Trends in Higher Education

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Preface

The Council for Industry and Higher Education (CIHE) is an independent body of companies, universities and colleges established in I986. Its aim is to encourage Industry and higher education to work together and represent joint thinking to Government.

The Council has become the UK's recognised authority on the relationships between business and higher education. It also encompasses post-school education in a wider sense including further education. The membership of the Council is shown opposite along with those companies that fund the Council's activities. Other companies are also involved in sub-groups covering particular issues of current concern.

The Council has commissioned this report from Professor Alan Smithers and Dr Pamela Robinson to help inform the debate on the future of higher education in the UK. Higher education has expanded rapidly over the last ten years, but:

- Where has that expansion occurred in terms of the subjects studied?
- What has been the relationship between subject areas, entry qualifications, degrees awarded and subsequent employment six months after graduation?
- Has the expansion resulted in a corresponding widening of access across social groups?
- Is there still evidence of unmet demand?
- What are some of the policy implications of the trends?

This report seeks to shed some light on these and similar issues. It is the broad trends and themes which are of main interest. Some of the statistical base indeed does not lend itself to precise analysis. There have been changes in the agencies collecting the statistics, in the definitions used and in the way institutions have categorised courses, for example. The report tries to draw attention to these pitfalls wherever possible.

This report follows our earlier one, *Post-18 Education: Growth, Change, Prospect* produced by Professor Smithers and Dr Robinson in 1995 with the same objective of helping to inform and add to debate. The wide discussion on the role and future of higher education (epitomised in the Committee of Inquiry chaired by Sir Ron Dearing) makes this a most appropriate time to help raise awareness and address some of the key trends.

Richard Brown
Director, CIHE

Introduction

1. Higher education in the UK has expanded rapidly in the last decade. As we can see in Chart 1, total enrolments have increased from 945 thousand in 1986 to 1.63 million in 1995, with full-time first-degree students doubling from 428 to 861 thousand and part-time postgraduates rising from 52 to 182 thousand. Full-time overseas students have lept from 56 to 144 thousand.

CHART 1 : Enrolments in Higher Education *per cent*

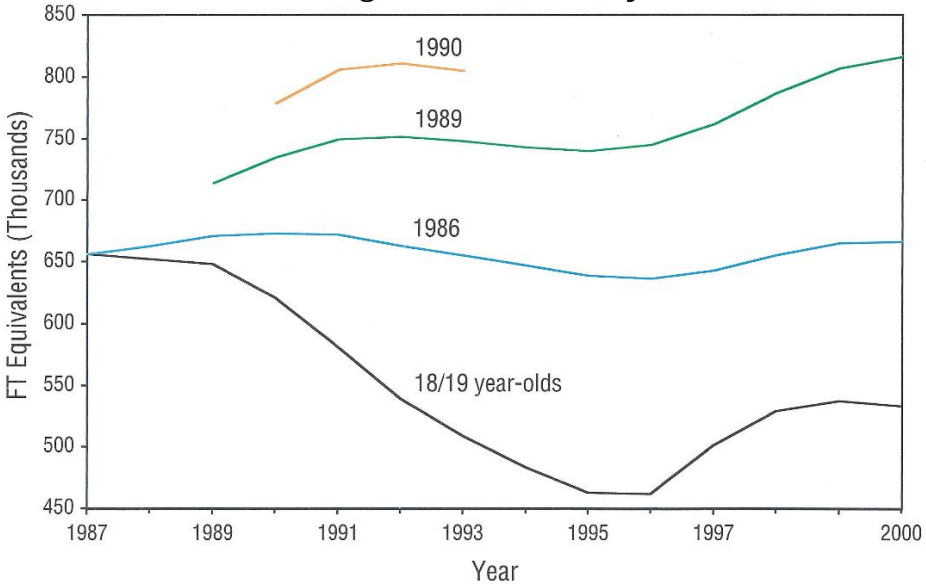
Provision	Thousands		% Change
	1986	1995	
Full-Time			
First Degree	428.0	860.5	101.1
Post Graduate	69.1	134.6	94.8
Certificate/Diploma	98.9	111.6	12.8
Part-Time			
First Degree	96.4	174.1	80.6
Post Graduate	52.0	182.2	250.4
Certificate/Diploma	200.4	162.0	-19.2
Total	**944.8**	**1,625.0** [1]	**72.0**

1. Does not include 34.4 thousand students writing theses or on sabbatical.

Sources: *SB 17/93*, London: DFE; *Students in Higher Education Institutions, 1995/96,* Cheltenham: HESA.

2. What has led to this substantial growth? Certainly it was not foreseen ten years ago. Chart 2 shows that when in 1986 the then Department of Education and Science attempted to make projections of higher education enrolments to the end of the century there was the distinct prospect offewer students. With the number of 18/19 year-olds set to fall by a third through to 1995/6 the risk was that the UK would not be educating enough highly qualified people and that one or two universities might have to close.

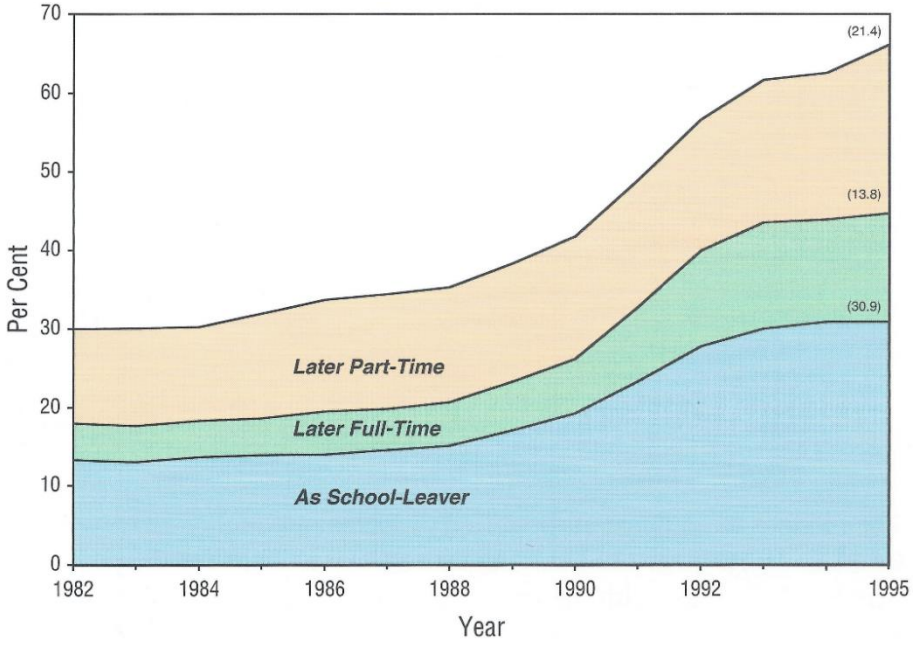
CHART 2 : DES Higher Education Projections



Source: *Highly Qualified People: Supply and Demand. Report of an Interdepartmental Review*, *1990*, London: HMSO.

