few cultural interests and attainments beyond those which they have acquired at school. Their presence in the universities has forced upon the universities various problems of teaching and the organization of student life which were not previously generally recognized, and the solution of which may be assisted by the fact that the academic staff are increasingly drawn from the same strata of society as the students.

As regards quality of students, it seems that in relation to the total number of students, the proportion of outstandingly good and outstandingly weak students is lower, and that of good second-class students higher, than it used to be. There is probably also a continuing tendency for a higher proportion of the abler school-leavers to seek admission to the scientific faculties; but the demand for technological courses is less keen than that for pure science. Despite the reassuring impressions of student quality derived from the Committee's visits to universities, its general conclusion is that no further substantial increase in student numbers could be expected in the immediate future without reducing university standards. It is not disturbed by present casualty-rates, but would deplore alike any tendency to admit to a first year of study students whose incapacity to read for a degree could have been detected before they entered the university at all, or to regard the award of a degree as automatic once admission to a university is granted. Nevertheless, the University Grants Committee thinks that in general the problem of selection is receiving the attention it deserves. It considers that the response to steps taken to stimulate wider interests among students has been most encouraging; but it gives a caution about vacation employment

and suggests that the question of vacation study may require further attention.

Although a few new university halls of residence have been erected during the quinquennium, the addition of 7,500 places since 1938-39 has done little more than maintain the pre-war proportion of students in residence. This is one of the outstanding disappointments of the past quinquennium; but in accepting the fact that there is little prospect of any immediate and considerable expansion of the residential system, the Committee does not wish to discourage universities from thinking ahead to a period when building on a larger scale can be resumed. It points out, however, that the extent to which students should reside in halls can be over-stated, and that residence in hall is not necessarily the best arrangement for every student at every stage of his career. Further, it is desirable meanwhile to do all that is possible to develop other agencies for promoting communal life and to keep students in the university atmosphere at times when they are not required to be in attendance at lectures. As regards student health, it is suggested that provision for this requires reconsideration in the light of the general principle that university schemes should aim at satisfying the special and distinctive needs of student life rather than providing a duplication of the National Health Service.

While the increase in students came early in the quinquennium, the increase in academic staff, from 3,994 during 1938-39 to 5,561 during 1946-47 and 8,952 during 1951-52, came later. It was not until the later years of the quinquennium that the flow of suitably qualified candidates enabled the universities to recruit new staff in sufficient numbers to meet the needs of the enlarged student population; but the staff: student ratio (excluding Oxford and Cambridge, for which comparable figures are not available) has risen from 1:10 in 1938-39 to 1:8 in 1951-52. Nearly all the universities and colleges in Britain have been able to develop to some extent a tutorial system, particularly for the benefit of their senior students. The Committee believes that the doubling of the academic staffs has not involved any deterioration in quality; but it points out that the full financial effect of this expansion has not yet been felt, and the low average age of the academic staffs in most universities has repercussions which require attention in recruitment policy in the creation of new posts, such as readerships, and in considering the age of retirement, if serious promotion blocks are to be avoided. The report gives a clear account of the present salary position and of the unavoidable differentiation between medical and non-medical staff. It stresses the importance of an improvement in the staff: student ratio; but while fully supporting the view that the university teacher should be able to devote an adequate proportion of his time to research or other original work, it deprecates any idea that the potential value of a young member of a university staff can always be judged by his or her output of research or scholarship before the end of three years service as an assistant lecturer.

More is said about research in the following section of the report. The University Grants Committee does not believe that there is any immediate danger in Great Britain of the universities devoting an undue share of their research activities to the fulfilment of government contracts. In the years ending July 31, 1950, and 1951, the universities received from government departments and the research councils,

for specialized research, including some capital, £1.6 million and £1.7 million, respectively, compared with a total revenue expenditure of the universities in these years of £22 million and £24 million, respectively. On the other hand, it is pointed out in regard to nuclear research that, while this is a continuation of a field of investigation which was attracting many notable physicists before the War, and it is desirable both that some university research workers should have access to the large machines provided at such universities as Cambridge, Oxford, Birmingham, Liverpool and Glasgow, and that a proportion of those undertaking physics research in other universities should devote themselves to nuclear investigation, it would be unfortunate if preoccupation with this particular branch of physics were to distort the general balance of research. The Committee states that it does not propose to continue, in the quinquennium 1952-57, the practice of recommending non-recurrent grants for the purchase of new equipment for existing accommodation, though such grants will continue to be available, as may be necessary, for furnishing and equipping new accommodation. Of non-recurrent grants for this purpose during the quinquennium, totalling £7 million, some was for bringing the equipment of existing laboratories up to an appropriate level, and the Committee believes that the average scientific worker in the university is now far better equipped for prosecuting his research activities than at the beginning of the quinquennium.

The Committee refers to the importance of avoiding overloading of the curriculum for a first degree and urges that in designing such courses of study the consideration that universities have to educate men and women capable of holding positions of responsibility in every walk of civil life should always receive its due weight. Students of all levels of ability will derive benefit from their courses only if they learn to think. Reference is also made to the inquiry into ways of learning by students of university age which the Committee is sponsoring by an *ad hoc* grant; and while welcoming the increased allocation to libraries proposed in the quinquennial estimates of many universities, the Committee also stresses the value of the possession of even a small private library. Expenditure by university libraries on the purchase of books and periodicals has risen from £87,802 during 1938-39 to £321,269 during 1951-52; but great difficulty is constantly experienced in meeting the legitimate demands of students and staff. Moreover, pressure on space has developed from increased buildings as well as from the increase in readers to be served, and the report holds out little prospect of any early alleviation of the position by new building. The suggestion is made that university libraries may need to be highly selective and that the possibilities of 'weeding' should be fully exploited. The Committee has also decided to terminate the ear-marking of grants, and has informed the universities that while it does not propose that any part of the recurrent grants for the new quinquennium should be formally ear-marked to support developments in the special fields which were initiated during the past quinquennium, it has taken this step on the assumption that in allocating their income the universities will treat the developments of the 1947-52 quinquennium in these fields no less favourably than other departments. The Committee has asked any university which proposes to curtail any development initiated with the aid of an ear-marked grant to consult the

