DOCUMENT RESUME

ED 353 938 HE 026 199

AUTHOR Drake, Keith
TITLE Higher Education and Employment: The Changing Relationship. Recent Developments in Continuing Professional Education. Country Study: United Kingdom.
INSTITUTION Organisation for Economic Cooperation and Development, Paris (France).
SPONS AGENCY Department of Education and Science, London (England).
REPORT NO OCDE/GD(91)173
PUB DATE 91
NOTE 77p.; For related documents, see HE 026 190-201.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Access to Education; Administration; Economic Factors; Educational Demand; Educational Finance; *Educational Trends; *Education Work Relationship; Foreign Countries; Government Role; *Higher Education; Labor Market; *Professional Continuing Education; School Business Relationship; Universities
IDENTIFIERS *United Kingdom

ABSTRACT

This report, one of a series of country studies on higher education and employment particularly in continuing professional education, looks at recent developments in Great Britain. In particular the report concentrates on developments at the interface between the country's higher education system and working adults in managerial or professional jobs. Following a preface and an introduction the first of four main sections describes the nature of continuing professional education including its development, the roles and responsibilities of various actors, access, certification and accreditation issues, and funding. The second section reviews the market for continuing professional education: the employer's perspective, the role of professional associations and the activities of other organizations such as commercial providers. The third section outlines higher education's response to changes and their central role in providing continuing professional education as well as discussing the effect of demand for continuing education on the universities and the place these services take in the universities. A concluding section argues that development of continuing professional education has been haphazard and unbalanced and argues for increased collaboration between industry and higher education. (Contains 74 references.) (JB)

GENERAL DISTRIBUTION
OCDE/GD(91)173

HIGHER EDUCATION AND EMPLOYMENT: THE CHANGING RELATIONSHIP

RECENTS DEVELOPMENTS IN CONTINUING PROFESSIONAL EDUCATION

COUNTRY REPORT - UNITED KINGDOM

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Paris 1991

GENERAL DISTRIBUTION

OCDE/GD(91)173

HIGHER EDUCATION AND EMPLOYMENT: THE CHANGING RELATIONSHIP
Recent Developments in Continuing Professional Education

COUNTRY STUDY: UNITED KINGDOM

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Paris 1991

GENERAL DISTRIBUTION
Paris, September 1991

English text only

HIGHER EDUCATION AND EMPLOYMENT: THE CHANGING RELATIONSHIP

Project iii): Recent Developments in Continuing Professional Education

COUNTRY STUDY: UNITED KINGDOM

This report is one of a series of country studies prepared in the framework of the OECD Education Committee activity on Higher Education and Employment: The Changing Relationship. It deals with one of the three main topics covered by this activity, Recent Developments in Continuing Professional Education. Together with other country studies on this topic, it provides the background information for the preparation of a Secretariat general report that will be published by the OECD in 1992.

Country studies and general reports are also being made available for the other two projects included under this activity: The Flows of Graduates from Higher Education and their Entry into Working Life; Higher Education and Employment: The Case of the Humanities and Social Sciences.

The present country study on the United Kingdom has been written by Keith Drake of the University of Manchester, and was made possible by a grant from the United Kingdom's Department of Education and Science. The views expressed are those of the author and do not necessarily commit the national authorities concerned or the Organisation.

CONTENTS

INTRODUCTION

The United Kingdom government is in many respects the most forthright critic of the education system for which it is responsible. The burden of its critique has been that too many young people and too many adults are inadequately educated and trained to meet the needs of a competitive, modern economy. Central government has acted decisively on the basis of this critique.

This report concentrates on developments at the interface between the country's higher education system and its most highly qualified manpower, i.e. those working adults who are in managerial or professional jobs. It explores the role of higher education in the continuing professional development (CPD) of these adults by examining higher education's provision of continuing professional education (CPE). It adapts to United Kingdom circumstances OECD's definition of CPE as:

"any form of education directed to adults (holding middle/upper management level posts) who already have an initial HE qualification and/or professional experience of an equivalent level so that they can update and expand their knowledge and skills relating to their professional life".

In order to delineate CPE provision in the United Kingdom, the report sets it in context. This context is revealed by means of four report sections. The first demonstrates the way CPE has recently developed, the roles of the key players, trends in access to and accreditation of CPE and policies and practices in funding it. The second section delineates the market for CPE and the role of employers, commercial providers, professional associations and other organisations in influencing the character and scale of demand and supply. The third section concentrates on the unique contribution of higher education in CPE provision, the changes which are occurring in the way this provision is managed and in the strategic position of CPE within higher education. A fourth section contains a review of the principal developments, and of the gap between what is needed and what has been achieved.

I THE NATURE OF CONTINUING PROFESSIONAL EDUCATION IN THE UNITED KINGDOM

I.I THE DEVELOPMENT OF CONTINUING PROFESSIONAL EDUCATION IN THE UK

THE NATURE OF CPE

The United Kingdom has well over two hundred organisations which protect occupational interests and would usually be held to represent professions. But UK professions are a heterogeneous category. They range from chartered and publicly-licensed occupational bodies like those in law or engineering, through to far less institutionalised and essentially "open" professions like management, and into occupational areas like social work which are sometimes designated as "semi-professions".

For this paper the precise definition of a profession is of no great consequence. The term professional will be used in the strictest sense, i.e. for members of an organised occupation with exclusive rights to perform certain kinds of work, which controls access to and training for the occupation, as well as evaluation of competent performance. But it will equally be used to refer to members of other occupations, like middle and senior managers and others with either a first degree or its equivalent, and occupational experience and responsibility roughly equivalent to that of people who are members of what are undoubtedly professions.

In other words, the term professional is used for all highly qualified manpower, whether qualification refers to degree level certification, to membership of a publicly-recognised profession or simply to high level occupational competence and responsibility demonstrated on the job. Only health and education professionals are excluded from consideration, though there are occasions when it is not feasible to separate provision for them from that for other professionals. This exclusion was specified in the remit of this paper.

However, graduate status is a defining criterion for a large fraction of the highly qualified workforce who need CPE. The 1987 Labour Force Survey (TA, 1989b, p 7) shows:

i) Graduates form 6 per cent of the population of working age; two thirds of the 2 million graduates of working age are male; four fifths of graduates are under 45 and half are under 35.

ii) Labour force participation is high among female graduates - 81 per cent being economically active against 68 per cent of all females.

iii) The occupational group described as "managerial and

professional" accounted for 88 per cent of graduate employment. Half of all graduate employment is in education, health and public administration, with another 18 per cent in banking, finance and insurance.

iv) Some 45 per cent of graduate employment is concentrated in the South East region, Britain's largest labour market (one third of all employment in 1987).

v) Between 1984 and 1987, when overall graduate employment grew by 17 per cent, graduates who were self-employed or in part-time employment increased by 37 per cent, full-time numbers rising only 13 per cent.

vi) The graduate share of employment in manufacturing rose 3.9 to 4.6 per cent 1984 to 1987 (a 30,000 increase) and only from 8.6 to 8.9 per cent in the services sector (almost 200,000 extra).

The term continuing professional education is used to connote a broad interpretation of systematic and formalised activities which will enable professionals to update and expand the knowledge and skills necessary for a continuing high level of performance of occupational tasks. It is used because the emphasis is on all forms of vocational continuing education and training for this broadly-defined target group of the workforce, and not on personal development. Virtually all the long and short-term vocational continuing education and training provided by UK higher education institutions addresses the needs of this group.

ITS EVOLUTION AND GROWTH

One of the best known British experts on continuing professional development characterised its development in the UK as a three stage process (Todd, 1987a, p 15). In the first stage there was a vigorous debate in and around many professions as to the need for CPD. The second stage was located by Frankie Todd in the early eighties, around the time (1982) when the government launched its Professional, Industrial and Commercial Updating Programme (PICKUP) to help both higher and further education to provide more and better post-experience courses for industry, with an emphasis on flexibility. This provoked a much increased national networking and cross-fertilisation of experience and of ideas among the professions and educators. Relatively unsophisticated approaches like the equation of CPD with a scattering of short courses, seminars and conferences were increasingly supplemented by an exploration of alternative delivery formats which reflected a new provider emphasis on tailoring provision to employer or individual needs and circumstances rather than selling off-the-peg courses. The third stage, into which some of the professions are already edging at

varying speeds, has a number of distinctive traits. One dominant concern is "that CPD should support quality in professional practice and that we must plan it so that learning agendas follow on from work agendas" (Todd, 1987a, p 15). Uncomfortable questions are asked, for example, about the relevance of CPD programme contents to critical practice issues where professional negligence costs the client dear, whether the purpose of CPD is to protect the professional or the client, and whether self-choice can significantly improve practitioners' performance.

Frankie Todd's three stages can be considered as evolutionary phases, through which professions, and providers catering for their needs in CPD, pass at uneven speeds. Her characterisation of the evolutionary process also highlights the different interpretations which are being put on continuing professional education (CPE). CPE can be looked at narrowly, as formal educational events - face-to-face courses, distance learning programmes, seminars and conferences - designed to update knowledge and skills relating to professional life. But it can also be looked at in a far more developmental way, just as industrial training is being transformed, in substance as well as words, into a component of human resource development.

The leading edge of development in the British professions demonstrates the transition from the narrower to the broader conception, from "taking a course" to "professional development". In the latter conception, either the individual professional or the professional practice is encouraged to formulate a strategy for developing competencies which fits the work circumstances and plans of the individual or the practice. The entire approach is altogether more strategic than the essentially spasmodic and tactical approach which it supersedes. It encourages an equally strategic approach on the part of HEI providers, who have to learn how to relate systematically both to professionals and to other providers for those professionals. In the old approach, CPE was in perpetual danger of succumbing to passing fashion or being treated as a distress purchase. For the most part, it was reactive to immediate and obvious professional concerns. In the more modern and strategic approach the professional comes to behave like a long-term investor (in human capital). HEI providers recognise that they are in a capital goods industry requiring the same sort of long-term collaborative approach to the professions as Airbus Industrie or Boeing have to their major airline customers. CPE becomes far more pro-active and anticipatory.

The qualitative features of the evolution of CPE in the eighties have been relatively well documented (e.g. in Goodlad, Part Six, 1984; Todd 1987b; Welsh and Woodward, 1989). Overall there can be no doubt that there was a growth in the provision of CPE by professional associations, by employers, by HEIs and by commercial providers. But lack of data makes it difficult to offer a comprehensive quantification of this growth in CPE. All that is done here is to illustrate the growth in some areas, in relation to some professions (Chapter II.II), to funding (Chapter I.7) and to some of the provision by HEIs (Chapter III.I).

The reasons for the growth in CPE are varied:

A. Demographic and labour market pressures

All UK professional bodies face broadly the same labour market conditions in the 1990s. In addition to increased competition in services and changes in the nature of employment, there are major demographic shifts under way. Employment for the 1990s (1988, Chapter 1) showed why the rate of growth of the labour force will be at a far slower rate than in the mid-eighties. The principal cause of this is the decline in the number of young people leaving the school system. The number of 18 and 19 year olds is projected to fall by about 27 per cent 1987 to 1995, while the number of people of working age remains broadly stable around 34 million. From this radical shift other important changes follow:

i) The output of graduates from initial higher education will not keep pace with the growth in jobs usually occupied by them, so there will be increasing competition to recruit them. Studies at the Institute for Employment Research at the University of Warwick indicate that there will be an increasing demand for people in occupations requiring training, often at a higher level. They suggest that, out of a projected increase in employment of 1.7 million by 1995, 1 million will be in management and professional occupations.

ii) The 1990s labour force will contain more 25-54 year olds than in the 1980s. They, like younger workers, will expect increased training and retraining from employers to cope with increased pressures for change. Approximately three quarters of the year 2000 workforce are already at work.

iii) The proportion of women in the labour force will increase. The projected increase in the size of the female labour force may be around 90 per cent of the total increase in the 1990s.

The difficulty of maintaining recruitment of young entrants of constant quality to some professions, combined with the greying of the existing membership, has concentrated the attention of professional bodies on the problem of maintaining and enhancing the competence of existing members of the profession. There is evidence (Welsh and Woodward, 1989, p 16) that in some ageing professions CPE is perceived as a means of improving job satisfaction, no doubt by assisting job enrichment or even a change of job.

Simultaneously, the feminisation of the workforce and the growing propensity for self-employment, part-time employment, temporary work, sub-contracting and home-working must affect the professions to some degree. These trends make for flexibility of labour costs to variations in work-load. But they require a greater number of appropriately trained people to provide the same quantum of labour input.

B. Competition

Increasing competition in the market for professional services has several different causes, each with particular implications for CPE:

i) The government is committed to increasing competition for professional services by measures to deregulate, in certain respects, a number of professions.

ii) Many British professionals are accustomed to operating on an international market. Nevertheless, there is a special significance in the implementation of more and more Single Market directives. It brings closer to realisation the free movement of highly qualified manpower across the European Community. The 1989 EC Directive which came into effect on 4 January 1991 applies to 37 UK professions which are regulated by chartered bodies or directly by the state. These professions include lawyers, accountants, engineers, surveyors and actuaries (TA, 1989c, p5).

iii) One important organisational trend of recent years has been the growth of quite large inter-disciplinary firms employing a range of professionals - the evolution of big accountancy practices into very large accountancy-with-management consultancy firms is perhaps the best known example. There are requirements for inter-professional teams or multi-skilling, and more CPE is an inevitable concomitant.

C. Competence

Greater attention to CPE also arises from a direct concern about competence. In fast-developing fields like information technology it is now reckoned that the half-life of a first degree is around three years. One recent estimate (NUCEA, 1987, p 19) put the half life of a software engineer's skills at 2.5 years, of an electrical engineer's at 5 years and a mechanical engineer's at 7.5 years.

Controlling standards at entry to a profession was never enough. Most British professions have come to recognise, often in the eighties, that some of the large effort they have traditionally devoted to their gatekeeper role must now be complemented by a systematic effort to ensure that professional competence is reliably maintained throughout a member's career.

TYPES OF CPE PROVISION

The growing demand for CPE has been met by four main types of provider:

i) Higher Education. In the UK higher education is defined by the Education Reform Act 1988 as all educational provision above the standard of the General Certificate of Education, Advanced Level (rather different from, but as a benchmark approximating to the abitur or the baccalauréat). In 1988-89 there were 52 separately managed university institutions in Great Britain, including the Open University and the University of Buckingham, with two more universities in Northern Ireland. This count recognises the London and Manchester Business Schools and the six colleges of the University of Wales as institutions separate from the universities of which they are a part (London, Manchester and Wales respectively), but all the other colleges and institutions of the University of London as a single university. The Open University is in a class apart because, unlike all other universities, it receives direct funding from the Department of Education and Science (68 per cent of income in 1988) rather than from the Universities Funding Council or the Northern Ireland authorities (Queen's Belfast and University of Ulster). The University of Buckingham, which is extremely small, receives no Exchequer Grant by any route.

Outside the universities, the great bulk of provision from HEIs in England comes from the 84 polytechnics and colleges whose central government funding comes via the Polytechnic and Colleges Funding Council. There is some higher education provision to be found scattered among the non-advanced work in the hundreds of local authority colleges of further education. But the largely autonomous PCFC institutions, and especially the 32 polytechnics, are so dominant in non-university HE provision that attention will be concentrated on them. In Scotland, the non-university higher education provision is concentrated in 16 Central Institutions, broadly equivalent to English polytechnics but receiving their public funding from the Scottish Education Department; and in Wales the

Polytechnic of Wales and colleges of higher education have remained under the control of local government, with their funding allocated on the advice of the Wales Advisory Board for Local Authority Higher Education. In Northern Ireland university provision is unusually important because the large Ulster Polytechnic merged with the smaller New University of Ulster in 1984 and the merged institution, the University of Ulster, with Queen's Belfast, dominates CPE provision. In sum, UK higher education provision is highly fragmented, there being over 150 major HEIs in the CPE market.

ii) Employers. There are two kinds of employers providing CPE, as distinct from financing it. One is the professional practice of a certain size, such as a big firm of accountants or solicitors, which has the capacity to mount courses and other CPE events for its own staff. The other is the large (non-professional) enterprise, which nevertheless employs sufficient numbers of certain types of professional staff to justify providing courses for them in-house. There is good evidence that employer spending on retraining managers and other professionals exceeds that of other occupational grades (TA, 1989a, pp 22-24).

iii) Commercial providers, almost totally dependent on fee income, are very active in the market for CPE, above all in management and business areas. This sector is badly documented, but in price terms it is the top end of the CPE market. In a major study of all kinds of employer training activities in 1987/88 (TA, 1989a, p 51) the average cost per day of training from these specialised training companies was £73, compared with £37 from a University/Business School, £15 from a Polytechnic and £17 using Open/Distance Learning.

iv) Professional bodies now promote and encourage CPE more often and more vigorously than in the 1970s. One recent survey (Welsh and Woodward, 1989) approached over two hundred professional bodies, although this produced only 123 returns suitable for analysis and excluded doctors and teachers and sampled only a selection of the professional bodies in engineering.