3. In fact, student enrolments continue to rise dramatically (Chart 3). The participation rate for school-leavers increased from 14 per cent of the age group in the mid-eighties to reach over 30 per cent by 1994, and showed every sign of going still higher had not the government (which previously had been trying to talk it up) put a ceiling on entry. Nevertheless, participation in later life, either full-time or part-time, has continued to grow. Some 60 per cent of 18 year-olds can expect to enter higher education at least once in their lives.

CHART 3 : Per Cent Chance of HE

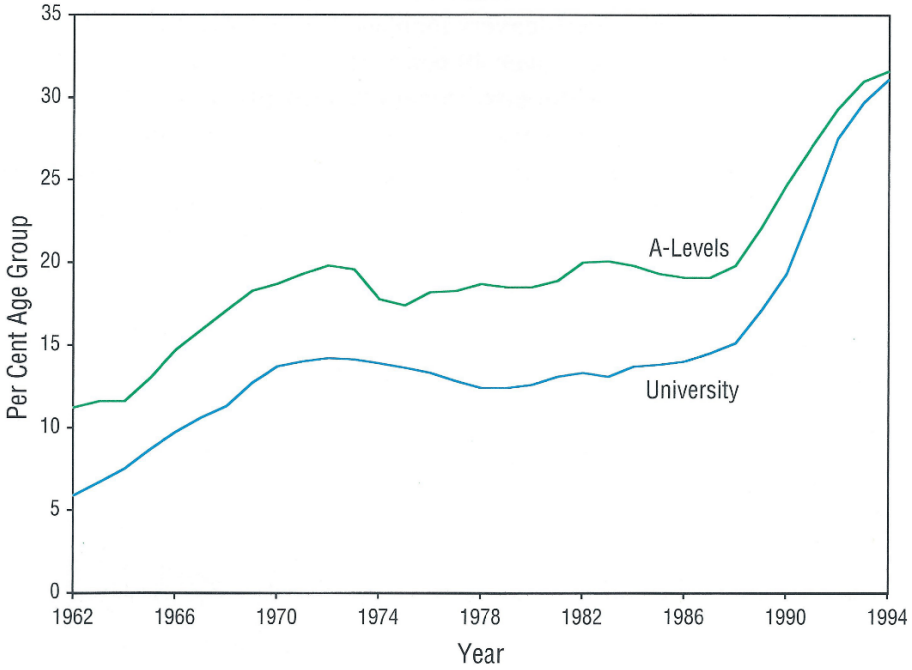


Source: Smithers, A. and Robinson, P. (1995). *Post-18 Education: growth, change, prospect*, London: CIHE.

Demand

4. Burgeoning student demand has been driven by many factors including rising expectations and the desire for personal development, the realisation that a degree improves job and salary opportunities, increasing levels of youth unemployment, and the fact that it remains a free good for school-leavers. Expansion has been facilitated by the increasing number of students who have taken and passed A-levels and by the opening of alternative applied (GNVQ) and vocational (NVQ) pathways, and access routes for those without formal qualifications. Chart 4 shows that post-school entry to higher education correlates closely with A-level uptake. Students on A-level courses trebled from 11 per cent of the age group in 1962 to 33 per cent in 1994. The increase occurred in two main stages - during the 60s and from 1989. The first related to the shift to comprehensive education and the second to the introduction of GCSEs.

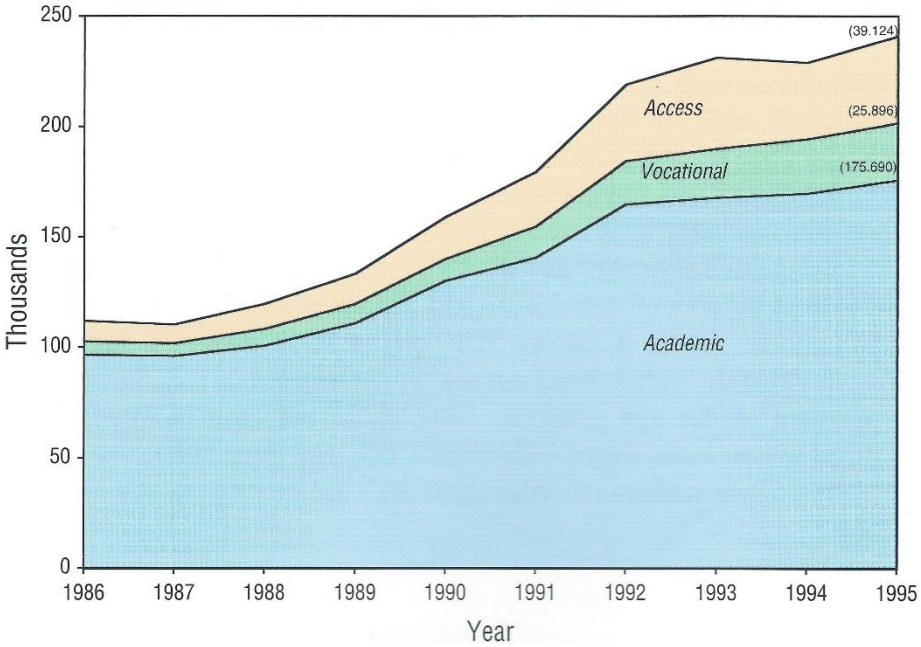
CHART 4 : A-Levels and Participation



Sources: Unpublished Data, September 1996, DFEE; *Statistics of Education Schools 1962-1995*, London: DES; Office of Population Consensus and Surveys; *DFEE News 213/96; SB 10/94*, London: DFE.