Table 3

	1947-48	1948-49	1949-50	1950-51	1951-52
	£	£	£	£	£
Total recurrent (including ear-marked) grants	8,850,455	10,317,775	13,635,470	15,222,408	1,660,113
Medical education	1,840,350	2,149,800	2,565,500	2,835,000	3,198,500
Dental education	157,150	206,000	237,000	268,000	300,000
Agricultural education	150,000	262,000	299,500	327,850	361,000
Veterinary science	12,500	28,800	116,800	276,750	412,500
Social studies	102,000	160,000	240,000	320,000	400,000
Oriental and African studies	55,000	125,000	148,500	173,000	200,000
Slavonic and East European studies	15,225	30,975	36,875	42,825	49,900
Institutes of education	20,230	79,570	131,994	155,499	171,463
Ear-marked grants as a percentage of total grants	26.6	29.5	27.7	29.2	30.7

Committee before a final decision is taken. The totals for each year of the quinquennium of the recurrent grants allocated and of the ear-marked grants for each special field are given in Table 3.

Non-recurrent grants approved in the period August 1, 1947–July 31, 1952, amounted to rather less than £35 million, as compared with the estimate in January 1947 of capital needs for the quinquennium of £40 million for new building and £10 million for sites and equipment, or about half the capital expenditure regarded as required, at 1947 prices, to give effect to the Barlow report over ten years (instead of the actual five in which the expansion was realized). Of this sum, £23 million was in respect of building, more than £4 million for the purchase of sites and properties and £7 million for provision of furnishings and equipment. Actual payments during the quinquennium totalled £26 million, and at its close more than £11 million of approved grant awaited payment. Some indication of the way in which the universities have met the situation arising out of the reductions in the investment programme and the rationing of steel by adapting their building programme is given by illustrations included with the report.

The outstanding feature of university finance during the quinquennium has been the increase in the proportion borne by recurrent Treasury grants to the total income of the universities, from 31.4 per cent in 1938–39 to 64.5 per cent in 1951–52. The original and ultimate Treasury provision for each year in the quinquennium is shown in Table 4.

Income derived from local authorities in England and Wales increased by 50.9 per cent, from £626,947 during 1946–47 to £945,972 during 1951–52, that from tuition and examination fees increasing from £3,022,634 to £3,807,440, while in the same period "Other income" increased by 113 per cent, from £910,032 during 1946–47 to £1,936,596 during 1951–52. Annual expenditure rose from £12,694,227 to £26,132,122, almost half of this being due to the increased cost of salaries and superannuation

Table 4

	Academic year				
	1947-48 £m.	1948-49 £m.	1949-50 £m.	1950-51 £m.	1951-52 £m.
Original provision	9.00	9.97	10.62	11.27	11.92
Additions for:					
Medicine	—	0.02	0.28	0.44	0.60
Social studies	—	—	0.05	0.10	0.15
Agricultural education	0.15	0.28	0.30	0.33	0.38
Veterinary education	0.01	0.08	0.12	0.28	0.41
Salary supplementation	—	0.31	2.28	2.86	3.19
University College of North Staffordshire	—	—	—	0.05	0.06
Ultimate total provision	9.16	10.61	13.65	15.33	16.71

of teaching staff, which rose from £5,956,248 during 1946–47 to £12,542,994 during 1951–52, the average salary of a full-time university teacher increasing by about 32 per cent. Other expenditure rose from £6,737,979 to £13,589,128 or 102 per cent, that under the heading "Departmental and Laboratory Maintenance", which was more severely affected by rising prices than that under any other head, accounting for £3,174,295 of this increase. Maintenance of premises increased by 98.5 per cent and administration by 94 per cent, due partly to increased staff required by the higher level of university activity, partly to salary and wage increases and partly to increases in prices, notably in paper and printing.

Some remarks are made on particular fields of study. Regret is expressed, for example, that little appears to have been done to carry out the recommendations of the Goodenough Committee for lightening the medical curriculum, and also that in some institutions the course for a degree in dentistry appears to be longer than is necessary. The arrangement by which, with the co-operation of the general practitioners in the area, students receive during part of their clinical period instruction directly related to the conduct of general practice is commended for imitation.

A statement of the additional science subjects for the development of which block grants have been given is appended to the report, and the Committee is satisfied that the only major subject in which additional facilities appear to be required is biochemistry. In regard to technology, it observes that in the universities as a whole the demand for entry into technological faculties from students of acceptable standard is not greater than the universities can meet, but entry into science faculties has continued in most places to be more competitive. While agreeing that the number of those taking technology in the universities should be increased, the Committee does not advocate a uniform increase in all faculties of applied science or technology, or that technologists should constitute a similar proportion of each university. It suggests rather seeking to increase the number of students of technology in those universities where it is already high, on the ground that it is most economic to make provision for subjects in which large and expensive apparatus is required in a few centres. It is convinced, however, that scarcely any centre can cover the full range of technological subjects, since the activities of an institution must be in part related to those of the area which it serves. On management, it suggests that any course which teaches a man to think, broadens his mind and develops his personality, fits him for a position of responsibility; but otherwise education for management is best concentrated in postgraduate courses.