TRENDS IN CPE PROVISION

In general terms the variety of pressures which increase the need for updating, retraining and upgrading have been referred to above in discussing the main reasons for the growth of CPE in recent years.

Over the entire range of PICKUP provision - long and short updating courses at all levels - there appears to be a considerable annual rate of growth in the last few years. Moreover, the dominant demand seems to be for management and business skills and for courses in engineering, computing and information technology. Between them these subjects account for over 60 per cent of all courses being provided, and they are of similar importance in higher education provision of CPE (see DES 1990a).

There is also reason to think that in general the centre of gravity in continuing education and training is still swinging towards the firm and that this swing may be reflected in CPE. Although most CPE courses may be run on the premises of higher education institutions, there is a general trend to run them elsewhere, especially on employer premises, or at hotels and similar locations convenient to the employer. A growing proportion of all PICKUP courses are "closed", i.e. tailored for one or more employers or organisations. In general, open and distance learning programmes are becoming more popular (DES, 1990a, p 2). Some professional bodies are very actively developing distance learning packages, as are higher education institutions. The Open University Business School is expanding rapidly.

I.II ROLES AND RESPONSIBILITIES IN CONTINUING PROFESSIONAL EDUCATION

GOVERNMENT POLICY

The policy of the UK government on the development of CPE has been clear and essentially unchanged throughout the last ten years. In a White Paper on higher education the government identified two areas of priority for continuing education, second chance higher education for adults and the requirements of "the many who need updating, retraining or new skills - for example in business management - in order to remain competent members of Britain's increasingly technological workforce. The Government's intention is that both categories should be well served, and it has promoted programmes on both accounts" (Higher Education, 1987, pp 11-12). It went on to claim that its own pump-priming programme, PICKUP, had played a notable part in the progress of in-career vocational education, and that both HEIs and firms were recognising the value of CPE:

"Many of the more enterprising colleges and universities have adopted, with great benefit, a new style and approach to the provision and marketing of courses for industry and commerce. For their part, increasing numbers of firms recognise that investing in updating or retraining their workforce is essential to their future competitiveness; and are ready to release

employees and pay a proper price for a good product" (ibid. p 12).

Government policy is to use public funds only to develop capacity and, especially, collaborative provision of CPE between HEIs, the professions and employers. It is not policy to subsidise short-term provision beyond these development projects, although it cannot at present avoid a considerable amount of financial subsidy to many of the adults who undertake forms of long-term CPE such as one year full-time postgraduate degrees and diplomas or part-time postgraduate qualifications. HEIs receive grants from either UFC or PCFC in respect of most of their postgraduate teaching provision; and up to now such grants have been made assuming less than full cost fees. The policy is that short-term CPE should be entirely self-financing, preferably for development costs as well. Where the market will bear it, as in management or business, the same policy of self-financing should be applied to long-term CPE, even if the government subsidises some of the costs of developing new provision.

The government's pump-priming takes two main forms. The first is to pump money into development projects, mostly based on the further and higher education system. In 1988-89 some £13 million was allocated for this purpose. For higher education, much of this development funding is channelled through the Universities Funding Council and the Polytechnic and Colleges Funding Council.

The government estimates that about 3 per cent of the English working population (not just highly qualified manpower) now receive some kind of updating training each year. The considerable measure of uncertainty which still surrounds the volume and incidence of this activity does not matter too much because the current level of activity is far below the ambitious target which the government has set: 10 per cent of the working population being updated annually, by 1992, by the further and higher education institutions (DES, 1990a, p 1).

The second main form of government support is a range of schemes designed to develop higher education/business links. PICKUP is the principal programme sponsored by the Department of Education and Science. Other government departments are also active and have their own programmes. For instance, the Department of Employment (DE) through its Training, Enterprise and Education Directorate (TEED) - formerly the Training Agency - has set up 82 Training and Enterprise Council (TECs) now becoming operational in England and Wales. These are directed by boards with a majority from private industry. They are intended to become the main brokers of vocational training and enterprise at local level, with a remit to help firms develop new training programmes, including collaboration with HEIs.

In Scotland 22 Local Enterprise Companies are being-established under the Scottish Enterprise and Highlands and Islands initiatives. These companies will have a far wider remit than the TECs in England and Wales as their responsibilities

extend to economic development as well as enterprise and training. At least two thirds of the members of these companies' boards come from the private sector and the Boards are chaired by senior local businessmen.

TEED also operates The Experimental Programme (TA, 1989f). This is a £2.6 million a year experimental strand (27 courses a year) within TEED's High Technology National Training Programme (350 courses nationwide). The Experimental Programme provides mostly postgraduate training in skill shortage areas to graduates unemployed or underemployed at the time they are accepted on the course. By 1988/89 most trainees had at least a first degree, over 60 per cent in a science area. Virtually all had full-time work experience, and over half had at least five years of work experience. Sixty per cent left employment in the year their course started, but 25 per cent had been unemployed for at least two years. Over 80 per cent were male and between 25 and 40 year olds. By 1988/89 some 90 per cent of trainees were on computing courses, related slightly more frequently to information technology than to engineering.

Another important scheme is run by the Science and Engineering Council Teaching Company Directorate. This is the Integrated Graduate Development Scheme, which provides recent graduates with a coherent programme of short courses designed to deepen and to extend their technical knowledge. "Graduates are employed by firms who sponsor them on study and project work tailored to the firms' needs. This work leads to a Master's degree in Science. Current schemes are based at 12 institutions and cover engineering subjects" (DTI/CIHE, 1990a, p 34).

THE CPE PARTNERS: ROLES AND RESPONSIBILITIES

All short-term CPE and a growing proportion of long-term CPE from HEIs is self-financing, as is the provision of commercial providers. Some cross-subsidy occurs in the provision from professional bodies, but in general their principle is to make seminars, workshops and conferences self-supporting from fees. So, virtually all short-term CPE which is not in-house is market-driven. The partnerships which exist are often between suppliers and customers. Courses, materials or events which are not bought in break-even volumes disappear. What survives is what a sufficient number of customers are willing to pay for at a price that providers can afford to sell at.

That said, there is generally more than a market contract to the relationship between providers and their customers, whether those customers are highly qualified individuals, professional partnerships, or employers. Of the six key players two are directly involved as sellers (HEIs and commercial providers), two as buyers (individuals and employers) and two chiefly as promoters and brokers (government and organisations

representing occupational groups).

The commercial providers are fundamentally for-profit operators and should be distinguished from the HEIs. The HEIs need fee income to finance provision, including an appropriate contribution to meet their indirect costs. But they are operationally and essentially private not-for-profit providers. They recognise a long-term mutual interest with their customers in a high skills economy, and especially in maintaining competitiveness through competence. They often have strong non-financial reasons for engaging in CPE (see Chapter III.I) which, for the most part, are not found among the commercial providers.

Highly qualified individuals in employment tend to want more CPE than their employers are willing to resource with company time as well as money. The best overall evidence is that in 1986/87 management and professional staff received on average 10.1 days of training. This was 50 per cent more days than the next most trained group, i.e. skilled and semi-skilled manual employees. Of management and professional staff 56 per cent received some form of training, compared to 40 per cent of the skilled and semi-skilled; and 44 per cent of management and professional employees received off-the-job training compared to only 27 per cent of skilled and semi-skilled (TA, 1989a, p 23).

However, the individual is also a customer for CPE. Many professionals are self-employed, while others are in group practice or employment where the tendency is increasingly to share the cost of CPE between individual and firm. Characteristically, this is done by the firm paying some or all of the direct financial costs but requiring the individual to contribute at least some of his or her leisure time instead of all the training taking place in company time. Whether or not it should be so, the predominant approach of professional bodies in the UK at present is to put the responsibility for updating on the member, shared with the employer where the member is an employee.

An increasing number of professional bodies recognise the need to have a well-articulated CPD policy and strategy, in which the body itself has a variety of roles ranging from needs identification to national and local promotion, sometimes direct provision and - rarely - the enforcement of mandatory CPD requirements on members. Even those occupational groups which are "open" in terms of access to jobs, such as managers, have been moving towards a stronger promotional role for national bodies and rationalisation of certification and CPE provision, notably through the Management Charter Initiative.

I.III ACCESS TO CONTINUING PROFESSIONAL EDUCATION

A. Access to long-term CPE

At undergraduate level the admissions practices of HEIs have produced a distinctive pattern of provision for mature entrants. Apart from two shining exceptions - Birkbeck College, University of London and the Open University - the university sector has offered negligible part-time provision and a rather limited entry of adults to full-time provision (see Smithers and Griffin, 1986; Smithers and Robinson, 1989). Adults seeking a mid-life career change or a postponed higher education have depended heavily on much more accessible PCFC institutions (Bourner et al, 1988).

A more important form of long-term CPE for the target group of highly qualified manpower is postgraduate diplomas and degrees. All HEIs, including the Open University, have generally had formal requirements for entry to higher degree programmes. The bulk of actual provision has usually been in the universities rather than in the polytechnics and colleges. Some areas of work, such as business and management, have proved highly responsive to demand and increasingly ready to make programmes available in forms which widen access, i.e. part-time, modular and sometimes using distance education. There has been a growth in postgraduate programmes precisely tailored to the needs of particular firms or industries. Sometimes they use a scheme like the Integrated Graduate Development Scheme, or TEED's Experimental Programme which pump-primes mostly postgraduate courses in key technologies like information technology, bio-technology or advanced materials for unemployed graduates. Since Experimental Programme courses are geared directly towards occupational fields with shortages of highly qualified, manpower it is not too surprising that over 90 per cent of those who successfully complete these new model Master's programmes quickly find relevant employment.

The major issues in access to long-term CPE are formal qualification requirements, financial support and the delivery system. In some ways the formal entry requirements are the least important obstacle. Preparatory courses can be provided and postgraduate programmes designed to fit clienteles with particular kinds of qualification profile. More important is the inability of most numbers of the target population to get paid educationalal leave for full-time CPE. PEL is scarcely on the policy agenda, even though it remains on the trade union agenda (see McIlroy, 1988). For those without the support of a company, or a government scheme like the Experimental Programme, a Career Development Loan (1) is the only obvious way of supplementing household resources.

In long-term CPE modularisation, part-time and distance teaching are all playing their part in improving access. The problems with short-term CPE are somewhat different in the sense that information is a really serious problem, and the solutions are inevitably different.

B. Access to short-term CPE

Some short-term CPE is full-time over short periods, a few days or a week or two. Paid leave is necessary for those who are employees or loss of earnings for those who are self-employed. But a very high proportion of short-term CPE takes the form of one-off events like a seminar or conference, or a series of meetings spread over some weeks and probably not amounting in total to more than 20 or 30 contact hours.

The professional bodies have a ready-made publicity network through their branches and their membership. The HEIs and commercial providers have a more difficult task with open courses and events. Local and national databases have been developed to help reduce the potential client's high information costs. The government pump-primed the PICKUP Training Directory, for instance, which lists about 12,000 work-related courses available in HEIs and from commercial providers. It is available on PRESTEL, viewdata, floppy disc, microfiche and off-prints.

C. A specific problem: women

TEED has been pump-priming in HEIs a variety of initiatives tailored specifically for highly qualified women personnel, especially those who require a refresher course or broadening of skills at the point of re-entry to the labour market after a break to start a family. Again the key to access is not educational qualifications but the availability of the right kind of provision in the right place at the right time.

It is reported (Finn, 1990) that the UK Inter-Professional Group estimates that on average women make up 17.5 per cent of numbers in the professions surveyed. Women are entering the professions in increasing numbers, and for demographic reasons this trend is bound to continue. In some professions, like law or veterinary surgery, over half of all new entrants are now women. In others, and notably in management and engineering, women are still grossly under-represented. Finn points out that despite the Engineering Council's Women into Science and Engineering (WISE) campaign launched in 1984, only 0.5 per cent of the membership is female; and a recent survey by Remuneration Economics showed that since 1987 the percentage of companies employing female engineering graduates fell from 45 to 37.3 per cent. Last year women were 12.8 per cent of new university engineering admissions; and, according to the Director General of the Engineering Council, the percentage of women among engineering graduates has risen from 7 in 1982 to 12 per cent in 1989. The key to improvement is policies in the professions and at company level on part-time work, career breaks and equal opportunities. But there is growing recognition that to make such policies work, and ensure a long and productive career for so many more women professionals, it will be necessary for HEIs

to provide more of the specially tailored refresher courses which are now beginning to appear all over the country.

D. A specific problem: small firms

Another very specific problem is access to CPE for highly qualified personnel working in small firms. This is a growing problem because, although there is no standard UK definition of a small firm, by any measure they are increasing in number. It is also a peculiarly critical problem for professionals, since so many of them are either self-employed or employed in practices which are themselves small firms.

The eighties witnessed an accelerating growth in the number of small firms in the UK (TA, 1990a). UK businesses registered for VAT (in 1989 all those with annual turnover over £23,600) increased from 1.29 million to 1.57 million between the start of 1980 and the start of 1989.

The number of the self-employed also grew by over 1 million September 1980 to September 1989, with a 116 per cent increase for women and 45 per cent for men. By December 1988 the number of self-employed had reached 3 048 000 (Employment Department, 1989, Table 3). The proportion of the non-agricultural workforce which is self-employed (11.6 per cent) is still marginally below the average for other EC member states, but the increase in the eighties was easily the highest of all.

Small firms in general, and self-employment even more so, present considerable problems of access to CPE:

i) It is very difficult to cover for the absence of key personnel - high qualified people - so that they can undertake off-the-job training.

ii) Many small businesses live on such a financial knife-edge that it is difficult for them to contemplate a long-term, strategic and expensive approach to the continuing professional development of staff. The median lifespan of small firms in the UK is reckoned to be between 7 and 9 years.

iii) Not only is it difficult for staff in small firms to take time off for off-the-job training. It is also very difficult for providers, whether HEIs or commercial organisations, to reach them with information on CPE which small firms recognise as meeting their needs. Firms in general are quite bad at needs analysis. Small firms are often so utterly absorbed in day-to-day operations that very little thought has been given to CPE.

Many HEIs, individually or in collaboration with other

HEIs, have development projects which concentrate in part or exclusively on developing a more effective outreach for CPE towards the personnel of these small firms. Not many would claim to have cracked the problem except here and there, for particular purposes.

NOTES

1) Loans administered by local banks from £300 up to £5 000 to attend a vocational course lasting at least one week but not more than one year, part-time or full-time or distance learning. No repayments and interest free during the course and for up to three months after, during which period the government pays the interest due. Between its 1988 launch and 30 September 1990 12 028 loans were approved at an average of £2 351 per loan (Employment Department, 1990).

I.IV CERTIFICATION AND ACCREDITATION

THE ROLE OF THE NATIONAL COUNCIL FOR VOCATIONAL QUALIFICATIONS

In 1986 a working group set up by the then Manpower Services Commission and the Department of Education and Science published a review of vocational qualifications in England and Wales (DeVille, 1986). It recommended a comprehensive restructuring of the framework of vocational qualifications which, among other things, would recognise "competence and capability in the application of knowledge and skill", ensure "opportunities for progression" and allow for "the certification of education, training and work experience within an integrated programme".

This report was quickly acted upon by the government, which set up a National Council for Vocational Qualifications to evaluate and rationalise vocational qualifications at all levels into a coherent system. As the Chairman said in his preface to the original report, this ambitious programme would require, inter alia, "a clearer definition of employers' needs and better means of fixing standards and assessing work-related competence" and that "the 'divide' between vocational and academic learning by bridged". Such a programme is inevitably of interest to the professions and, indeed, to all highly qualified people.