5. The relative importance of the different routes into higher education is shown in Chart 5. Even now, academic qualifications account for 74 per cent of first-degree admissions, with the emerging vocational route providing l0.8 per cent and access schemes 16.3 per cent. Entry via the vocational route is likely to grow as we move closer to meeting the national targets. But in the "old" universities, A-levels and other academic qualifications such as Scottish Highers still account for 85 per cent of admissions.

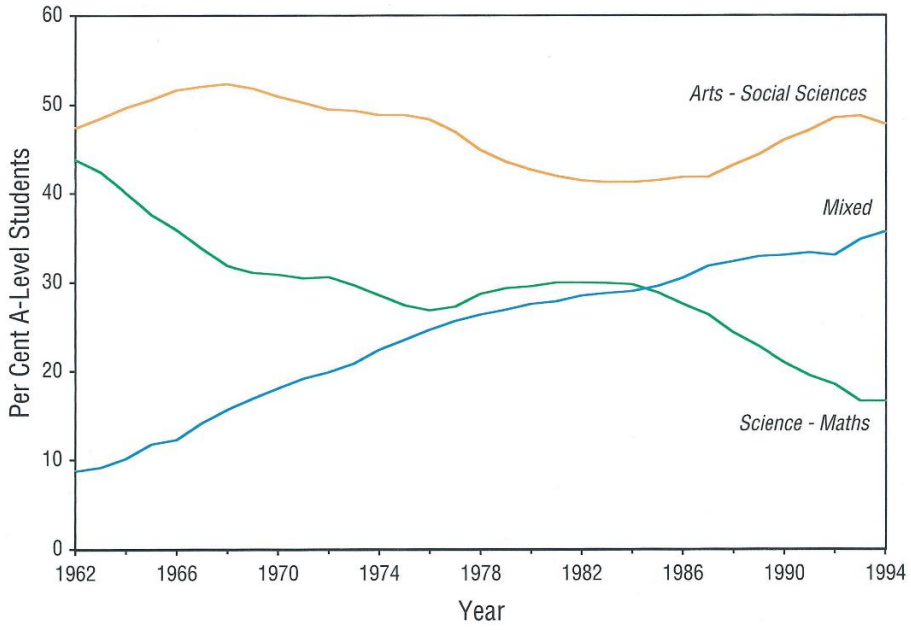
CHART 5 : Degree Entry By Qualifications



Sources: *Annual Reports 1986-1993,* Cheltenham: UCCA: *Annual Reports 1986-1993*, Cheltenham: PCAS; *Annual Reports, 1994, 1995*. Cheltenham: UCAS.

6. The proportion of A-level students specialising in science and maths has declined from 44 per cent in 1962 to less than 17 per cent in 1994. This has been brought about largely, as we can see in Chart 6, by a shift to the mixing of science and arts/social science A-levels, but only about a fifth of these students go on to the sciences and technology at university. As a proportion of the age group, specialist science combinations have remained at about five per cent, but the number of 18 year-olds has fallen by a third since 1983. This has limited the growth of science-based higher education.

CHART 6 : A-Level Combinations



Source: *Statistics of Education Schools, 1962-1995,* London: DFE.

7. The different subject areas have different patterns of recruitment (Chart 7). Medicine & dentistry, veterinary science, law and languages recruit mainly on top A-levels (21 points or more). Computer science, architecture, building & planning, business & administrative studies, the catch-all mass communication & documentation, and engineering & technology have substantial intakes on the basis of vocational qualifications. Social, economic & political studies, the humanities, education, and combined studies take up to about a quarter of their students without formal qualifications. Recruitment to education is disturbing since so many of our future teachers seem to come with either poorish academic qualifications or from alternative routes, suggesting they may not have done very Well at school themselves. In the sciences and maths, this applies also to postgraduate teacher training courses where up to 40 per cent of entrants have “a third” or lower.

CHART 7 : Entry Qualifications by Subject Area, 1995[1] *per cent*

Subject Area	A-level Score[2]		Other Acad	Voc Qual	Access	Other	None
	21+	20-					
Medicine & Dentistry	75.4	5.7	16.4	0.2	0.4	1.5	0.4
Subjects Allied to Medicine	21.1	37.1	13.7	12.5	8.4	5.0	2.1
Biological Sciences	28.7	41.6	8.9	6.2	7.5	4.8	2.3
Veterinary Science	70.1	5.4	23.0	0.2	-	1.0	0.2
Agriculture & Related Subjects	10.3	50.2	6.7	18.5	4.0	6.0	4.2
Physical Sciences	27.9	47.8	7.6	4.6	3.7	5.0	3.6
Mathematical Sciences	33.7	37.9	6.1	10.4	3.0	5.3	3.6
Computer Science	11.3	38.1	5.8	26.4	5.3	7.1	6.1
Engineering & Technology	20.6	33.4	9.2	20.8	2.6	7.7	5.8
Architecture, Building & Planning	12.5	39.4	9.6	25.8	3.0	5.0	4.5
Social, Economic & Political Studies	24.2	43.2	4.0	8.1	12.6	5.2	2.8
Law	42.2	29.6	9.2	5.1	6.6	4.7	2.6
Bus & Admin Studies	13.4	44.5	7.9	23.5	2.7	4.4	3.5
Mass Comm & Doc	16.0	44.9	5.3	20.6	5.6	4.4	3.2
Languages	41.2	40.7	3.8	1.4	6.1	5.0	1.9
Humanities	36.0	41.9	3.8	2.5	9.7	4.3	1.9
Creative Arts & Design	19.5	44.3	3.5	17.0	5.2	6.1	4.4
Education	7.4	52.9	6.4	16.8	9.5	5.1	2.0
Combined	20.1	42.9	7.3	10.0	9.0	9.6	8.1
Total	**23.8**	**41.3**	**7.3**	**12.2**	**6.7**	**5.3**	**3.4**