This re-appraisal of Britain's system of vocational qualifications has so far concentrated almost entirely on qualifications available to people whose jobs do not require

many formal qualifications, the semi-skilled, the skilled, technicians, supervisors and other qualified manpower below degree level. In the next year or two the Councils's work is expected for the first time to reach into general management and the fringes of the professions, though it is not expected to have influenced more than some units within qualifications at the lower end of the professions much before the mid-1990s. Its task is a very large one in a country whose qualification system is so ramshackle. In Scotland, a separate but similar system of Scottish Vocational Qualifications (SVQs) is being developed through co-operation between SCOTVEC and NCVQ. SVQs too embrace industry-determined standards, attempt to meet the needs of specific occupations and are analogous to the NVQs offered in the rest of the UK.

This initiative raises very important issues concerning the certification of competence as a result of CPE. These issues echo throughout many current debates on accreditation. Outside the liberal professions, with their well established assessment procedures, there is talk of them being "wary of a competence-based approach" (Wood, 1990). The slow progress which is expected when the Council begins to tackle the qualifications of professionals is often attributed to resistance by the professions to "any diminution of knowledge-based testing" (ibid). Within the professions, and among many employers of high level personnel, such talk is met with considerable scepticism about the ability of the Council and its chosen assessors to improve on the extensive assessments of competence which are such a major feature of the final (or practice) stages of professional training in occupations like engineering or architecture.

THE MANAGEMENT CHARTER INITIATIVE

Many high level personnel do not belong to well-established professions, like engineering, with elaborate accreditation procedures. The largest and most obvious group in this category is the country's 2.5 million managers. The National Council for Vocational Qualifications has begun to address the qualifications of general managers from the angle of the retail industry, defining some units of competences which are specific to the sector but others which are claimed as "generic management competencies" (Wood, 1990). It has not yet tackled strategic management but hopes to introduce what it calls competence-based elements into qualifications such as the MBA. The issue of qualifying managers is highly contentious in the UK. The Management Charter Initiative was originally launched in 1987 to establish an elaborate and progressive nationwide qualification system based on the notion of a "Chartered Manager". In the original concept this would be a very high level professional qualification only to be achieved through demonstrated on-the-job competence as well as mastery of defined bodies of knowledge.

Such was the severity of the criticism from within both

industry and higher education that this central plank in the campaign "to put management on the same footing as other professions" (Stirner, 1989, p 21) had to be abandoned, though the need for training is fully recognised. Accreditation has proved a particular problem, with two issues presenting difficulties for employers.

A. Definition of competences

The identification and assessment of generic management competences within an empirically-based total-system approach to management development has proved to be a very difficult exercise (see, for example, Boyatzis, 1982). Central government, through TEED, has provided considerable funds to finance a major effort to provide an improved methodological underpinning for a uniform national set of management qualifications fully in the spirit of the National Council for Vocational Qualification's aims. There are still many sceptics among the most experienced and senior managers and business school leaders.

B. A system of formal qualifications

The need rationalise the range of management qualifications is still widely recognised, but practical difficulties remain, including

i) the squaring of existing vested interests such as higher education's business schools, and a range of interested associations such as the British Institute of Management or the Institute of Personnel Management;

ii) the widespread fear in industry of developing a damagingly rigid system of formal qualifications with a heavy bureaucracy to protect as well as administer them.

THE PROFESSIONAL BODIES

The range of professional bodies in the UK is very wide. Some are ancient, exclusive and tightly-organised bodies with statutory responsibilities; others are not a great deal more than voluntary clubs whose members have a particular set of professional interests which the organisation exists to serve. Some represent every practising member of the profession; a few represent no more than a minority of practitioners.

The great majority of UK professional bodies have not established or enforced tests of continuing competence. As the survey reported by Welsh and Woodward (1989) showed, the professional bodies have generally been most interested in the process of maintaining competence and in developing provision.

They have been relatively relaxed about the role of assessment and certification in quality assurance. This section of the report draws heavily on the findings of the one recent investigation of CPE in professional bodies (Welsh and Woodward, 1989).

The survey of 240 professional bodies (excluding doctors and teachers) yielded 123 responses for analysis. Those respondent bodies represented around 1.4 million professionals, though some may belong to more than one professional body. Their assessment functions are characteristically a very important part of their entire role. They all require a high level of entry qualification, though not necessarily at degree level. Control of entry standards is one of their major preoccupations:

* 64 ran their own examinations system
* 69 recognised degrees or diplomas offered in further or higher education
* 53 allowed entry by other means, such as a combination of age and experience and successful completion of practical work.

It could be significant for their approach towards the increasingly important field of CPD that the survey evidence suggests a gradual move by the professional bodies away from running their own examination systems and towards greater reliance on recognising qualifications from educational institutions. If this is the case, it suggests a further strengthening of the already close links between higher education and the professional bodies. This trend could well influence very strongly the way in which the currently underdeveloped assessment and certification of CPE is managed.

Out of the 123 useable returns, 58 respondent bodies had a CPD policy already and a further 38 were considering introducing one. The mechanisms and systems being used or considered to ensure that members maintained and improved their professional competence were varied. For example, 24 respondents set minimum quantities of CPE, some with very specific targets; but another 34 did not. The status of their CPD schemes was no less varied. Only 7 had compulsory CPD; 46 ran voluntary/advisory schemes and 9 were experimental. In terms of membership coverage, 34 CPD schemes applied to all members, with a further 4 only applying to specific categories of membership.

The predominant view appeared to be that individual members should take responsibility for setting and achieving their own CPD objectives, with the professional body itself providing a framework for such activities. Most professional bodies regard a mandatory approach to assessment of continuing competence as quite impractical given

i) wide variations in the potential of members' job for maintaining and enhancing competence;

ii) extremely unequal opportunities to undertake the CPD members need for their present or a future job;

iii) and the reluctance of many firms to support CPD which addressed the needs of members rather than the needs of the firm.

It is a very common view that, though a mandatory approach might ensure members' participation, it would certainly not guarantee their commitment.

THE ROLE OF HIGHER EDUCATION

To the extent that the professional bodies really address the issue of assessment of CPE outcomes, they increasingly look to the HEIs, as awarding bodies, to help them. During the eighties, there were initiatives all over the higher education system, including the first tentative experiments in the certification of work-led rather than training-led learning. Many polytechnics now have a high degree of effective autonomy in academic accreditation, having graduated from the tutelage of the Council for National Academic Awards. Some of them are busily developing very close working partnerships with large employers. Thames Polytechnic (Currell and Randall, 1989), for example, validates a Sainsbury plc management training programme, having designed the assessment procedures and monitored progress to provide quality assurance. For the Woolwich Building Society it provides quality assurance for the in-company training which leads to the Associateship of the Chartered Building Society Institute and two thirds of a degree, plus teaching for the remaining one third so that employees can complete a full Honours degree. The intention is to progress these partnerships with firms onwards to master's degrees which would certainly be CPE.

Universities are similarly engaged in industry-higher education partnerships where the specially-designed updating programmes, usually modularised master's degrees, spring from a collaboration which includes one or more of the appropriate professional bodies. The professionals do not have to take a master's degree; but they and their employers have the assurance that they have acquired well-defined competences through a high quality continuing education programme. The Institution of Electrical Engineers set up a sub-committee of its Professional Board to research the industry's requirements, design the overall format of the degree, invite universities to design and develop modules and then approve modules, keep central records and approve pass lists (DTI/CIHE, 1990, pp 26-27). Members of the sub-committee are drawn from universities and from industry. Some 13 UK universities and several power engineering companies are partnering the Institution. The first modules, from the universities of Bath and Aberdeen, ran in September 1989.

Such examples show higher education putting its certification experience and instruments at the service of CPE,

with notable gains in the areas of flexibility of provision, and the same quality assurance available for what can, in effect, be short courses (individual modules) as is available for whole degree programmes. At Master's level, and especially in the universities, there tends still to be a strong reliance on quite traditional ways of assessing learning at the completion of modules. On the whole, it tends to be the polytechnics who are experimenting with assessment methods which have until now been less common in academic qualifications.

Short courses, designed as such rather than as modules in an MSc, represent a different kind of certification problem for HEIs. Traditionally, a great many of these have not included any assessment, although some have always done so. Some professions accredit certain short courses in the sense that they recognise attendance at them as fulfilling certain of their CPD requirements. In this field of provision, too, there is experiment. For example, the five Greater Manchester HEIs who constitute its Consortium for Advanced Continuing Education and Training (CONTACT) introduced in 1988 a jointly-awarded vocational certificate called the CONTACT Continuing Professional Development Award (see Entwisle, 1989). This is focused on the need for updating or broadening identified by the individual. It recognises that some task-oriented short courses are extremely difficult to assign to traditional academic levels and that the same person may simultaneusly need a simple business computer applications course, an appreciation of a particular management topic and a detailed updating in a very advanced area of his own specialisation. Some component courses may also be recognised for academic credit at undergraduate or postgraduate level by PCFC or university institutions. But the Award is not itself an academic award; its intent is vocational updating or broadening.

I.V FUNDING OF CONTINUING PROFESSIONAL EDUCATION

GOVERNMENT POLICY

Government policy on the financing of short-term CPE is to use public funds only to help develop capacity and, especially, collaborative provision of CPE between HEIs, the professions and employers. It is not policy to subsidise short-term provision beyond these development projects. However, the government does provide support to many of the adults who undertake forms of long-term CPE such as one year full-time postgraduate degrees and diplomas or part-time postgraduate qualifications. HEIs receive grants from either UFC or PCFC in respect of most of their postgraduate teaching provision. The government maintains that the market for short-term CPE should operate on the basis of prices which cover the full economic costs of provision, free of subsidy from taxpayers or cross-subsidy from provider activities which are not CPE. HEIs, professional bodies, for-profit providers, and employers

providing their own CPE or selling it to others would all be operating on an equal footing.

In the case of CPE buyers, it is government policy to treat employers and individuals rather differently with respect to the tax treatment of expenditures on CPE. It is clear from the government-financed research report by Coopers and Lybrand (1987) that company expenditures on either internal or external training wholly for the company's own business, even the training of, say, non-employees like the staff of a company's distributors, is fully allowable against tax.

In contrast with this, another government-financed study (Planning Exchange, 1988) compared tax concessions available to employees and the self-employed as well as to employers in the UK, Belgium, Denmark, France, Japan, the Netherlands, Sweden, the United States and West Germany. The study showed that the UK is as generous as most but not all the other countries studied with respect to those classed by national tax authorities as self-employed and to employers. With respect to spending on CPD by employees, the UK appears to offer less support in the form of tax concessions than every other country, excepting Japan, and far less than countries like West Germany, the Netherlands and the United States. As the authors themselves pointed out (Planning Exchange, 1988, p 37) many UK studies have demonstrated the low priority accorded to all forms of training in the UK. Yet UK tax policy "is failing to encourage those employees who are enthusiastic and conscientious enough to invest in their own training and personnel development". This policy should be set beside the policy of nearly all the professional bodies that the fundamental responsibility for CPD must lie with individuals. The position has not changed since 1988.

Tax policy is no less uneven in its treatment of sellers. Commercial providers enjoy no tax exemptions and must charge Value Added Tax on training events. On the other hand, universities, polytechnics and colleges, including their Scottish equivalents, together with only a selection of professional bodies (including, for example, the Royal College of Surgeons but excluding the Institute of Chartered Accountants), have charitable status (Coopers and Lybrand, 1987, pp 8-9). A range of tax advantages flow from this. Though in practice they do not invariably understand this, and Customs and Excise has been slow to clarify the situation to all of them, these charities do not need to charge Value Added Tax even on a course where they charge a full cost price, intend to and actually realise a net financial surplus. Company donations of money or equipment to those training institutions which have charitable status constitute allowable expenses against tax - which is not the case either for publicly-maintained (generally local authority-owned) institutions or commerical providers.

UFC AND PCFC POSITIONS

In no area of their activities are the Universities Funding Council and the Polytechnic and Colleges Funding Council more tightly constrained by central government than in the financing arrangements governing HEIs. Legally, the HEIs within the scope of UFC and PCFC are not state universities, polytechnics or colleges. They are independent, non-profit organisations. But the Education Reform Act of 1988, and the wide-ranging powers of HM Treasury to dictate terms to those who receive government grants, severely constrain HEIs' financial operations. This can be so even where they are using physical assets which were not provided by the taxpayer, and managing staff and provision financed from market revenues (1).

The main lines of UFC and PCFC policy were delineated in working party reports to their predecessor bodies, the University Grants Committee (UGC, 1984) and the National Advisory Body for Local Authority Higher Education (NAB, 1984). Not all recommendations concerning financial arrangements have since been translated into practice, first by UGC and NAB and now by UFC and PCFC. But some of the biases in financing arrangements against providing part-time award-bearing CPE have been removed or reduced. For example, in universities virement between full and part-time student load is now permitted, so that the full-time/part-time profile is within each institution's own control.

The original position of UGC and NAB on short-term CPE was that it should be self-financing out of fees, except for some funding of development costs, with fees covering directly attributable costs. However,the guidance which has emerged on fees has in general been more sensible than the suggestions of the two working parties. The peculiar idea that all institutions throughout higher education should either charge the same fees for part-time long-term CPE or calculate them in the same way (NAB, 1984, p 47) has been quietly ignored. Instead, HEIs have gradually been allowed more freedom in setting their prices for teaching services according to what the market will bear and have been moving away from the UGC/NAB cost-based approach to pricing. Further, the UFC and PCFC have progressed from promoting short-term CPE which covers attributable costs to promoting a pricing regime which includes an adequate contribution to non-attributable costs.

THE POSITION OF HIGHER EDUCATION

Now that the 1988 Education Act has freed most of the non-university higher education institutions from local authority management and control the way is open, central government permitting, for them to develop their own market niches. However, like all universities - except for the University of Buckingham - these institutions still operate in a highly constrained and only semi-market environment. All UK HEIs have

had to operate since the end of the Second World War in a grants-driven rather than a market-driven economy. This was the choice of a succession of governments, not of the institutions. By insisting on subsidising supply rather than demand - institutions rather than customers - central government destroyed all the main markets for teaching services, with two exceptions. These were long and short courses for overseas students and short-term CPE.

The eighties witnessed a series of hesitant central government initiatives towards full-cost recovery by charging customers for all teaching services. This hesitant shift has not gone very far in long-term CPE, although institutions are providing more and more postgraduate programmes at full-cost fees. It has gone a long way in short-term CPE, though even here the full application of a market-led pricing regime is only now becoming a reality in many HEIs. Because HM Treasury has so little appreciation of asset management or the operation of market-driven rather than tax-fed budgets it has used its power as a single buyer to limit the freedom of HEIs to respond to market forces. Although the UK government "talks market" it does not "act market". Takeovers and closures were once permitted to some extent in the non-university sector during a government-controlled rationalisation phase. But in the university sector of higher education competition has not been allowed to work in the way it would in industry. Central government has followed a no closure policy and kept the university sector highly fragmented, put quotas on student numbers to frustrate market forces (customer choice) and placed arbitrary limitations on the borrowing powers of institutions many of which have a very high net worth (see Bowles and Roberts, 1990).

The HEIs have made heavy use of development funds available through NAB and UGC, and then PCFC and UFC, to grow both their long-term and short-term CPE. These development funds have been available on an annual basis, except for the current UFC four year planning exercise, under which universities have tendered to UFC for development funds to enhance their short-term CPE capacity even further during 1991-92 to 1994-95.

At the same time all the HEIs are engaged in a major transformation not only of their marketing function but also of their management information and accounting systems. As one guidance document put it, "existing accounting systems were not designed to enable the HEI to manage the business of supplying services to clients: they were designed for another purpose. Consequently, much of the required data will not be readily available and considerable groundwork may be needed to identify costs" (DTI/CIHE, 1990 b, p 19). In collaboration with industry the HEIs are every year engaged in more and more collaborative developments of both long and short term CPE, and this is more and more frequently financed by the industrial partners and by the HEIs out of their own resources. The restraints put on the HEIs by central government act as an intermittent brake on this entrepreneurism, but all the evidence suggests that they are not halting the overall movement.

INDUSTRY'S CONTRIBUTION

UK industry has not lacked for government-financed advice on what to do about CPE (see, for example, DTI/CIHE, 1990a, passim). It has increasingly engaged in a close dialogue with higher education on best practice and on specific partnerships, both nationally (e.g. CIHE, 1987) and locally in a proliferating network of formal and informal industry/higher education consortia.

Industry is cast in the role of principal financier of at least short-term CPE, together with a growing number of self-financing long-term CPE programmes which are designed in close collaboration with HEIs. It is also, in effect, becoming an increasingly important partner in the development of new CPE capacity, either by direct financial help for the development phase and/or the commitment of management and professional staff time, sometimes even via short-term secondments.