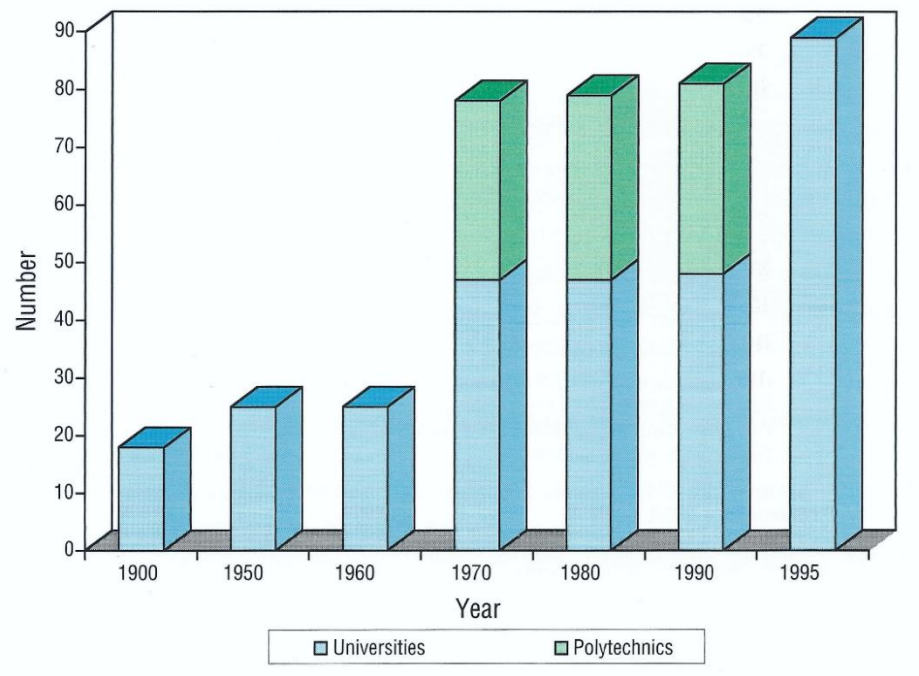
1. Home students. first-year. full-time or sandwich. first degree.
2. Points arrived at by scoring A-level grades: A. 10. B. 8 down to E. 2; and AS grades: A, 5. B. 4 down to E. l.

Source: *Annual Report, 1995,* Cheltenham: UCAS.

Places

8. The number of universities has increased from 25 in 1960 to 89 in 1995 (Chart 8). This would be 124 if the 30 colleges and centres of London University, the six of the University of Wales and the Manchester Business School were counted separately. In addition, there are 75 other colleges (higher or further education) receiving funding for higher education courses ranging from those offering a wide range to those specialising in, for example, art, music, design, or agriculture.

CHART 8 : Universities and Polytechnics



Sources: *An Overview of Recent Developments in Higher Education in the UK (1994)*. Ref M2/94. Bristol: HEFCE; *Students in Higher Education Institutions, 1994-95,* Cheltenham: HESA.

9. In the 1960s, nine new universities were built on green field sites, ten colleges of advanced technology were upgraded to universities and thirty technical colleges were designated polytechnics as part of a "dual system" of higher education. These (together with some other institutions) were enabled by the Further and Higher Education Act of 1992 to re-title themselves universities.

10. With the merging of the two arms of the dual system, over half the universities (the ex-CATS and polytechnics) - 51 out of 89 - now come from the technical-vocational tradition. This has meant, as Chart 9 shows, that the balance of university education has shifted from the academic towards the more employment-related. The pattern of course provision has changed also with the new universities bringing with them more part-time students and more sub-degree courses (Chart 10). Over the decade, however, there has been some tendency towards convergence.

CHART 9 : First-Year Places *per cent*

Course[1]	1986	1995	% Increase
Academic	51,251	94,262	83.9
Vocational			
Degree	42,498	106,795	151.3
HND		24,826	

1. Does not include combined degrees, for information on which see Chart 13.

Sources: *Annual Report and Statistical Supplement, 1986*, Cheltenham: UCCA; *Annual Report and Statistical Supplement, 1986,* Cheltenham: PCAS; *Annual Report and Statistical Supplement, 1995,* Cheltenham: UCAS.

CHART 10 : Changing Provision *per cent*

Provision	Higher Education Institutions			
	Universities		Polytechnics/Colleges	
	1986	1995	1986	1995
Full-Time	*88.5*	*78.7*	*56.3*	*70.8*
First Degree	70.8	59.4	35.7	45.9
Post Graduate	16.1	14.2	2.7	4.5
Certificate/Diploma	1.6	5.1	17.9	20.4
Part-Time[1]	*11.6*	*21.3*[2]	*43.6*	*29.2*[3]

1. Does not include the Open University.
2. Comprises. first degree 1.5%, postgraduate 15.9%. certificate/diploma 3.9%; comparable figures not available for 1986.
3. Comprises, first degree 8.9%, postgraduate 9.8%. certificate/diploma 10.5%; comparable figures not available for 1986.

Sources: *SB 17/93,* London: DFE; *Students in Higher Education institutions, 1994/95.* Cheltenham: HESA.

Students

11. The characteristics of home full-time first degree students within institutions have not changed much. Chart 11 shows that in the system as a whole while mature entry (over 21) has doubled and the proportion of women now exceeds that of men, the A-level entry route remains predominant, and the percentage from manual backgrounds has risen only from 23 to 28 per cent (against 55 per cent in the population) and that from ethnic minorities from 11 per cent (in 1990) to 13 per cent. But Chart 12 shows that it is the adding on of new institutions that has largely accounted for these changes.

CHART 11 : Trends in Student Intake *per cent*

Characteristic	1986	1995
Women	42.4	51.5
Age 21+	14.5	29.0
Social Classes IIIb-V	23.4	28.1
A-Level	86.3	73.7
Ethnic Minorities[1]	10.7[2]	13.0[3]

1. First recorded in 1990.
2. Comprises Asian. 7.5%, Black, 2.2%, Other, 1.0%.
3. Comprises Asian. 8.4%. Black, 3.3%, Other, 1.4%.

Sources: *Annual Report and Statistical Supplement, 1986,* Cheltenham: UCCA; *Annual Report and Statistical Supplement, 1986,* Cheltenham: PCAS; *Annual Report and Statistical Supplement, 1995,* Cheltenham: UCAS.

CHART 12 : Entrants to Old and New Universities[1] *per cent*

Characteristic	Old	New
Women	49.6	49.0
Age 21+	17.0	34.2
Social Classes IIIb-V	22.3	32.4
A-Level	83.9	58.5
Ethnic Minorities	8.5	14.4

1. For 1993, the last year for which these figures were published separately.

Sources: *UCCA Annual Report and Statistical Supplement, 1993; PCAS Annual Report and Statistical Supplement, 1993.*

Courses

12. Entry to degree courses through the university/polytechnic admission(s) systems has doubled since 1986. Chart 13 shows that the increases have occurred across all 19 categories. There has been particular expansion in mass communication & documentation (which is a heterogeneous category including both media studies and tourism), creative arts & design, and subjects allied to medicine. In part, this has come about through the inclusion of more courses and institutions. BEd admissions have been absorbed from the Central Registry and Clearing House and there has been some transfer of courses from the Art and Design Admissions Registry. Nevertheless, as we saw in Chart 1, there has also been substantial real growth. Engineering & technology has increased less than the average despite government attempts at preserving its relative share.

CHART 13 : Expansion by Subject Area

Subject Area	1986	1995	% Increase
Medicine & Dentistry	4,686	5,045	7.7
Subjects Allied to Medicine	2,845	11,641	309.2
Biological Sciences	6,736	14,361	113.2
Veterinary Science	302	482	59.6
Agriculture & Related Subjects	1,110	1,897	70.9
Physical Sciences	8,410	14,362	70.8
Mathematical Sciences	3,717	6,608	77.8
Computer Science	3,211	8,194	155.2
Engineering & Technology	14,422	17,645	22.3
Architecture, Building & Planning	3,095	5,241	69.3
Social, Economic & Political Studies	12,026	23,332	94.0
Law	5,075	8,899	75.3
Bus & Admin Studies	9,085	23,625	160.0
Mass Comm & Doc	870	5,509	533.2
Languages	10,070	16,793	66.8
Humanities	5,568	10,612	90.6
Creative Arts & Design	1,513	7,750	412.2[1]
Education	1,008	19,061	1790.9[2]
Combined	18,824	39,653	110.7
Total	**112,573**	**240,710**	**113.8**

1. Includes transfer of some courses from Art and Design Admissions Registry.
2. Due mainly to absorption of BEd recruitment and winding up of Central Registry and Clearing House.

Sources: *Annual Report and Statistical Supplement, 1986,* Cheltenham: UCCA; *Annual Report and Statistical Supplement, 1986,* Cheltenham: PCAS; *Annual Report and Statistical Supplement, 1995,* Cheltenham: UCAS.

13. Charts 14 to 17 show that academic subjects like physics have hardly grown at all and have struggled to hold on to the best A-level students (26 points or more), whereas psychology has trebled, attracting some of the brightest A-level students. On the vocational side, there has been an attempt to expand engineering & technology (already a large element, accounting for 7.3 per cent of places), but that

has not succeeded largely because it has out-run the supply of suitably qualified students. It attracts fewer of the top A-level students now than ten years ago. Engineering employers are increasingly questioning the wisdom of encouraging quantity over quality and look to see some concentration of provision through the encouragement of the Funding Councils. (Whereas 105 institutions offer degree places in engineering & technology, over half the students, 55 per cent, are based in the largest thirty).

CHART 14 : Physics

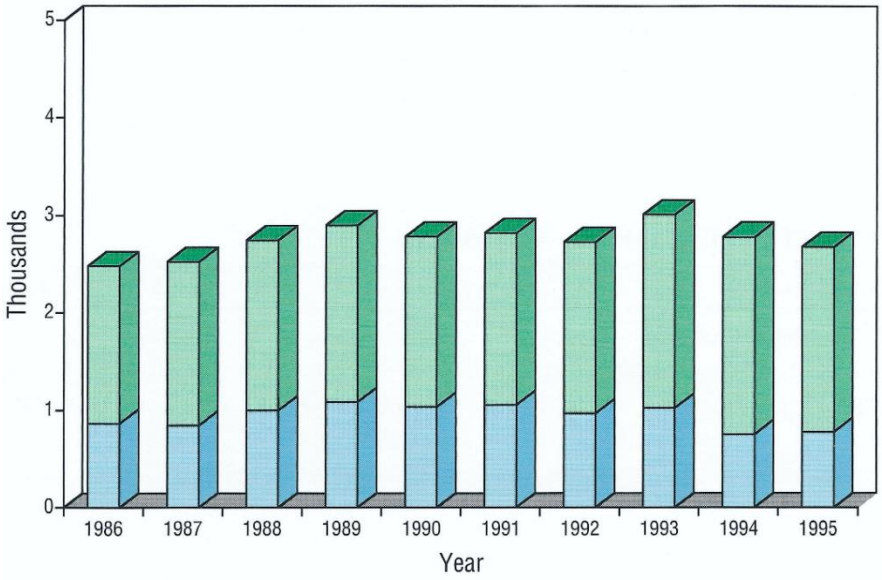
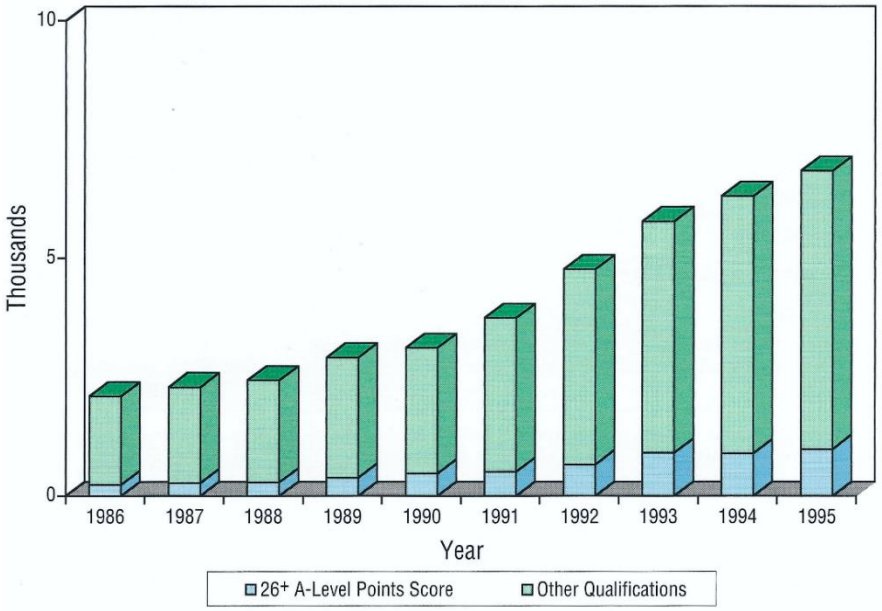


CHART 15 : Psychology



Sources: *Annual Reports 1986-1993,* Cheltenham: UCCA; *Annual Reports 1986-1993,* Cheltenham: PCAS; *Annual Reports, 1994, 1995,* Cheltenham: UCAS.