There are examples of successful collaborations with small and medium-sized firms; but on the whole HEIs find that the larger firms tend to be most responsive to a very close supplier-customer relationship from the design stage onwards.

What industry does is not very responsive to the efforts of pro-active HEIs or to the exhortations of central government, but it is responsive to the strategic reaction of companies to competitive pressures in both product and labour markets. Industry's contribution is heavily dependent on the choice of UK firms between a low skills and a high skills strategy, between a purely tactical approach which sees training as an operational cost and a more strategic one which sees it as an investment and part of a broad, long-term strategy for human resource development tied to corporate strategy (see TA, 1989d; Cassels, 1990, Chapter 7). The evidence about the training activities of UK employers (specifically in 1987/88) suggests that the tactical low skills approach is still predominant. The evidence is that their demand for and therefore willingness to finance CPE is very patchy, with little more than a half of management and professional staff likely to receive any training, on or off-the-job, in a given year (TA, 1989a, pp 23 and 36-37).

NOTES

1) For example, UFC requires of every university that "the Institution shall obtain the prior consent of the Council to borrowing on the security of Exchequer-funded assets. The Council may after consulting the Institution set out such other conditions on the Institution's power to borrow to fund capital or recurrent expenditure as seems to it necessary to protect the public interest in Exchequer-funded assets, to protect the public investment in the Institution, and to maintain accountability for the use of public funds"

(Financial Memorandum, Universities Funding Council Circular letter 11/89, 30 May 1989, p 5).

Given that the minority of HEIs who have any substantial physical assets which were not originally tax-financed might find it difficult to distinguish those assets completely untouched by public money from the rest, the effect of this regulation is fairly sweeping. Although there is much official talk in the UK about local management of educational institutions, from primary schools upward, central government appears to be so alarmed by the consequences of genuine local management and of real market freedom that there is little prospect at present of more than a semi-market regime in CPE.

II THE MARKET FOR CONTINUING PROFESSIONAL EDUCATION IN THE UNITED KINGDOM

II.I THE EMPLOYERS' PERSPECTIVE

EMPLOYER TRAINING

Employer funding of training in the UK has recently been the subject of the most thoroughgoing research programme ever mounted. Unfortunately, this research did not separate out continuing from initial training. Nevertheless, it is revealing of the extent of employer involvement in the external training market relative to in-house provision; and it provides a survey-based perspective within which to set much more fragmentary and anecdotal evidence concerning employer involvement in CPE activities.

Table A Expenditure on Training by Employers, Great Britain, 1986/87

	£m	% of total net expenditure
Staff costs		
Off-the-job:		
Trainees	2 554	17.7
Internal part-time trainers	943	6.5
On-the-job:		
Trainees	2 680	18.6
Trainers	4 158	28.8
Senior management	1 378	9.5
Full-time instructors/ admin	530	3.7
	12 243	84.8
Non-labour inputs		
Off-the-job:		
Cost of training facility	1 495	10.4
Materials	172	1.2
Equipment	137	0.9
Other costs	136	0.9
	1 940	13.4
Externally provided training		
Trainers on-site	117	0.8

Training off-site	606	4.2
	723	5.0
Levies and subscriptions to industry training organisations	157	1.1
Total gross expenditure	15 063	104.4
Income		
Revenue from providing training	177	1.2
Grants	451	3.1
Total net expenditure	14 435	100.0

Source: TA, 1989e, Table 3.1

The survey from which Table A data originated was of a sample of firms representing 17.8 million employees in 1986/87, excluding only those employees in firms with fewer than 10 employers, the armed forces and agriculture. The included employers are estimated to have borne about 80 per cent of all training costs borne by employers in 1986/87 (TA, 1989e, Table 3.2).

The proportions of all employees receiving on-the-job training and off-the-job training were roughly the same at about one third, and some 40 per cent received both sorts of training. However, on-the-job training seems to account for about 61 per cent of all employer training costs in Table B and off-the-job training costs for another 37.2 per cent of total net expenditure on training. Externally-provided training, on and off-the-site, where HEIs might expect to compete for a large slice of the market, accounts for only 5 per cent of total net expenditure by employers. The evidence from some not-very-compatible surveys in the eighties (TA, 1989e, pp 13-14) suggests a fairly steady annual increase in the total volume of employer-provided or employer-sponsored training.

EMPLOYERS IN THE CPE MARKET

In general, when the training choice is between "making" or "buying", the evidence is that employers prefer to "make". But in the case of CPE, the training of managerial and professional employees, there may well be a greater propensity to hire outside expertise. In part, this is because so much professional knowledge is highly specialised and many firms do not carry people suitably qualified to carry out this kind of training.

The survey evidence is very clear about the extent to which employers' training, by volume and by cost, focuses on jobs requiring high level skills, particularly professional jobs. The surveys of individuals in 1986/87 show that high earners, regardless of their educational attainments, are most likely to have received training within the last three years. Even among part-time workers, who were less likely to receive training than full-time employees, those earning above £6,000 a year were as likely to have undertaken training as comparable full-time workers. Most employees in managerial and professional jobs are in Social Class 1 and 2, and many have as their highest qualification something above Advanced Level GCE (15 per cent of economically active adults). Table B shows the incidence of training for such people relative to the total of all economically active adults.

Table B Incidence of training by highest qualification level and social class, economically active adults, Great Britain, 1987

	Higher than 'A' level	Class I and II	Total % received training
Last 3 years	52	48	32
Earlier	35	35	35
Never	13	18	33

Source: TA, 1989e, Tables 6.4 and 6.5

The heavy gearing of employer training to their managerial and professionals staffs is highlighted in survey responses on employer training lasting more than three days. For this training there were 31 experiences mentioned per 100 professional and managerial staff, 16 for other non-manual workers, 12 in skilled and semi-skilled manuals and 4 in other manuals and personal services.

Half of all highly qualified individuals surveyed in 1987 had received vocational education and training during the previous three years, over 40 per cent receiving employer- funded training (TA, 1989g, p 82). In general, the incidence of continuing training declines with age, but even among highly qualified over 35s some 44 per cent received training in the previous three years. The extent of employer focus on the training of managerial and professional staff was further re-inforced by the evidence from the employers' survey. The annual cost to employers for such staff at an average of £1 306 was far greater than for skilled, semi-skilled and other non-manuals at about £740 or for other manuals and personal services staff at £438. Moreover, off-site fees and expenses were £130 for management/professional staff, £73 for other non-manuals, £34 for

skilled and semi-skilled and £10 for other manual/personal services staff (TA, 1989a, pp 36-37).

Small firms, defined as employing under 10 workers, were estimated to account for about 9 per cent of total training costs borne by employers in Great Britain, 1986/87 (TA, 1989e, Table 3.2). In some sectors, like high technology manufacturing or financial, legal and medical services these may employ a high proportion of graduates and all have a need for management training, especially in marketing and financial areas. One recent survey (TA, 1990b, pp 11-12) of 500 graduate-intensive small businesses, with an average of 11.8 employees among responding firms, found graduates comprising 29 per cent out of nearly 6 000 staff. They were most concentrated in professional areas such as computing and systems (50 per cent of total employment in that category), research, design and development (60 per cent), and other professional specialists (60 per cent). They were quite well represented in general management and administration (20 per cent), but hardly at all in production (5 per cent) or services (2 per cent).

Three quarters of respondent firms recruiting new graduates provided them with on-the-job training, and only a small minority reported provision of full-time courses, which were most common in legal and financial services firms. There was a very wide variation in the number of days training being given to newly recruited graduates. At one end of the scale 40 per cent were providing no training whatsoever and 25 per cent more only 1 to 5 days per year. Perhaps 5 per cent provided 21-30 days per year, another 5 per cent 31-50 days and 2 to 3 per cent over 50 days.

Small firms have a very patchy record as trainers. But they are a vital and growing part of the economy, and a major net generator of jobs. In 1987 firms in the 5-19 employee size band were responsible for a net generation of 290 000 (out of 310 000) new UK jobs, which was 8.3 per cent of total 1985 employment in their size band (Employment Department, 1989, Table 5). There is every reason to think that small firms represent a growing field of employment for management and professional staff as well as for graduates, so the training behaviour of such firms is a matter of increasing moment.

EMPLOYER ATTITUDES TO PARTNERSHIPS

Nationally, employers have supported government and institutional efforts to work more closely with industry, but they started from the position that the efforts of HEIs had been inadequate. The government's developmental initiatives through TEED, the Education Departments, the Department of Trade and Industry, the UFC and the PCFC are addressing many of the employer criticisms concerning deficiencies on the supply side of the market. These initiatives have resulted in a considerable number of collaborative ventures. They have assisted HEIs by doing something to help to create industry and professional

demand as well as helping HEIs to improve the flexibility and effectiveness of their CPE and their capacity to deliver it in greater volume.

At local level, it is possible to distinguish at least three types of subject-specific training consortia (Love, 1987, pp 18-24). One type is sectoral, such the East Midlands Food Technology Consortium bringing together Nottingham and Loughborough Universities, Trent Polytechnic and Nottinghamshire College of Agriculture, and 18 food processing and service companies in the region. In a year or so from launch, the consortium provided over 30 tailormade courses for local companies. A second type is the LX or Language-Export Centre and a third the Regional Technology Centre. The LX Centres have concentrated on export skills as well as training and consultancy in foreign languages, the RTCs on commercial and industrial applications of technological innovations.

In addition, there are local partnerships which are nearer to being multi-purpose. One example is the North East consortium called HESIN (Higher Education Support for Industry in the North), established in 1983 and bringing together the Universities of Durham and Newcastle, the Open University Northern branch, and the Polytechnics of Newcastle, Sunderland and Teeside (see TC, 1988, p 16). HESIN interacts with industry in many different ways, including the region's Technology Centre, credit transfer, joint courses for industry, and an Integrated Graduate Development Scheme (IGDS) in Manufacturing Systems Engineering. Other partnerships have no existence beyond one specific programme of CPE which they exist to provide. The University of Warwick Manufacturing Systems Engineering Group collaborates with industry in a comprehensive IGDS with streams in manufacturing systems and in design systems in engineering (Innovations, 1989, p 30). In 1989 there were 320 participants, mostly over 25 years old and working in 16 "full member" companies and 15 "associate" companies. The industrial partners have expanded from the original automotive/aerospace companies like Austin-Rover, Lucas, Rolls-Royce, British Aerospace and Jaguar to include Thorn/EMI, Vickers Shipbuilders, Plessey, Norcos and Istel.

II.II PROFESSIONAL ASSOCIATIONS

The major role of the UK professional bodies has emerged as setting goals and standards and helping to establish the CPD needs of members. For a growing number of professions this has involved the development of an explicit CPD strategy, a mix of objectives and the means to achieve them. The professions actually provide CPE to very different extents, although all of them recognise that they must promote and seek to regulate provision even where it comes from some other source.

The recent survey of CPD (Welsh and Woodward, 1989, pp 20-22) gave some indication of the growing activity of the

associations in the form of increased provision from headquarters and at local level through branches, also their much increased liaison with and encouragement to other providers of CPE. Of the respondent organisations in the survey, 73 had paid staff engaged in CPD matters, 59 had staff organising events and 23 had staff producing distance learning materials. The Institute of Housing was cited (ibid, p 21) as an example of an association where running training events is a key priority, with the equivalent of three full-time staff, plus administrative staff, dealing with CPD/training. Running conferences and similar prestigious events is a quintessential HQ activity for professional associations.

Although many such events are self-financing, it is clear that the growing number of professional associations who have developed or are developing a CPD strategy see the association as having a developmental role much more than a role as a supplier. This costs money. Welsh and Woodward (1989, p 21) noted a number of cases of considerable involvement by associations in the production of distance learning materials to support CPD, an activity requiring substantial investment. A growing number are doing this, and they included the Royal Institute of British Architects, the Royal Institute of Chartered Surveyors, the Royal Town Planning Institute and the Inter-professional CPD in Construction Group.

In addition, CPE branch activity is also considerable, and the nationwide network is more and more being supplemented by taking educational institutions, especially HEIs, into partnership. In 1989 Welsh and Woodward (1989, p 22) summarised this aspect of their survey:

"34 respondents have CPD organised by recognised centres, generally F/HE institutions. 77 respondents have a mechanism to liaise at HQ level with educational institutions to ensure that CPD provided by them is relevant and appropriate, and 38 have such a mechanism at branch level. A further 15 are intending to develop such liaison in the future. Case studies show that such liaison takes different forms, from the fairly formal mechanisms of validating centres and courses, and providing syllabuses for CPD courses, to the fairly informal liaison operating locally through local networks and contact".

The trend towards establishing a CPD strategy for each profession shows every sign of continuing, so there is a convergence at the policy level on the notion of a professional strategy: objectives, criteria, even some monitoring (probably voluntary), and a mix of encouraging other providers, providing some own-account events and urging employers to co-operate (for their own good, of course). The need to try to ensure that there is provision of CPE and that it meets professional standards is already well recognised.

Ensuring that every active member of a profession is actually still competent to do his/her job, or finds the means to remedy competence deficits, does not have anything like the same priority with most professional associations. The gaps

between individual needs and supply, or employer needs and supply, are being probed by some associations - occasionally and tentatively.

A case which might serve to point up the significance of some of these areas of low priority in the current approach of many professional associations is CPD in the construction industry, which was the subject of a recent study (Goodacre, 1989). There is an additional interest to this study because it was designed to identify whether chartered surveyors were carrying out CPD, and chartered surveyors elected as corporate members after 1981 had a mandatory requirement to undertake at least 60 hours CPD in a three year period. The Royal Institution of Chartered Surveyors might be regarded as in some ways one of the avant garde among the professional associations, certainly with respect to making CPD mandatory. This study reported "a worrying gap between the CPD being carried out by an individual and the need for improved skills within the organisation for which an employee worked".

His own research and the findings of the RICS monitoring exercise prompted Goodacre to a reflection that applies to surveyors a three stage analysis which is not the same as but complements that used by Frankie Todd (see Chapter I.I):

"We believe that CPD has already passed through two stages. The first stage was the definition and general acceptance of CPD as a concept. The second stage was the significant encouragement and provision of opportunities for individuals in the professions and industry to become actively engaged in CPD. Our research leads us to believe that the time has come to add a third stage. This third stage involves relating the CPD of the individual to the competence of the whole practice or organisation. This is because the main objective of CPD must be the maintenance and improvement of competence at all levels within a practice. A useful analogy is the fallacy of training sportsmen, such as footballers, only as individuals without recognising that they must play together as a team" (Goodacre, 1989, p 11).

While the lead professions (in developing CPD) are now quite well down the road in helping to raise individual members' awareness of their need for CPD, the problem of resourcing it, and especially the role of employers, remains largely untouched by the professional associations. All the evidence suggests that there are some exemplary employers, but that they are a minority of all employers and are responsible for an even smaller proportion of professional employment. Until this issue is tackled successfully there is likely to be a very big gap between the intentions of an enlightened professional association and the reality of CPD. So long as that gap persists, so long will the demand for and supply of CPE fall far short of what is required to match the ambitious CPD strategies being formulated by leading professions.

II.III OTHER ORGANISATIONS

COMMERCIAL PROVIDERS

Virtually all HEIs in the UK are private providers in the sense that their assets are not owned by central or local government. They are not state polytechnics or state universities. However, their status is significantly different from all other private providers because they do so much work directly for central government. They receive so much public money through UFC, PCFC and the Research Councils that central government as a single buyer is able to force them to accept its guidelines and rules. Moreover, their articles of government are such that they are bound to pursue their declared corporate objectives, and these do not include making profits to distribute to shareholders: they have none.

So the private providers in the UK are commonly considered to be other non-profit associations or organisations, for whom training may be either the principal or a subsidiary activity (e.g. Chambers of Commerce, group training associations and industry training organisations); and for-profit, i.e. commercial providers usually constituted as public or private companies.

The CPE market and government policy are also influenced by pressure groups whose organisations range in formality from very comprehensive chartered bodies like the Engineering Council and employer organisations like the Confederation of British Industry and the Chambers of Commerce, to partnership promoters like the Council for Industry and Higher Education and campaigning bodies like the Management Charter Initiative.

The commercial providers concentrate overwhelmingly on the sale of short courses, with employers as their main market. The Training Agency's study of the operation of UK training markets (TA, 1989e and 1989i) showed that employers perceived the private for-profits as offering excellence in Manager/Supervisory training rather than the expertise of the traditional professions.