CHART 16 : Engineering and Technology

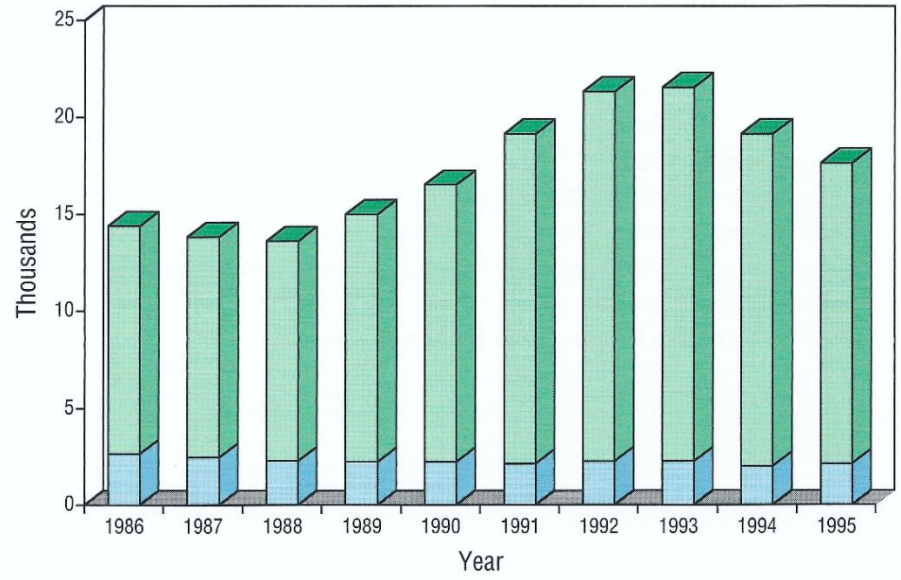
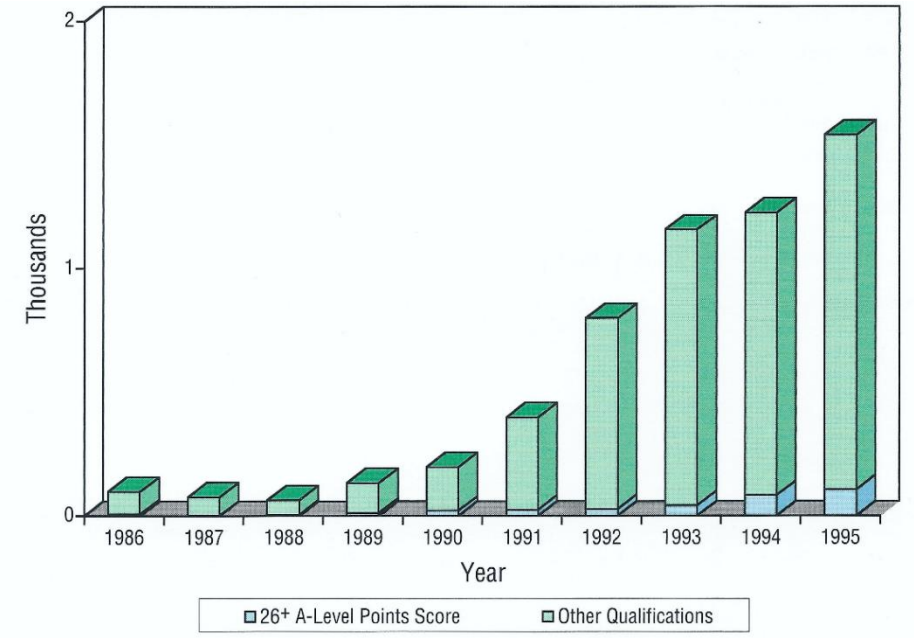


CHART 17 : Media Studies



1. P4 courses in UCAS classifications.

Sources: *Annual Reports 1986-1993,* Cheltenham: UCCA; *Annual Reports 1986-1993,* Cheltenham: PCAS; *Annual Reports, 1994, 1995,* Cheltenham: UCAS.

14. Employment-related education has in some cases expanded rapidly. As Chart l7 shows, media studies as a university subject grew from about 100 entries in 1986 to over 1500 in 1995. Design studies has expanded similarly. Tourism which was not even counted in 1986 now takes over a thousand students a year. However, whereas the first rungs of career ladders in medicine, veterinary science and law clearly lie within higher education, the employment links of many of these newer fields are more tenuous.

Degrees

15. The degree classes awarded, as we can see in Chart 18, vary considerably with subject area. In the mathematical sciences, physical sciences and engineering & technology, where there are clear external referents of success and failure, there are higher proportions of "firsts" but also of "thirds". In the humanities and languages the degree results are bunched more towards the middle. In medicine and veterinary science (which have the highest A-level entry grades) the tradition is for pass degrees as a stepping stone to a professional career.