Employer perceptions strongly associated different kinds of provider with different kinds of provision. Moreover, employers focused far more heavily on quality than price. Asked which factors were most important in choosing providers the factors mentioned as most important were, in the lead, level of expertise (66%) and quality (44%), with value for money some way down the rank order (24%) and cost well down (12%). That the lowest price ranked so low as a determinant is noteworthy since the commercial providers tend to charge high.

These employer perceptions seem to be influential in guiding their purchasing decisions. Once established in a market niche, the private provider competes with providers of the same type across labour market areas rather than within a local labour

market. Much of the competition appears to be on quality of provision rather than price. The Training Agency (TA, 1989e, p 58) found that the overall market in training as a traded service is not only highly segmented but relatively small, "only one day in five of employer sponsored training (on- and off-the-job) was provided outside the employed enterprise".

It is not possible to say how many private providers there are at this or any other level. The best estimate is probably about 1 450 institutions in total, but hundreds and hundreds of these specialise in areas like languages, secretarial skills or health and beauty. In all likelihood there are only one or two hundred with any significant sales on the CPE market, and a far smaller number of major players. The most widely known are probably those which specialise in particular stages of training for professions like accountancy, and the private management/business schools, some of which have operational links to HEIs in the form of joint provision (e.g. Wolsey Hall and Oxford Polytechnic for a distance learning MBA) or access to a university's accreditation (e.g. Henley - The Management College and Brunel University).

TRADE UNIONS

The role of trade unions in the development of CPE has been negligible because of the characteristics of trade unions in the UK. There are a few trade unions or organisations with similar functions which have a professional membership. But some of these, such as the British Medical Association or the Association of University Teachers, are excluded from the scope of this particular study. Members of a good many professions are also members of trade unions, although the proportion with dual membership tends to be relatively small or even very small in many of the well-established professions compared with some semi-professionals in public sector employment like social work.

In general, the influence of the UK trade unions on the development of training, and of continuing training in particular, has been limited by the strength of a long tradition which has regarded training more as a means of controlling supply, and therefore labour market competition, than as a means of increasing productivity. There have been one or two notable exceptions among British unions, but they are exceptions. In general, UK unions have not made enhanced continuing training - to raise productivity and therefore real wages - into a key component in their collective bargaining positions. Some have pronounced in favour of paid educational leave and increased provision of learning opportunities for adults. But the ineffectiveness of such campaigns has reflected not only the strength of conservative forces among employers and in Her Majesty's Treasury but also the lack of priority for such issues in the trade union movement as a whole.

III HIGHER EDUCATION'S RESPONSE

III.I HIGHER EDUCATION'S CONTRIBUTION TO CONTINUING PROFESSIONAL EDUCATION

For this particular target group - managerial and professional staff - the most important provision by HEIs is long-term CPE, mostly at postgraduate level, and short-term CPE. In terms of postgraduate provision the university institutions are responsible for a considerably larger share of total higher education provision than the polytechnics and colleges. This is because the universities have always been staffed and resourced for postgraduate work at a far higher level than polytechnics and colleges. The difference in scale between the two sectors is indicated by the number of higher degrees awarded annually in Great Britain. In 1988, 27 100 of these degrees were awarded by universities and 2 900 by polytechnics and colleges (DES, 1990b, Table 8). The universities also have a long tradition of short-term CPE mostly oriented towards their very long-term clients, the learned professions. Table C shows that the polytechnics and colleges are nevertheless major providers for mature home postgraduate students, i.e. for people who are the core of the long-term CPE market.

Table C First year mature home postgraduate students,[1] Great Britain, 1986-87

Student numbers:	Men	Women	Men & Women
Full-time[2]			
University	5 800	3 900	9 700
Polys & Colleges	2 500	2 000	4 400
Higher Education	8 200	5 900	14 100
Part-time[2]			
University	6 900	3 800	10 700
Polys & Colleges	5 400	2 700	8 200
Higher Education	12 300	6 500	18 800
Full-time & Part-time[2]			
University	12 700	7 700	20 400
Polys & Colleges	7 900	4 700	12 600
Higher Education	20 500	12 400	33 000

Source: DES (1988), Table 3

(1) Mature postgraduates are 25 or over on the first year of their course (ages as at previous August).

(2) Undercounted because the Open University and the University of Buckingham are excluded. In 1988 the Open University

admitted 1 142 new full and part-time postgraduate students, virtually all of whom will be mature (OU, 1990, Table 10).

There are quantitatively important segments of long and short-term CPE in which polytechnics and colleges are dominant or the only providers in higher education. The DES PICKUP branch believes that, measuring in courses rather than delivered student hours, higher education provision of short updating courses is now evenly split between PCFC institutions and universities (DES, 1990a).

Although the data on the total CPE market in UK are often fragmentary and unreliable, what data there are suggest that HEIs are the bulk providers of whatever CPE is not provided in-house by employers or by professional associations for their own members. In a few fields, such as management, the commercial providers (and some private non-profits) are quantitatively important players within certain market niches and therefore for the whole occupational group.

The HEIs are also qualitatively very different from other key providers like employers, commercial providers or professional bodies. Employers' provision has the great advantage of closeness to the problem and the potential for complete relevance - at least to current operational needs. The professional bodies, similarly, have unparalleled access to a complete range of the very best practice and experience within the boundaries of a particular profession's skills and knowledge. The commercial providers travel light in terms of commitments: they can move quickly to exploit market opportunities and have no obligations whatsoever to pursue the unfashionable or any long-term strategy which is unprofitable.

By contrast, HEIs are long-term institutions with a long-term commitment to skill formation and the dissemination of knowledge whether demand is strong or weak. They were set up to be pro-active, generative institutions, to be knowledge creators and missionaries. This does not preclude them from also being responsive to professional and employer needs (see Moore, 1988, pp 82-90). They carry a very extensive portfolio of expertise in research and consultancy, as well in training, so they can cater much better than most employers, commercial providers or professional bodies for the growing need for multi-skilling among all kinds of professionals. They have not always been very good at building innovation and new knowledge into their training, but their capacity for this is great.

DEVELOPMENTS IN POLYTECHNICS AND COLLEGES

The eighties witnessed a great expansion in the teaching activities of the polytechnics and colleges, plus a series of organisational reforms. The last and most far-reaching of these constitutional changes, introduced by the Education Reform Act

of 1988, took these institutions outside local authority control, reconstituted their national grant-awarding body into the Polytechnic and Colleges Funding Council, and more or less co-incided with many of them receiving greater autonomy in awarding qualifications.

As Table C shows, they are already a major provider of long-term, award-bearing CPE at postgraduate level. The universities have played their part, but the PCFC institutions have been very keen to expand this kind of work in close collaboration both with industry and the professions. They have exploited to the full the opportunities for development in government programmes like the High Technology National Training Programme or the Integrated Graduate Development Scheme. They have often been particularly successful in making provision for women. Table D shows how much higher the uptake of these postgraduate learning opportunities has been among women than among men. The increase in the number of mature women students has been greater than that for men at all levels and in all modes of study. In 1986 some 83 per cent of all mature students at all levels (70 per cent full-time, 90 per cent part-time) were in polytechnics and colleges.

Table D First year, mature home postgraduate students,[1] Great Britain, 1986-87

	1986 student numbers	Percentage change 1979-1986
Full-time		
Men	8 200	23.2
Women	5 900	36.1
Men & Women	14 100	28.3
Part-time		
Men	12 300	51.0
Women	6 500	125.8
Men & Women	18 800	70.6
Full-time and Part-time		
Men	20 500	38.5
Women	12 400	72.0
Men & Women	33 000	49.5

Source: DES (1988), Table 2

(1) Undercounted because the Open University and the University of Buckingham are excluded. The Open University admitted 1 142 mostly mature full and part-time postgraduate students in 1988 (OU, 1990, Table 10).

The remarkable increases in overall provision for mature students by polytechnics and colleges should not disguise the

fact that the level of such provision throughout higher education is not particularly large in relation to age group sizes or need, and women still have much ground to make up at postgraduate level (see Table E).

Table E First year full-time and part-time home postgraduate students per thousand of 25-44 year old age group, Great Britain, 1979 and 1986 (1)

	1979	1986
Full-time		
Men	0.9	1.0
Women	0.6	0.8
Men & Women	0.8	0.9
Part-time		
Men	1.1	1.6
Women	0.4	0.8
Men & Women	0.8	1.2

Source: DES (1988), Table 7

(1) Undercounted because the Open University and the University of Buckingham are excluded. The Open University admitted 1 142 mostly mature full and part-time postgraduate students in 1988 (OU, 1990, Table 10).

In short-term CPE the polytechnics and colleges have undoubtedly increased their provision very substantially but the statistical data are even more unsatisfactory than they are in the university sector of higher education. One important bank of information is to be found in the evaluation of the PICKUP Selective Funding Scheme of the National Advisory Body for Public Sector Higher Education which was carried out by Kathleen Levine of Hatfield Polytechnic (Levine, 1990). That evaluation and its companion evaluation of the UGC PICKUP Selective Funding Scheme by John Geale of Bradford University (Geale, 1989) will be used over and over again in this section as a principal source of information on short-term CPE in higher education in the late eighties.

The polytechnics and colleges have never had the amount of grant-aided adult liberal education provision through short courses which is a notable feature of short-course provision in the university sector. Their short courses have always been almost entirely concentrated on updating, upgrading and retraining the employed or unemployed workforce. The usual estimate - to be treated with considerable caution - is that about 100,000 people a year study on short courses in polytechnics. Levine (1990, p 18 and Table D) concluded that, in 24 major institutions between 1986/87 and 1987/88, there seemed to have been an increase in the number of post-experience

vocational education short courses with over 40 per cent growth in gross fee income and just under 30 per cent in student hours. The data referred only to these 24 institutions rather than the 84 in the entire PCFC sector, but they included 19 of the 32 polytechnics. The data referred only to full-time courses of less than 18 weeks duration and part-time courses of 60 hours contact time or less run during the academic year. Nevertheless the provision was undoubtedly a major fraction of total PCFC short-term CPE provision and very substantial by itself. In 1987/88 the 24 institutions provided 3 027 courses to 50 541 students. The student load was 3 295 FTEs and yielded a gross income of £5 535 920. For comparison, the reported gross fee income of British universities for short courses, 1987/88, was £56 530 000, just over 2 per cent of total income.

The lack of comprehensive trend data for short-term CPE in polytechnics and colleges makes generalisation about its pattern or growth hazardous. Some fields which are very important in one sector (e.g. postgraduate medical education in universities) are non-existent or quite unimportant in the other. But it seems likely that, though the total volume of provision may be less than in the university sector, the range is not generally that much different, and areas like management, business, engineering and information technology predominate in both sectors.

DEVELOPMENTS IN UNIVERSITIES

As Table C indicates, university provision of long-term postgraduate CPE, including the Open Univeristy, is more extensive than that in all kinds of non-university institutions and accounted for over 60 per cent of first year mature home postgraduates in 1986-87. In this area, as in most levels and modes of higher education, the growth rate of provision in universities has not matched that in polytechnics and colleges in the eighties. However, they too have been innovating. Universities, as well as polytechnics and colleges, have been exploiting the Training Agency's High Technology National Training Programme and especially the DTI/SERC Integrated Graduate Development Scheme. They too have been developing extremely flexible, modularised credit accumulation models of postgraduate qualification both individually and in consortia with other universities or other universities and polytechnics. The Council for National Academic Awards has been vigorously promoting the potential of its credit transfer and accumulation scheme as a means of integrating provision by employers, PCFC institutions and universities. It would thus fulfill the bridging function in certification which the National Council for Vocational Qualifications is established to promote at all qualification levels (see Chapter I.IV).

The universities have proved very ready to collaborate in certification with PCFC institutions while continuing to develop their own much older certification and accreditation

systems. The essence of bridging is compatibility and intelligibility. The universities' certification systems, where they are being overhauled, are generally being modified to make for easy compatability with the CNAA structure used by polytechnics and colleges. In practice, where universities work together or with polytechnics to provide a consortium postgraduate qualification, bridging does not require that all providers use the same credit structure for their qualifications. At this moment many universities are reviewing their certification and accreditation systems. Some, like the Open University, have a comprehensive and highly-articulated credit structure to complement a set of modularised teaching programmes. Some have nearly all their provision in the form of non-modularised undergraduate and postgraduate provision and most universities lie along a continuum between these extremes.

However, it is notable that a very high proportion of all innovative long-term CPE programmes in universities tend to respond to the balance of opinion in the professions and industry, which broadly favours credit-accumulation and modularisation. In one investigation, out of 30 responses to written enquiries made to professional bodies, 22 favoured modular postgraduate post-experience provision, 1 was against and 7 could not be classified (Squires, 1986, p 24). Industry has in general been even more clearly in favour of the new modular-credit schemes. A response to the same investigator from IBM UK is characteristically positive but reflects the attitudes of a broad band of employers:

"... We very much welcome the trend towards providing modular courses, as it seems the best way of catering for a more mobile population - particularly at the postgraduate/post experience level. No doubt you are aware that there are the beginnings of a debate about how industrial learning itself can be recognised... From this you will gather that as an organisation we do indeed think it important for employees to receive credit for continuing education. We see it as one way of stimulating interest in an active professional career. In the same vein we welcome the move by more of the professional institutions to require individuals to provide evidence of continuing education in order to retain mambership. As to the employees themselves, we already have strong indications of desire to gain credit in the US, and that is now becoming more evident in this country" (Squires, 1986, p 35).

Short-term CPE in universities has also been growing rapidly, indeed a little faster than the data suggest since the growth of modular-credit provision at postgraduate level means that there is some leakage of reported volume from the short course data set into the long-term CPE data set. What happens is that provision in an area like information technology is converted from non-award bearing, free standing short courses into modules within a new Diploma or Master's programme. The same professionals may continue to come on them for the same reasons, but they are then registered and recorded as part-time postgraduate students (long-term CPE) rather than short course

TABLE F Selected short-term continuing education provision by UK universities (1), 1983-84 to 1988-89

	Total short courses	Excluding extra-mural, health and education courses					
		Courses	% of total short courses	Student numbers	Percentage of all short course students	FTEs (2)	Percentage of all short course FTEs
1983-4	20 567	3 261	15.9	79 622	16.3	7 351	27.3
1984-5	21 713	3 704	17.1	90 828	17.9	8 550	30.8
1985-6	22 041	3 685	16.7	93 768	18.3	9 110	32.4
1985-7	24 218	5 065	20.9	128 571	22.5	10 392	33.6
1987-8	24 969	5 990	24.0	149 750	25.9	11 803	35.7
1988-9	30 848	7 417	24.0	165 465	24.7	13 097	38.9

Sources: USR (1986a) Vol 1 table 21 and table 23
USR (1987a) Vol 1 table 22 and table 24
USR (1987c) Vol 1 table 22 and table 24
USR (1988b) Vol 1 table 25 and table 27
USR (1990) Vol 1 table 25 and table 27
USR (proof b) Vol 1 table 27
USR (proof a) Vol 3 table 19

(1) Excluding the Open University and the University of Buckingham.

(2) Using a 360 hours divisor to convert from total student hours to full-time equivalent students (FTEs), and all GB FTEs, excluding postgraduate medical and dental provision, from Table H. The difference between the FTEs for all subjects excluding medicine and dentistry for UK and GB was 1 303 in 1987-88 and is fairly constant as a percentage of the UK total.

enrolments (short-term CPE).

One crude way of approximating the available data to the target set for this paper, i.e. all post-experience CPE for highly qualified manpower excepting health and education, is to net out health and education courses and provision by university extra-mural departments. It should be noted, however, that this simple procedure leads to some (probably fairly consistent) undercounting because university extra-mural departments account for not far short of 5 000 FTEs on vocational short courses and some of their so-called non-vocational courses are actually used by people as updating provision (1). Another source of under-measurement is the exclusion from the following tables and data of a fast-growing and increasingly important short-course provider, the Open University. Short course enrolments on its Business School courses grew from 974 in 1983 to 8 715 by 1988 (OU, 1990, Table A6).

As Table F shows, this subset of total short-term CPE provision of UK universities increased in volume (FTEs) by 78 per cent between 1983/84 and 1988/89. This provision grew steadily in its relative importance within the whole repertoire of university provision. Its growing importance is underlined further by Table G, especially by comparison with the rest of the instructional load of universities, which increased by a mere 11.3 per cent 1983/84 to 1988/89.

Table G Growth rate of selected continuing education provision by UK universities (1), 1983/4 - 1988/9

	Short Course FTEs (2)	Year on Year % Growth	As % of col 4	FTE student load excluding short course FTEs	Year on year % growth rate
1983/4	7 351		2.3	314 040	
1984/5	8 550	16.3	2.7	320 507	2.1
1985/6	9 110	6.5	2.8	324 796	1.3
1986/7	10 392	14.1	3.1	330 688	1.8
1987/8	11 803	13.6	3.5	336 348	1.7
1988/9	13 097	11.0	3.7	349 644	4.0

Sources: USR (1985) Vol 3 table 1
USR (1986b) Vol 3 table 1
USR (1987b) Vol 3 table 1
USR (1988a) Vol 3 table 12
USR (1989) Vol 3 table 12
USR (Proof a) Vol 3 table 12

(1) Excluding the Open University and the University of Buckingham.

(2) A subset of all short courses, from Table F.

When university short-term continuing education provision is disaggregated into subject groupings (excluding education, health, medicine and dentistry) the consistency of pattern becomes clear (Table H). However, these data, like those from polytechnics and colleges, have their own particular pitfalls. Some trends are what they seem to be. For instance, the 45 per cent growth in FTEs in engineering and technology really does represent a big rise from a surprisingly low base. But the lesser growth in volume in administrative, business and social studies is quite deceptive because a decline in short courses in social studies delivered by extra-mural departments - for general educational interest and not much used by people for work-related reasons - rather disguises the continuing growth in provision of business and management short courses.

Table H Short-term continuing education provision by GB universities (1) 1983/4 - 1988/9, selected subjects

Student Numbers	83/4	84/5	85/6	86/7	87/8	88/9
Engineering & Technology	14 633	14 935	16 706	20 022	22 243	27 737
Agriculture forestry, and veterinary science	1 562	2 590	3 043	2 913	2 902	3 027
Biological and physiological sciences	47 277	48 000	48 596	51 608	52 952	55 056
Administration, business and social studies	85 818	86 353	89 874	101182	112803	115467
Architecture and other professional vocational subjects	13 607	15 031	16 023	17 286	18 745	24 275
Language, literature and area studies	49 395	51 572	52 757	60 411	63 018	72 753
Arts, other than languages	110 511	110 653	111 369	114 825	118 235	118 426
All subjects (incl	395 325	402 663	403 268	449 197	481 395	520 776

education, excluding postgraduate medical and dental courses						
FTEs (2)	83/4	84/5	85/6	86/7	87/8	88/9
Engineering & Technology	1 301	1 283	1 320	1 492	1 577	1 886
Agriculture forestry, and veterinary science	163	328	292	399	567	389
Biological and physiological sciences	2 842	2 811	3 000	2 987	3 047	3 257
Administration, business and social studies	6 822	6 954	6 860	7 727	8 392	7 712
Architecture and other professional vocational subjects	1 055	1 227	1 373	1 449	1 417	1 644
Language, literature and area studies	4 011	3 887	4 208	5 105	6 419	7 004
Arts, other than languages	6 407	6 375	6 668	6 657	6 728	6 741
All subjects (incl education, excluding postgraduate medical and dental courses	26 878	27 733	28 136	30 899	33 049	33 701

Sources: USR (1986a) Vol 1 table 23
USR (1987a) Vol 1 table 24
USR (1987c) Vol 1 table 24
USR (1988b) Vol 1 table 27
USR (1990) Vol 1 table 27
USR (Proof b) Vol 1 table 27

(1) Excluding the Open University and the University of Buckingham.

(2) Using a 360 hours divisor to convert from total student hours to full-time equivalent students (FTEs).

That the story is one of a swing to employers and, to a lesser extent, individuals using more and more fee-financed CPE is brought out by Table I. Industry and commerce's share of the main burden of financing courses rises from 5.5 to 9.8 per cent, with considerable increases in share for central and local government as employers, and for private individuals (10.6 to 14.4 per cent), with a corresponding and dramatic fall in the share of university and joint university funding, i.e. where the taxpayer subsidises liberal adult education (down from 56.8 to 40.2 per cent of all courses).

Table I Short-term continuing education provision by UK universities (1) 1983-4 to 1988-9, number of courses by principal source of finance.

	83/4	84/5	85/6	86/7	87/8	88/9
Total	20 567	21 713	22 041	24 218	24 969	30 848
Private individual fees	2 179	2 539	2 519	2 900	4 152	4 438
UK industry and commerce	1 129	1 369	1 463	1 704	2 069	3 033
Local government	832	885	881	1 139	1 594	1 713
University	829	631	591	721	719	982
Joint university/ other funding	10 849	11 062	11 326	11 912	11 065	11 414
Health and social security departments	3 438	3 561	3 774	4 069	3 404	4 071
Other government departments	682	825	779	1 018	882	869
Overseas funding	263	308	323	306	327	438

Other	366	537	385	449	757	890

Sources: USR (1985) Vol 3 table 17
USR (1986b) Vol 3 table 17
USR (1987b) Vol 3 table 17
USR (1988a) Vol 3 table 19
USR (1989) Vol 3 table 19
USR (Proof a) Vol 3 table 19

(1) Excluding the Open University and the University of Buckingham.

These data are too crude to indicate more than very broad magnitudes and trends, but the message of Table I accords with everything else which is known about university provision in the eighties: it became very much more vocational in purpose and content, and there was a strong and continuing trend growth in what the government calls PICKUP provision, i.e. CPE.

John Geale's study (1989) gives additional support to this picture. His best estimate is that all post-experience vocational education or PICKUP courses, including health and education, lasting less than 9 months full-time or the equivalent in part-time study, comprise about six per cent of all university teaching. Liberal adult education, sometimes called non-vocational short courses, accounts for another six per cent. Moreover, Geale estimates that the 13 233 FTEs of vocational provision in 1987/88 (excluding medical, dental and courses for overseas students) was double the volume a decade earlier. According to the universities their PICKUP enrolments were increasing in 1987/88 at a rate of between 20 and 25 per cent a year. Geale reported that in his PICKUP subset the biggest sector, after postgraduate medical "was 'business, administration and law' (37 per cent of participants in 1987/99). 'Education' was in second place but declining (16 per cent), 'languages' had risen rapidly into third place (12 per cent) and 'engineering' was a steady fourth (10 per cent). These four accounted for 75 per cent of PICKUP in universities" (Geale, 1989, p 5). Since Table H covers both the so-called non-vocational as well as vocational courses for all subjects except medical and dental and education, this throws additional light on the balance of the specifically vocational portion of universities' short-term CET provision.

The estimate by John Geale of 13 233 FTEs for his subset of post-experience provision exceeds Table F's 11 803 FTEs for the same year, but the latter figure omits not only postgraduate medical and dental and education, like Geale's figure, but also vocational provision in extra-mural departments and it is not adjusted for courses provided for overseas students. In other words, the two sets of figures are not at all easily compared. However, the trends are not in doubt whichever sets of data are used. The data show a very large increase over the last ten

years, a step increase in the growth rate in the 1986/87 session (comparable to the acceleration in polytechnics and colleges in Kathleen Levine's study) and indications of a continuing high rate of growth.

NOTES

1) A large number of Continuing Education short courses originate in what used to be called University Extra-Mural Departments (now often called Departments of Adult and Continuing Education). Such departments cannot be ignored simply because they have traditionally provided a great many courses of liberal adult education, supposedly unrelated to people's work and designed for the citizen's general education and enlightenment. In practice, a very significant proportion of those who attend courses officially but misleadingly described as 'non-vocational' have vocational reasons for doing so; and some of these departments also provide a considerable volume of so-called 'vocational courses' (4 677 FTEs in 1988/89). Their contribution to continuing professional education is far too large to be ignored.

   The UK department with the largest number of 1988-89 enrolments (18 099) was the University of Manchester's Department of Extra-Mural Studies (UCACE, 1990, Table 7b). Its 1989 Student Survey was based on responses which varied between 1 111 and 1 225 according to the question. Respondents were attending a great diversity of courses ('non-vocational' and 'vocational'), excluding only those for foreign students, day schools and study visits. The subject distribution of the sampled courses was Arts 49.2%, Science 15.4% and Social Science 35.4%. Out of all respondents, 22.4% were receiving some financial assistance from an employer or similar sponsor, 38.9% gave 'relevance for work' as the most important reason for taking their course and another 8.1% gave work as a secondary reason. Some 54.4% of respondents described their current work status as paid employment, and 75.3% gave as their present or previous socio-economic status 'managerial/executive/professional'. This accords with their formal educational status since 65.4% had at least a first degree or professional qualification.

   The data do not exist to show whether the fraction of Manchester respondents with a declared vocational intent (47%) holds good for all similar UK departments and their total 1988/89 student load of 19 530 FTEs (USR, proof a, Table 18). Nor is it known what would be the effect of excluding from consideration all health or education-related courses, and all sub-professional students. However, the University of Manchester's Extra Mural Department Student Survey suggests that there are very probably a few thousand FTEs of relevant continuing

professional education hidden within 14 853 FTEs of even the apparently non-vocational extra-mural provision (UCACE, 1990, Table 1). This merely illustrates the old adage that there are no such things as vocational and non-vocational courses, only people with vocational or non-vocational reasons for attending a CET event or taking a course.

III.II EFFECTS ON INSTITUTIONS

LONG-TERM CPE

HEIs have usually had self-financing postgraduate, and less often, undergraduate programmes within their total provision. For the most part, this kind of full cost price provision has been geared to overseas students, to one very large employer such as the National Health Service, or to a small group of employers. The Business Schools in HEIs have tended to employ this kind of postgraduate provision, and the best known of these institutions, London and Manchester Business Schools, are 70 per cent financed from the market for their total operation. In addition, there are self-financing units and departments, as well as self-financing programmes, scattered throughout the HEIs. Fees for instructional services account for under 20 per cent of the total recurrent income of UK universities (USR, 1989, Table 1). But highly-customised long-term CPE contradicts that total picture because it is more and more often charged at a full cost price instead of being subsidised by the taxpayer through grants from UFC or PCFC to the host HEIs (1).

As an order of magnitude, full cost fees for master's level provision in universities usually work out at between three and seven times the fee assumed by UFC for grant-aided provision, depending on content, mode of delivery and the structure of an HEI's costs. If an employer/customer is paying that kind of price it has to be for CPE which fits his requirements well; so it is not surprising that a close intermeshing of customers and programme makers is so characteristic of this kind of provision. Ever since the Second World War, all British governments have insisted on a supply-driven higher education system by pushing virtually all public money into the supplying institutions through bodies like UFC and PCFC. Tentative experiments with a more demand-driven system, such as a doubling of undergraduate fees in the early eighties so that more public money came through the customer and less through institutional grant, frightened ministers so much that it was reversed within a year. In long-term CPE the HEIs have worked steadily against the dirigiste, supply-driven ethos of central government; but it limits their room to manoeuvre and is one of the factors which makes it difficult to develop large-scale demand-driven long-term CPE.

Despite these constraints, HEIs continue to move towards

a full-cost recovery regime over a larger and larger fraction of all long-term CPE. At least on paper, government-sponsored guidelines now recognise the necessity for this shift:

"There is a long-standing expectation that publicly-funded institutions should provide their services either free to the user, or at subsidised rates. Yet no HEI could operate now without sources of funds other than government grants. Diversifying such sources is one of the cornerstones of both funding councils' policies. Nevertheless, out-dated expectations still affect relations with business in a way that only more effective dialogue can correct" (DTI/CIHE, 1990c, p 14).

It is true that the prevalence of such expectations among employers does affect their willingness to resource long-term CPE by paying cost-covering fees, even though central government will not resource it with taxpayers' money.

In part, the phenomenon of demand deficiency is another aspect of the chronic under-investment in training by UK employers and the failure of central government to use legislation to structure the labour market and skills market in the way that all the UK's successful competitors do. Adequate resourcing of long-term CPE via the market also requires that the HEIs succeed in breaking out of the artificially depressed prices which are presently charged. This undercharging is due to the way in which governments have framed the market for HEI instructional and research services so that they do not reflect the true value of HEI output. Typically, HM Treasury values a person newly-qualified from an HEI, say a mature postgraduate, in terms of what it cost to qualify him or her rather than the market value, i.e. the difference between the subsequent discounted income stream of that person and the discounted income stream of a similar but non-qualified person. In other words, the net present value of the output is ignored and the production cost is treated as if it was a measure of value-added.

The immensely damaging consequences of this treatment of an expensive process of human capital formation was graphically underlined by Dr Derek Roberts, the Provost of University College London (after a long career in industry), and David Bowles, his Director of Finance and Planning:

"...there is an industrial analogy of this failure to recognise true value. It can arise in a company which sets up research, development and manufacturing as an "operations" cost centre, fixes a low transfer price into the "sales and services" centre - and makes all the profit in that centre. The financial ratios for "operations" look terrible; those for "selling" look great - but what would they sell if manufacturing and research were to be closed down?" (Bowles and Roberts, 1989).

To develop and maintain the competence in depth which they need to be internationally competitive, UK professions and industry need to finance a comprehensive (i.e. not patchy) effort in long-term as well as short-term CPE - for there is "catching-

up" to be done in addition to keeping pace with tough competitors and high rates of change. At present, long-term CPE is not a very big fraction of HEI business. If it was to grow to what the professions and industry need to be competitive, then it would be essential for employers and/or individuals to pay properly for value added. Grant-financing has produced HEIs which are less and less "well-found" as each year goes by, with completely inadequate funding of assets and staff. Market-financing will only do better if prices reflect value-added. As Bowles and Roberts argued, the alternative is decline in the competitive and financial performance of industrial companies starved of adequate support in instructional and research services from higher education.

SHORT-TERM CPE

Although long-term CPE is not at present a large fraction of the total instructional effort of HEIs, and self-financing short-term CPE is also a relatively small fraction - two per cent of total income in the bigger, university sector - the need to improve the management of the growth and running of these operations alongside the main line grant-supported instructional services is widely accepted in HEIs and actively promoted by government (see DTI/CIHE, 1990a, b and c). The CPE business criss-crosses collaboration with industry and the professions in research and development. There are tough management problems which arise from the need to market effectively and efficiently such non-standardised services from organisations lacking the power structures of industrial companies. Many of the staff in HEIs have worked all their lives in the non-commercial environment of grant-fed institutions. Becoming a more market-financed organisation requires a large scale staff development programme at almost all levels of the organisations, but especially at leading edges like CPE. Only now is the size of this task coming to be recognised in many universities, where UFC PICKUP development funds are being used to construct CPE-oriented staff development programmes for the first time. Kathleen Levine (1990, p 11) remarked on the relatively low priority given by polytechnics and colleges in their plans to staff development, and especially to expertise in techniques of promoting adult learning and exploiting open learning.

A number of recent organisational changes were identified both by Kathleen Levine (1990) and by John Geale (1989). In the polytechnics and colleges these included:

* The development of both a central and a departmental-level infrastructure - central co-ordinators, central providing units, dedicated units within departments or faculties, even some companies and consortia arrangements.

* More developed financial arrangements, usually with

central supervision of budgets and levy on income, with discretion for departments on when and how to offer financial incentives to staff.

In the universities there have also been notable organisational changes:

* Further strengthening of the trend towards devolution of budgets to departments and the growth of stronger central functions such as marketing.

* Central units, purely co-ordinating or with a provider role, have increasingly come to play a key role in marketing, administration, staff development and external liaison.

No less important were some of the downside features of recent developments noticed by Kathleen Levine and John Geale:

* In polytechnics and colleges, the need to ensure that growing provision of short-term CPE contributed towards the total costs of the institution and not just direct costs has led to a range of levies on costs or income, from 5 to 50 per cent. But these were sometimes seen as avoidable taxes, and in some instances led to running courses through consultancy companies rather than units or departments - "disembedding" from the institution.

* Consortia did not feature prominently in comment by polytechnics and colleges on short-term CPE development, but "when they did, it tended to be adverse; there was a danger that such networks were formed primarily because external funding was available, and that they thus become 'funding-agency driven' rather than 'market driven'."

* "Curricular strategies to develop new courses and utilise new learning methods and systems, including modularisation, and open and flexible learning, tended to be fragmentary."

* Despite seven or eight years of central government effort, and increasing complementary effort centrally in universities, "commitment to, and implementation of, PICKUP at departmental level was still extremely uneven."