CHART 18 : Degree Performance by Subject Area *per cent*

Subject Area	1st	2i	2ii	3rd	Pass
Medicine & Dentistry	5.2	12.7	2.7	0.2	79.2
Subjects Allied to Medicine	7.2	46.0	32.0	4.1	10.6
Biological Sciences	8.1	50.0	33.8	4.0	4.3
Veterinary Science	4.4	9.1	4.7	-	81.8
Agriculture & Related Subjects	5.2	45.9	34.6	4.1	10.1
Physical Sciences	11.0	36.2	36.0	10.0	6.7
Mathematical Sciences	18.5	28.5	30.1	15.2	7.7
Computer Science	9.2	33.9	37.1	9.3	10.4
Engineering & Technology	10.8	31.8	34.7	10.9	11.8
Architecture, Building & Planning	5.4	34.2	37.8	6.0	16.6
Social, Economic & Political Studies	4.1	47.0	40.0	4.2	4.8
Law	3.3	44.9	40.1	5.6	6.1
Bus & Admin Studies	3.7	38.8	41.1	5.0	11.5
Mass Comm & Doc	4.5	46.6	38.9	3.0	7.0
Languages	8.8	54.2	32.9	2.3	1.8
Humanities	7.0	56.3	31.5	2.5	2.6
Creative Arts & Design	9.2	45.0	35.3	6.6	4.0
Education	5.6	39.2	40.3	3.5	11.4
Combined	5.9	34.7	31.8	6.5	21.1
Total	**7.0**	**40.4**	**35.0**	**5.8**	**11.8**

1. Courses here mainly lead to pass degrees as the first steps on career ladders.

Source: *Students in Higher Education institutions in the UK, 1994-95,* Cheltenham: HESA.

16. Some employers question whether the regularly improving degree results shown in Chart 19 reflect a real improvement in performance, especially given the opening up of higher education to a far wider range of abilities.

CHART 19 : Trends in Degree Results *per cent*

Year	1st	2i	2ii	3rd	Pass
1995	7.2	43.2	37.4	5.8	6.3
1993	7.2	42.0	37.5	7.7	9.6
1992	7.3	40.6	36.7	6.1	9.2
1991	7.3	39.3	37.0	6.3	10.1
1990	7.1	38.4	37.1	6.4	10.9
1989	6.8	37.7	37.9	6.6	11.2
1988	6.4	35.9	38.0	6.8	12.9
1987	6.0	33.9	38.3	7.2	14.6
1986	6.2	33.0	38.6	7.5	14.6

Sources: *SB 14/94,* London: DFE; *DFE News 210/94; DFE News 188/95; Students in Higher Education institutions in the UK, 1994/95,* Cheltenham: HESA.

Employment

17. In the traditional professional areas such as medicine and veterinary science, as Chart 20 shows, few graduates are seeking employment six months after graduation. On the other hand, some of the newer areas where there has been major expansion, like mass communication & documentation and creative arts & design, unemployment levels are well above average. This raises the question of the extent to which they are truly employment related and have been generated with employer input.

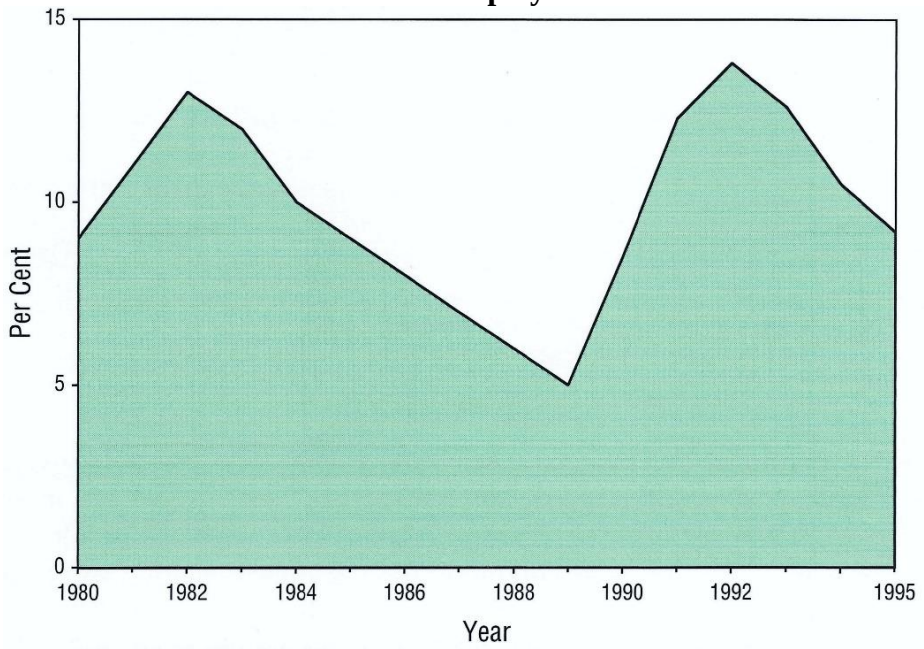
CHART 20 : Destination by Subject Area *per cent*

Subject Area	Employed	Further Study	Not Available for Work	Seeking Employment
Medicine & Dentistry	95.4	4.2	0.2	0.2
Subjects Allied to Medicine	81.7	11.8	1.9	4.6
Biological Sciences	50.7	31.8	4.9	12.6
Veterinary Science	97.7	1.0	-	1.3
Agriculture & Related Subjects	67.2	15.9	5.4	11.5
Physical Sciences	49.5	33.7	4.9	11.8
Mathematical Sciences	54.8	32.4	3.5	9.3
Computer Science	77.5	8.3	2.5	11.8
Engineering & Technology	69.4	15.1	3.5	12.0
Architecture, Building & Planning	71.6	13.4	3.2	11.8
Social, Economic & Political Studies	61.2	20.5	5.6	12.7
Law	24.3	65.8	3.8	6.1
Bus & Admin Studies	75.0	8.3	4.7	12.0
Mass Comm & Doc	69.9	10.3	5.4	14.4
Languages	55.9	28.6	5.3	10.1
Humanities	51.3	30.9	5.3	12.4
Creative Arts & Design	58.2	18.4	4.2	19.2
Education	86.2	3.5	2.3	8.0
Combined	57.3	24.9	4.8	13.0
Total	**63.4**	**21.0**	**4.2**	**11.4**

Source: *First Destinations of Students Leaving Higher Education Institutions, 1994/95,* Cheltenham: HESA.

18. Thus while the overall employment level among new graduates depends on the wider economy (Chart 21), it now also relates to subject studied. In a period of popular higher education, a degree irrespective of subject can no longer be regarded as a passport to a job.

CHART 21 : Graduate Unemployment



Sources: *First Destination Statistics, 1980-1994,* Manchester: CSU; *First Destination Statistics of Students Leaving Higher Education institutions, 1994/95,* Cheltenham: HESA.

19. The class of degree matters too (Chart 22). There are indications that employers are also looking back to see what A-level grades new graduates have obtained. Whereas A-levels are a national examination, there are doubts about the comparability of degrees across institutions.

CHART 22 : Unemployment by Degree Class *per cent*

Year	1st	2i	2ii	3rd	All
1992	4.5	11.3	18.3	25.4	13.6
1991	5.0	9.8	15.6	22.8	12.5
1990	2.7	6.6	11.1	16.7	8.6
1989	1.5	4.3	7.0	11.1	5.8
1988	1.5	4.8	7.4	10.9	6.2
1987	1.6	5.7	8.5	13.6	7.4
1986	3.3	6.7	10.0	16.6	8.8

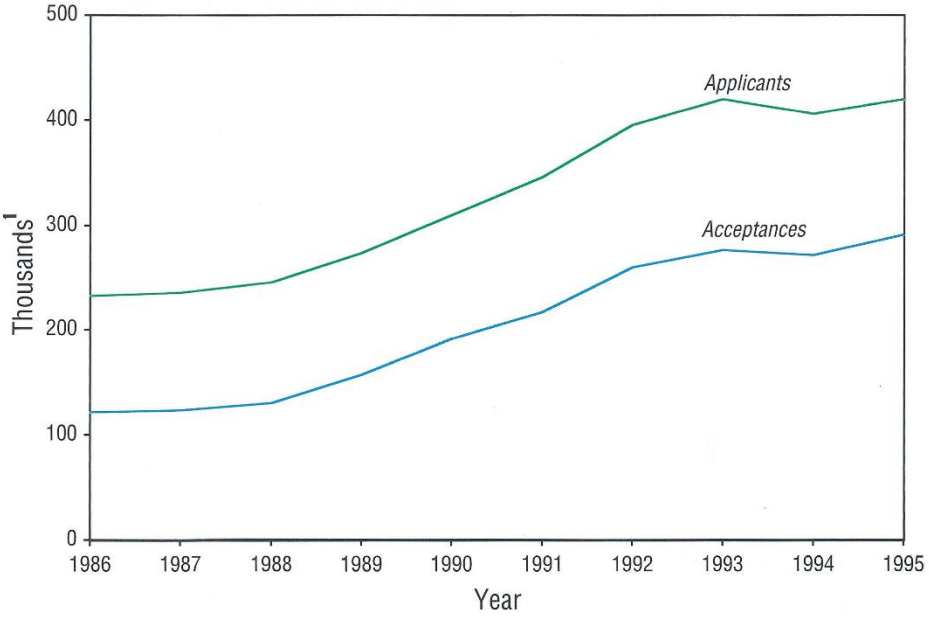
Source: *SB 14/94,* London: DFE.

Implications

20. There has always been unmet demand; demand seems to grow with opportunity (Chart 23). No doubt much of the unmet demand is satisfied subsequently and hopefully will be increasingly addressed through lifelong learning. It does, however, suggest that to set any "optimum" or "maximum" target for initial higher education involvement is both unrealistic and fails to take account of the dynamism

and a desire which exists throughout the community for self-improvement and enhancement. The Council considers that opportunities should be available to all who can demonstrate a capacity to benefit and wish to do so.

CHART 23 : Unmet Demand?



1. Diploma students included from 1989.

Sources: *Annual Report and Statistical Supplement, 1986,* Cheltenham: UCCA; *Annual Report and Statistical Supplement, 1986,* Cheltenham: PCAS; *Annual Report and Statistical Supplement, 1995,* Cheltenham: UCAS.

21. It is important, however, that such latent demand achieves its hoped for outcome. In so far as that relates to an expectation of enhanced employability, then the courses chosen need to embrace satisfactory employability criteria. Apparently attractive vocationally-sounding courses which are not grounded in actual employer needs and do not develop necessary skills can all too easily result in the student being unemployed or under-employed. Chart 24 shows that media studies and design studies, for example, have expanded rapidly at the university level in the last decade but the new graduates are finding it difficult to obtain work.

CHART 24 : Growth and Unemployment

Subject	Admissions		% Change	Unemployed[1]
	1986	1995	1986-95	1995
Physics	2,479	2,677	8.0	11.1
French	991	914	-7.8	9.5
Psychology	2,094	6,834	226.4	12.9
Sociology	1,499	4,834	230.2	15.1
Medicine	4,686	5,045	7.7	0.2
Engineering	14,422	17,645	22.3	12.0
Business	9,085	23,625	160.0	12.0
Media Studies	99	1,538[3]	1453.5	15.2
Design Studies[2]	77	1,453[3]	1787.0	21.3

1. Seeking employment, including those temporarily employed.
2. Courses with UCAS code W2 including graphic design, fashion, interior design.
3. lncludes some transfer in of courses.

Sources: *UCCA Annual Report, 1986; PCAS Annual Report, 1986; UCAS Annual Report, 1995; First Destination Statistics of Students Leaving Higher Education, 1994/95,* Cheltenham: HESA.

22. The Council has argued for a form of applied education which is neither narrowly vocational nor narrowly academic and that takes the world of work as the basis for at least part of its raw material. It also considers that transferable key skills should, to an appropriate extent, be embedded in every course.

23. The Council also considers that institutions should be more explicit about the nature of the experience that they intend to offer students. Greater explicitness, and greater openness on performance indicators, bench-marking and outputs (including information on employment), would do much to improve customer awareness. They would also help to address employer concerns about standards and overall quality.

24. If full-time students had to meet part of the cost of their tuition (fees are already paid by most part-time students), more cost and output conscious customers could be expected to induce a more customer-conscious and institutionally-responsive system.

25. Greater co-operation, including at a regional level, between higher and further education and with schools, libraries and other community-based organisations allied to a greater use of modern technologies may be needed if the still restricted levels of access noted in this report are to be widened. The Council is undertaking a research project to ascertain the barriers to access from lower socio-economic groups, and the likely underlying causes.

26. This report has highlighted some of the important trends which have contributed to the great expansion of higher education. It has also noted some of the limitations of that growth. It will be for the policy makers to have regard to these trends as they come to propose changes that will take higher education well into the twenty-first century. The Council's own proposals are outlined in its document "*A Learning Nation*".

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