To counterbalance the considerable and varied problems which many HEIs still have to overcome, there is a range of additional benefits to institutions from the growth of CPE and from the government's targeted development programme:

* Many more universities and polytechnics and colleges have now committed themselves to playing an active role in local and regional economic development, and

recognise better the vital function of training and retraining in improving competitiveness and overcoming skill shortages arising from demographic changes.

* PICKUP development is seen by HEIs as focusing increased attention not only on delivery methods (modularisation, credit accumulation and transfer and open learning,) but also on the inter-relationships between instructional, research and consultancy services and all kinds of links with industry, commerce and the professions.

NOTES

(1) The best recent estimate (Williams and Loder, 1990, pp 32-36) shows that in 1987-88 British business bought "short courses and other services" worth £49.9 million from universities and £13.1 million from polytechnics. This makes possible at least an order of magnitude measure for business purchases of instructional services from the principal HEIs in a year when Williams and Loder estimated their total income from business at £170 million for universities (6.3 per cent of total income) and £22 million for polytechnics (2.4 per cent of total income). Williams and Loder identified an additional £5 million business contribution to HEIs' budgets for about 3 500 full-time and part-time university students (probably on long courses), and around a quarter of that number in polytechnics. This brought the total business contribution to these higher education budgets in 1987-8 to just under £200 million. About one third of that total will have been spent on instructional services, predominantly CPE.

III.III CONTINUING PROFESSIONAL EDUCATION WITHIN HIGHER EDUCATION

THE POSITION OF CONTINUING PROFESSIONAL EDUCATION IN HIGHER EDUCATION

The position of CPE within higher education is changing faster than many HEIs fully realise, partly because so much of the development is relatively concentrated in certain departments or faculties. The core of long-term CPE is the mature home postgraduate student (25 or over at entry), full or part-time. The number of full-time home postgraduate students in higher education in Great Britain, who were mature and first year, increased by 36 per cent 1979 to 1988. The number of full-time home postgraduates, 21-24 years old, first year and probably not post-experience, rose by only 6 per cent over the same period. By 1988 the mature full-timers had come to account for 44 per cent of all full-time first year home postgraduates. Part-time

postgraduates are virtually always mature, UK-based and post-experience. Their numbers increased 1979 to 1988 by 64 per cent whereas total postgraduate numbers, full-time, aged under and over 25, home and overseas, increased only 18 per cent in that time (DES, 1990b, Tables 3 and 4). By 1988 around two thirds of all full and part-time postgraduates were mature and home-based, i.e. on long-term, award-bearing CPE programmes. This was still only 10-15 per cent of all first degree and postgraduate students in Great Britain. But these are expensive students, with relatively small numbers of students on highly specialised and increasingly customised programmes. They are the consequence of a steady shift of resource and effort within HEIs in support of CPE.

This shift of resource is replicated in short-term continuing education and training, where the great growth in provision has been in post-experience vocational provision, not in so-called "non-vocational" or liberal adult education. This growth has been entirely market-financed, except for some of the development costs; but again it represents a redirection of effort by HEIs towards CPE. By 1988/89 short-term CPE represented around 6 per cent of the total instructional load of universities, not perhaps as much in polytechnics and colleges, but, say, 5 per cent of the whole system's load. Long-term CPE load from mature home postgraduates probably constitutes 5-10 per cent of total higher education instructional load. CPE, long-term plus short-term, seems therefore to account for 10-15 per cent of higher education's instructional load if we ignore sub-degree work in polytechnics and colleges. Moreover, it continues to grow in importance.

The recent reports by Kathleen Levine (1990) and John Geale (1989) indicate that in many HEIs the CPE function is not always well structured and integrated. In effect there are two aspects of this problem:

- the establishment and implementation in each HEI of a clear policy and strategy on collaboration with industry, commerce and the professions; and

- the reform of the internal organisation and management of each HEI to accommodate the major changes in higher education's environment during the eighties.

Over the whole system of higher education there is a growing amount of collaborative research and development, consultancy and post-experience training - CPE. It has been consistent government policy throughout the eighties to encourage the diversification of HEIs away from heavy dependence on grants from funding agencies. The HEIs have readily appreciated the non-financial benefits from such collaborations, the feedback from practitioners in the field into HEI research, the opening up of fresh opportunities for joint (HEI/industry) research, the cementing of relationships with employers who can provide work placements for students, and the increased relevance of on-campus teaching as a result of joint-teaching programmes between

industry and HEIs.

Yet those who have reviewed the multi-faceted development of business/HEI collaborations (e.g. DTI/CIHE, 1990c) also warn against the dangers from ill-considered policies:

* inadequate attention to HEI priorities and so to the opportunity cost for the institution of exploiting a particular CPE initiative.

* over-reliance on particular individuals - academics or industrialists - to set up and make a collaboration work, without putting in place a collaborative framework sufficiently robust for it not to depend on these individuals.

* under-costing in order to achieve growth, with medium and long-term debilitation of parts of the institution as well as the whole because there has been insufficient provision for a sufficient level of overheads.

* "playing down differences in ideologies, priorities and values of academic institutions to stimulate short-run collaboration has generated unrealistic expectations and disappointing outcomes" (DTI/CIHE, 1990c, p3).

* failure of HEIs to ensure that newly-established infrastructure designed to encourage collaborative CPE - central units, co-ordinators and marketing specialists, costing and pricing guidelines, consortia - are well understood and fully used by those within and outside the institutions whom they are intended to help.

HIEs have thought much more than they ever did ten years ago about the place of short-term CPE within their overall strategy for teaching and research. In the case of universities CPE's intimate relationship with research links to employers is regarded as a target for mutual re-inforcement: training becomes part of an elaborate nexus of quid pro quos between employers and HEIs, including placements, joint research, and training support. But Kathleen Levine (1990, p 7) noted that, of the 28 polytechnics and colleges she surveyed, "three quarters of the institutions set only financial targets for their PICKUP work." Half of the institution's referred in strategy documents to the need for PICKUP to be integrated with other activities. "Very few, however, said explicitly how this would be done." Both she, and John Geale in the university sector, were very cautious about the extent to which short-term CPE had really become integrated into institution-wide academic programming and resource planning, despite the combined efforts of DES PICKUP, UGC/UFC and NAB/PCFC. Both concluded that there was a growing "awareness" among HEIs that "PICKUP is an integral part of the academic mission" (Geale, 1989, p 12). The problem seems to be that conversion has often

occurred on paper (policy documents), at the top of the institution, and in some departments and faculties. But in many HEIs the deep structure - where research or undergraduate teaching are universally recognised as mainstream activities of the organisation - may not yet have been reached.

Nor is it clear that the consequences of the rise and rise of long-term CPE are properly understood. Most of the dangers mentioned with respect to short-term CPE apply also to the development of long-term CPE. In particular, even in an HEI which is regarded as unusually good at industry/HEI collaboration, the effective collaborations on long-term CPE tend to remain surprisingly ad hoc. They arise from the initiative of enterprising individuals or sections within firms and HEIs. They may not be subject to a really searching and comprehensive institutional scrutiny and monitoring as long as they are not obviously draining cash. The underdevelopment of HEI policy and strategy on HEI/industry collaboration is complemented by underdevelopment of management information systems adequate to the task of informing the evaluation of a very wide range of different kinds of outputs from an ever-increasing number of non-standardised programmes. Costing expertise is a problem because it is very underdeveloped. But it is rarely recognised that the evaluation of benefits to the institution - of the extent to which outcomes match prioritised institutional objectives - is even more seriously underdeveloped. The management of CPE epitomises in an acute form a much more wide-ranging weakness of management in HEIs.

INFLUENCES OF UFC AND PCFC

UFC and PCFC are continuing the broad policy of their predecessor funding bodies, UGC and NAB. This policy is to promote the development of continuing education, and especially collaboratively-designed CPE, by

* encouraging a policy change in the form of increased institutional priority for CPE;
* promoting more business-like management of HEIs;
* pump-priming a professional and dedicated infra-structure to develop CPE within each HEI;
* pump-priming staff development to change attitudes and skills of HEI staff so that, in marketing CPE, they can become more effective entrepreneurs; and
* pump-priming innovative, user-friendly forms of long-term and short-term post-experience vocational education.

The effort to persuade HEIs to give CPE higher priority has been a matter of carrots and sticks. The carrots have been exhortation, plus development money influenced by recent performance and credible good intentions. The sticks have been

a prolonged squeeze on grant aid given to support all instructional services, so that HEIs are driven more and more to seek out non-tax funds to finance both instruction and research.

The eighties have witnessed a prolonged campaign to encourage and help HEIs to improve their management; and to reorganise for a regime in which public funding of teaching and research were separated and public funds for either had to be bid for through increasingly competitive procedures. In other words, the bureaucratic sector of the life of HEIs is being put by UFC and PCFC onto a semi-competitive basis, though one which mimics the market far more in its language than its substance. At the same time, HEIs are encouraged to increase the proportion of their income drawn from non-tax sources.

The outline of a management regime more appropriate for a more market-driven, less grants-driven economy was provided by a series of official reports culminating in the Education Reform Act, 1988 and the policy documents issued by UFC and PCFC in 1989 after their inception. In addition to improving management, the changes signalled by all these documents "were also intended to make it easier for money, ideas and people to cross between higher education and industry and commerce, and they have been partly effective in doing that" (DTI/CIHE, 1990b, p 3).

HEIs now have a more developed infrastructure for developing CPE, they are just beginning to tackle the serious lack of appropriate training for both academic and non-academic staff; and most of them are engaged in a much increased rate of programme innovation in both long and short-term CPE. The skills of marketing, of course development as (marketed) product development, of costing, pricing, negotiating and managing, are more widely available and competently practised than was the case at the start of the eighties.

That UGC and NAB, and now UFC and PCFC, have sponsored the PICKUP development scheme in higher education is judged to have contributed enormously to its effectiveness (see Geale, 1989, p 15), so credit is due to the funding councils. But, the special attention given to short-term CPE also has its drawbacks. It can be argued that UFC and PCFC, like the HEIs, have some way to go before they treat CPE as an activity as normal as undergraduate teaching for 18 year olds or research. The most striking illustration of this was the UFC's decision in 1989 to separate out its treatment of short-term continuing education (i.e. allocating development funds for short-term CPE 1991/2 to 1994/5) from all other teaching in its basic planning and grant-allocation process. So it has three separate processes, one for research, one for all teaching except short-term continuing education, and a third for short-term continuing education.

This decision to split CPE artificially and to disembed it from grant-allocation for all other teaching services is sometimes regarded outside HEIs as a sign of UFC commitment to continuing education (e.g. DTI/CIHE, 1990a, p 4). But inside HEIs the tide has for several years been running in the opposite

direction. Inside HEIs it is the interconnections between teaching 18 year olds and mature undergraduates, the feedback influences from HEI/industry collaborations into undergraduate teaching, the seamlessness of short courses, modularised and customised long-term CPE, open learning packages, consultancy and research and development which are increasingly the focus of attention. Institution-wide modularisation, credit-rated in a way which is compatible with other credit systems, is seen as a crucial development to give flexibility of movement between full and part-time study, and to cater for the geographical and occupational mobility of customers. The breaking down of compartmentalisation in the provision of all forms of instructional services is increasingly recognised as essential if HEIs are to be nimble enough to cater sensitively to rapidly shifting requirements for skills and the increasing fragmentation of employment. While doing what UFC requires of them, universities cannot in other respects afford to follow the UFC example and treat one artificially-defined segment of CPE as if it was a completely separate category from other CPE and from any other kind of teaching.

One of the best-informed views is that of the DES evaluator of the UGC's PICKUP Selective Funding Scheme:

"Universities are seeking significant changes to make PICKUP less an optional extra and no one interviewed by the researcher doubted its importance, or challenged its relevance to mainstream work, nevertheless this was their perception: that PICKUP is an adjunct to, not a part of, mainstream activity. The consequence, in all those departments where PICKUP is being developed without long-term academic staffing, is that there is bound to be a ceiling beyond which it will not be able to expand (say, double the current level of six per cent of full-time teaching)" (Geale, 1989, p 14).

Given the way teaching was usually being structured in 1989 the notion of a ceiling on growth of short-term post-experience vocational provision, and the judgement as to where that ceiling was, may well have been credible in most universities. But John Geale himself (1989, p 27) gave a warning which qualifies the validity of that judgement for the future, if present trends continue:

"Unless records are rapidly improved to include all continuing education activity, they are likely to become even more confused in future by the trend towards more modular accreditation on PICKUP courses leading to degree qualifications and due to the expansion of open and distance learning."

More than that, unless there is a halt to trends towards modularisation and credit accumulation systems at undergraduate and postgraduate level, and towards greater flexibility in programme design throughout mainstream teaching to suit students' prior learning and requirements, all forms of instruction will become more accessible and assessed outcomes more additive. The fundamentally misleading notion of continuing education provision

(rather than continuing education students) will then be seen to be an outdated reflection of an artificial compartmentalisation of teaching in HEIs.

A continuing education record which measured long-term as well as short-term CPE would have to identify the use of all kinds of instruction by students undertaking any form of education after an interval following the end of initial education. This was the definition of continuing education used in the NAB Report of the Continuing Education Group (1984, p 1). Its radical implications have not yet been reflected in the policies of UFC and PCFC; nor in the extremely unsatisfactory measuring instruments for short-term CPE with which the funding councils have persisted.

Policy and practice in HEIs is outdating UFC and PCFC policy so inexorably that adjustment by the councils to the emerging realities in HEIs is only a matter of time. When the funding councils use measuring instruments which record the higher education episodes in the educational biographies of working adults on every kind of programme, full or part-time, on or off-campus, face-to-face or taught at a distance, undergraduate, postgraduate or without identifiable academic level, only then will there be meaningful information on CPE. The concept of a short-term CET record which UFC and PCFC operationalise at present - respectively the misnamed Continuing Education Record and the misconceived Short Course Monitoring survey - will be seen to be redundant and misleading. Once all teaching provision genuinely becomes potential provision for continuing education students the concept of a ceiling on expansion has to be modified. It is redefined in terms of an efficient and equitable balance between the needs of the young who have not yet entered upon their working life and the needs of those who have. Other countries, such as Sweden or the United States, reached this point a good many years ago. The UFC and PCFC are not there yet.

IV CONCLUSIONS

IV.I BUILDING PARTNERSHIPS

UNBALANCED GROWTH

The expansion of CPE throughout the eighties is a success story, but a flawed one. Urged on and supported by central government, the professions and industry have made a major effort to overhaul the framework of continuing professional development in order to promote a widespread and large scale improvement in quality and to increase the volume of CPD. A vital component of this has been the expansion of CPE provided by higher education.

However, the growth in CPE - whether provided by employers, by HEIs, by professional associations or by commercial providers - has been unbalanced or even haphazard:

- in the professions, some associations have made a serious and thoroughgoing effort while others have not done very much to promote CPD. Where real progress has been made, it has almost invariably been with the younger members rather than with those whose knowledge and skills are most obsolete.

- in industry, probably a growing number of (mostly larger) firms have put in place more effective and comprehensive systems to maintain the competences of their managerial and professional staff. But, in general, employer provision remains fragmentary in its coverage, and, all too often, almost non-existent.

- in higher education, working from a low base, many but not all HEIs now provide a great deal more CPE than they did ten years ago. But this expansion of CPE is very inadequate in relation to the needs of industry and of individual professionals. This is because provision has been driven by an enhanced but still chronically deficient market demand, not by need. In consequence, while parts of most HEIs have become vigorous and much more entrepreneurial providers of CPE, many other parts - including some which could make a significant contribution - have scarcely begun to take part.

IMPROVED INDUSTRY/HIGHER EDUCATION COLLABORATION

One of central government's greatest achievements has been its promotion of widespread experiment among professions, firms and HEIs with ways of collaborating to improve the quantity and quality of CPE. Through the Department of Education and

Science, the Training, Enterprise and Education Directorate of the Employment Department (formerly the Training Agency) and the Department of Trade and Industry it has promoted CPE partnerships.

- It set in train a major overhaul of the entire qualification system of the United Kingdom, promoting a series of innovations designed to bridge the gap between work-based and campus-based learning and to improve the portability of skills through better quality assurance for CPE.

- It developed a range of vehicles like the Integrated Graduate Development Scheme, Local Collaborative Projects, the High Technology National Training Programme and now the Training and Enterprise Councils. They have complemented EC programmes like COMETT and EuroPACE in helping industry and HEIs to work closely together to meet industry's training requirements for highly qualified personnel.

- It managed the higher education system to promote closely targeted CPE, especially by channelling a major share of all PICKUP development funds through the higher education funding councils.

- It responded with development funding for collaborative initiatives which have come from HEIs and/or industry rather than from "above".

The increased collaboration between industry and higher education is evident in a vast array of jointly-designed, customised long-term and short-term programmes of CPE; and in a variety of local and nationwide industry/higher education consortia. This collaboration is mirrored by increased higher education collaboration with the professions, including managers, to assist their reform of CPD policies and strategies and to plan provision together.

THE UNIQUE CONTRIBUTION OF HIGHER EDUCATION TO CONTINUING PROFESSIONAL EDUCATION

Beyond employer-provided training, it is the HEIs who dominate the provision of CPE. After a decade of sustained and accelerating growth, CPE now accounts for about an eighth of the total instructional effort of UK higher education. But the contribution of higher education to the undoubted progress in developing CPE has not only been quantitative.

- HEIs have worked to adapt curricula, delivery methods and certification to the requirements both of employers and of the individual who purchases CPE.

- HEIs have worked with each other, and with the

professions, employers and central government to rationlise provision (through modularisation, credit transfer and accumulation schemes, academic recognition of employer-provided training, local and national consortia). This has been done in order to exploit the latent synergies within higher education but also between CPE in higher education and employer-provided CPE.

- HEIs have translated their own long-term approach to education and training into the encouragement of employers and government to adopt a longer-term, strategic approach to updating and enhancing workforce competences.

The HEIs have moved closer to the government's preferred model of the responsive college, which is the HEI which responds quickly and sensitively to the identified CPE needs of employers and individual professionals. But as research innovators and educators they have a natural inclination towards a different model, the model of the generative college. In consequence, they have contributed their own characteristically pro-active stance to the process of developing CPE. This contribution was explained by one university Pro Vice-Chancellor:

"There is not, and there should not be, a one-way functional dependence of education and training on employment. Education and training can be proactive as well as reactive. Training should not be merely a dependent variable in an equation where technological change, market conditions and personnel policies are the independent variables. Emerson felt that machines were in the saddle and rode mankind. Today, with the help of proactive training and a matching reorganisation of work into a learning system, man can ride the machine... It is essential not to create a passive off the job training system which merely responds perfectly and inevitably to training demands generated from a passive and unchanging employment system. Training can generate change as well as respond to it; and universities should be in the business of generating change" (Moore, 1987, p 83).

It is higher education which, unlike employers or central government, is inclined to put the learning process at the centre of its model of economic life. Judith Marquand (1989) has recently argued that, though the UK's industrial culture does not accord this position to learning, there is no good organisational or economic reason why it should not do so; and there are very strong competitive reasons why it needs to do so.

THE ROLE OF GOVERNMENT

In the eighties, central government devoted almost as

much energy to exhorting and pump-priming industry and the professions, to increase demand for CPE, as it did to exhorting and pump-priming higher education to work with industry and the professions to meet that demand. Its objective with CPE was to increase demand and supply, and the efficiency with which this training market works. In all three dimensions it made notable progress, even if the volume of CPE is still completely inadequate, and the pattern of demand on which the market runs continues to be chronically lop-sided.

CONCLUSIONS

When so much progress has been made - in raising awareness of the importance of CPD, in stimulating professional bodies and employers to overhaul their CPD policies and strategies, and in improving the relevance and volume of CPE provided by higher education - it may seem churlish to conclude by reviewing the problems which remain to be solved.

However, there is a high degree of consensus as to the nature and extent of the UK's problem with the continuing education of its managerial and professional workforce. The government itself has taken the lead by documenting in damning detail the inadequacies of vocational education and training, in which CPE shares, (see, for instance, TA 1989a, d, e, g, i) and by financing very thorough comparative studies to underline the nature of current deficiencies and their competitive consequences (see, for instance, Prais et al, 1989). There is much less of a consensus on the best way to solve the fundamental problem of a workforce which, even among its middle and senior managers, is undereducated and undertrained by comparison with its major competitors. The fact that there is so much agreement on the nature of the problem and so little agreement on its solution is part of the problem.

In a critical mass of professional bodies and of firms there is no determination to enforce the necessary conditions for widespread and deep work-led and training-led skill formation as a process of continuing professional development. With only a small proportion of managerial and professional staff employed on strong internal labour markets, many employers cite their fear of not reaping where they sow as an inhibitor on training investments other than quick-return, just-in-time CPE. Professional associations are unwilling to antagonise large numbers of senior members who are thoroughly acclimatised to the UK's low training industrial culture. To the relief of their international competitors, the British remain deeply attached to "muddling through" (more politely, voluntarism) where CPD is concerned. There are a small number of honourable exceptions - a few professions and a few firms who insist on a minimum level of CPD for all members or all managerial and professional staff. But, apart from these, the majority of professional bodies and firms (as well as the government) stubbornly resist anything remotely resembling comprehensive and mandatory CPD.

A growing number of employers - almost invariably those in the thick of international competition - acknowledge that their toughest competitors adopt an uncompromising, mandatory approach. Central government has at long last abandoned its traditional laissez-faire attitude with respect to schooling, where it has now insisted upon a national curriculum. But it refuses to insist that the obsolescence of skills and knowledge be remedied by even a minimum level of CPD.

It is a commonplace that the decades of central government neglect and incompetence have produced one of the most undereducated and undertrained workforces among all industrialised countries (on which see OECD, 1989; Prais, 1989; Cassels, 1990). One symptom and cause of this phenomenon is the relative undereducation and undertraining of British managers. Undertraining can be defined only in relation to need. With the historic backlog of neglect, the scale of the problem facing the United Kingdom, in a world where the recurrent updating of skills and knowledge is at a premium, is daunting. A CPE effort which more or less approximated to that of other countries with a higher base of education and training among managers would be completely insufficient. With respect merely to short updating courses, the government itself believes that educational institutions need to be providing for three times as many people as they are doing at present (DES, 1990a). Yet the scale and urgency of first, the catching-up and then the matching effort has not moved the UK government, most firms and most professions away from their attachment to the voluntarist approach which has failed the country so repeatedly in the past.

All the advances in CPE in the eighties cannot disguise the fact that the UK version of a market solution - let employers and individual managers and professionals, without powerful incentives or obligations, pay for CPE themselves in time and money - is a failure. Many UK companies have no grip on the problem. A very experienced senior manager from a large British manufacturing company, responsible for both recruitment and training, put it baldly:

"Most companies have training and human resource policies which are supply led rather than demand driven. When assessing future needs, they respond to events rather than anticipating and influencing them" (Tony Chaplin of Pilkington, quoted by Syrett, 1990).

What is missing is a strong pro-training industrial culture, or a wide coverage of strong internal labour markets, or external labour markets structured to promote long-term skill formation by employers and individuals, or an effective mix of all these. There is serious underinvestment in training. There is a chronic lack of demand and therefore of supply. The CPE market in the United Kingdom is a classic case of market failure. The current remedy is increased reliance on a market where - unlike the UK's competitors - central government has abstained from effective use of tax policy, company law and employment law to bias the decisions of individuals and of employers in favour of heavy

investment in CPE. Only heavy investment by the many, instead of the few, would meet the government and employer objective of recovering or maintaining international competitiveness.

LIST OF TABLES

BIBLIOGRAPHY

BOURNER, T., HAMED, M., BARNETT, R. and REYNOLDS, A. (1988), Students on CNAA's part-time first degree courses: a summary report, London: Council for National Academic Awards, February.

BOWLES, D. and ROBERTS, D. (1989), "On Balance it's No Business" in Times Higher Educational Supplement.

BOYATZIS, R. E. (1982), The Competent Manager: A Model for Effective Performance, New York: John Wiley and Sons.

CASSELS, J (1990), Britain's Real Skill Shortage and What to Do About It, London: Policy Studies Institute.

CIHE (Council for Industry and Higher Education) (1987), Towards a Partnership: A Summary, Spring.

COOPERS and LYBRAND, (1987), Tax, Training and Education, Sheffield: Manpower Services Commission.

CURRELL, B. R. and RANDALL, G. K. (1989), "The Thames Polytechnic Credit Accumulation and Transfer Scheme", in Industry and Higher Education, March, pp 46-48.

DE VILLE, H. G. (1986), Chairman of the Working Group, Review of Vocational Qualifications in England and Wales, London: Her Majesty's Stationery Office.

DES (Department of Education and Science) (1987), "Euro-PICKUP by satellite", in PICKUP in Progress, Summer, p 20.

DES (Department of Education and Science) (1987), "Turn on, time in... up-date", in PICKUP in Progress, Summer, p 20.

DES (Department of Education and Science) (1988), Statistical Bulletin 11/88, August.

DES (Department of Education and Science) (1990a), Updating Britain at Work, February.

DES (Department of Education and Science) (1990b), Statistical Bulletin 11/90, August.

DTI/CIHE (Department of Trade and Industry and Council for Industry and Higher Education) (1990a), Continuing Education and Training, Collaboration Between Business and Higher Education Series, London: Her Majesty's Stationery Office.

DTI/CIHE (Department of Trade and Industry and Council for Industry and Higher Education) (1990b), Organisation and Management in Higher Education, Collaboration Between Business and Higher Education Series, London: Her Majesty's Stationery Office.

DTI/CIHE (Department of Trade and Industry and Council for Industry and Higher Education) (1990c), Policy and Strategy for Higher Education, Collaboration Between Business and Higher Education Series, London: Her Majesty's Stationery Office.

EMPLOYMENT FOR THE 1990s, (1988), Cm 540, London: Her Majesty's Stationery Office: December.

EMPLOYMENT DEPARTMENT (1989), Small Firms in Britain, London: Her Majesty's Stationery Office.

EMPLOYMENT DEPARTMENT, (1990), Career Development Loans Newsletter, Autumn

ENTWISLE, J. (1989), "The CONTACT Continuing Professional Development Award scheme", in Industry and Higher Education, March, pp 48-49.

FINN, W. (1990), "Working to help more women reach the top", in The Times, August 16.

GEALE, J. (1989), Universities in the Training Market, London: Department of Education and Science PICKUP, September.

GOODACRE, P. (1989), Continuing Professional Development in the Construction Industry: Costs and Benefits, London: DES PICKUP.

GOODLAD, S. (1984), Education for the Professions: Quis Custodiet...? Guildford: The Society for Research into Higher Education and NFER-Nelson.

HIGHER EDUCATION: MEETING THE CHALLENGE (1987), Cm 114, London; Her Majesty's Stationery Office.

INNOVATIONS (1989), "Post Fordism at Warwick", in PICKUP in Progress, Spring, p 30.

LEVINE, K. (1990), Polytechnics and Colleges in the Training Market, London: Department of Education and Science PICKUP, September.

LOVE, J. (1987), "Training Together", in PICKUP in Progress, Autumn, pp 18-24.

MARQUAND, J. (1989), Autonomy and Change: The Sources of Economic Growth, London: Harvester Wheatsheaf.

McILROY, J. (1988), The Impossible Dream? The Future of Paid Educational Leave in Britain, The Society of Industrial Tutors and the Transport and General Workers Union.

MOORE, S. A. (1987), "The Universities Response to PICKUP", in Scown, C. L. and Chivers, G. E. (eds), PICKUP in Universities, Proceedings of the First National PICKUP in Universities Conference, 1986, University of Sheffield, London: Department of Education and Science PICKUP.

NAB (1984), Report of the Continuing Education Group.

NUCEA (National University Continuing Education Association) (1987), Challenges to Continuing Higher Education Corporate/Campus Collaboration, Washington D.C.

OECD (1989), Employment Outlook, Paris.

OU (Open University) (1990), Open University Statistics 1988: Students, Staff and Finance, Milton Keynes: Open University Educational Enterprises.

PLANNING EXCHANGE, GLASGOW (1988), Tax Concessions for Training: A review of current allowances in the United Kingdom and eight other major industrial nations, Department of Education and Science PICKUP Programme, May.

PRAIS, S. J. et al (1989), Productivity, Education and Training: Britain and Other Countries Compared, London: National Institute of Economic and Social Research, December.

RICHARDS, H. (1989), "The Business of Management", in PICKUP in Progress, Autumn, pp 17-20.

SMITHERS, A. and GRIFFIN, A. (1986), The Progress of Mature Students, Manchester: Joint Matriculation Board.

SMITHERS, A. and ROBINSON, P. (1989), Increasing Participation in Higher Education, London: British Petroleum Edcuation Service.

STIRNER, P. (1989), "Charter for Change", in PICKUP in Progress, Autumn, p 21.

SQUIRES, G. (1986), Modularisation, CONTACT Paper No 1, Manchester: The Consortium for Advanced Continuing Education and Training.

SYRETT, M. (1990), "Greater Assessment Needed", in Financial Times, 24 July, p 14.

TODD, F. (1987a), "The Way Forward", in PICKUP in Progress, Spring, p 15.

TODD, F. (1987b), Planning Continuing Professional Development, London: Croom Helm.

TA (Training Agency, Department of Employment) (1989a), Training in Britain: Employers' Activities, London: Her Majesty's Stationery Office.

TA (Training Agency) (1989b), "Graduates in the labour market in the 1980s" in Skills Bulletin, No 8, Spring.

TA (Training Agency) (1989c), "Europe Open for Professions", in Skills Bulletin, No 10, Autumn.

TA (Training Agency) (1989d) Training in Britain: Employers' Perspectives, London: Her Majesty's Stationery Office.

TA (Training Agency) (1989e), Training in Britain: Main Report, London: Her Majesty's Stationery Office.

TA (Training Agency) (1989f), The Experimental Programme in Higher Education: Getting Results, Sheffield.

TA (Training Agency) (1989g), Training in Britain: Individuals' Perspectives, London: Her Majesty's Stationery Office.

TA (Training Agency) (1989i), Training in Britain: Market Perspectives, London: Her Majesty's Stationery Office.

TA (Training Agency) (1989j), "Huge Demand for Open University Business Course", in Skills Bulletin, No 8, Spring, p 4.

TA (Training Agency) (1990a), "Small Businesses and Self-Employment in the 1990s", in Labour Market Quarterly Report, February.

TA (Training Agency) (1990b), "Graduate demand in small businesses", in Skills Bulletin, No 12, Spring.

TC (Training Commission) (1988), "Academic Links with Industry in the North East", in Skills Bulletin, No 6, Autumn.

UCACE (Universities Council for Adult and Continuing Education) (1990), Annual Report 1988-89.

UGC (1984), Report of the Continuing Education Working Party, January.

USR (Universities' Statistical Record) (1985), University Statistics 1983-84, Vol 3: Finance, Cheltenham.

USR (Universities' Statistical Record) (1986a), University Statistics 1984-85, Vol 1: Students and Staff, Cheltenham.

USR (Universities' Statistical Record) (1986b), University Statistics 1984-85, Vol 3: Finance, Cheltenham.

USR (Universities' Statistical Record) (1987a), University Statistics 1985-86, Vol 1: Students and Staff, Cheltenham.

USR (Universities' Statistical Record) (1987b), University Statistics 1985-86, Vol 3: Finance, Cheltenham.

USR (Universities' Statistical Record) (1987c), University Statistics 1986-87, Vol 1: Students and Staff, Cheltenham.

USR (Universities' Statistical Record) (1988a), University Statistics 1986-87, Vol 3: Finance, Cheltenham.

USR (Universities' Statistical Record) (1988b), University

Statistics 1987-88, Vol 1: Students and Staff, Cheltenham.

USR (Universities' Statistical Record) (1989), University Statistics 1987-88, Vol 3: Finance, Cheltenham.

USR (Universities' Statistical Record) (1990), University Statistics 1988-89, Vol 1: Students and Staff, Cheltenham.

USR (Universities' Statistical Record) (proof a), University Statistics 1988-89, Vol 3: Finance, Cheltenham.

USR (Universities' Statistical Record) (proof b), University Statistics 1989-90, Vol 1: Students and Staff, Cheltenham.

WELSH, L. and WOODWARD, P. (1989), Continuing Professional Development: Towards a National Strategy, London: Department of Education and Science Professional, Industrial and Commercial Updating Programme.

WILLIAMS, G and LODER, C. (1990), "Industry Contributions to Higher Education Funding and their Effects" in Wright, P.W.G. (ed), Industry and Higher Education, Buckingham: The Society for Research into Higher Education and Open University Press.

WOOD, L. (1990), "Setting standards for all occupations", in Financial Times, July 24, p 15.