## Abstract

This paper reviews the main characteristics of the provision, organization and financing of appprenticeship in a number of leading European countries - Austria, Denmark, France, Germany and the Netherlands. These are compared to current practice in Britain as exemplified by Modern Apprenticeship. The main areas examined are the statutory framework and standards; employment prospects; achieving the employer-apprentice match; prior school qualifications of apprentices and motivation to enter apprenticeship; the management and financing of apprenticeship. The paper concludes that apprenticeship in Britain, judged as a programme, falls short of the standards of that provided elsewhere in Europe on every important measure of good practice.

## Acknowledgements

I am grateful to the following for helpful comments and information: Svend-Erik.Povelsen, Ministry of Education, Copenhagen, Denmark; Saskia Ummels, COLO, The Netherlands; Professor Howard Gospel, King's College, University of London

All errors are my own. This paper forms part of the *Skills for All* research programme at the CEP. The research programme is financially supported by the Esmée Fairbairn Foundation.

Hilary Steedman is a member of the Centre for Economic Performance, London School of Economics.

Published by
Centre for Economic Performance
London School of Economics and Political Science
Houghton Street
London WC2A 2AE



ISBN 0 7530 1542 0

Individual copy price: £5

# Benchmarking Apprenticeship: UK and Continental Europe Compared

## Hilary Steedman



The Centre for Economic Performance is financed by the Economic and Social Research Council

# Benchmarking Apprenticeship: UK and Continental Europe Compared


## Hilary Steedman


## September 2001

> "Beyond compulsory school age, we are determined to build a coherent and high-quality vocational education and training system that is the envy of the world."
> From ***Opportunity and Skills in the Knowledge-Driven Economy***. *A Final Statement on the Work of the National Skills Task Force from the Secretary of State for Education and Employment*, 2001

## Introduction

Earlier this year, the government gave a commitment to build or (some would say) rebuild a vocational route to high-level skills and qualifications in Britain. This commitment arose from recognition that Britain did not have the coherent and transparent vocational route to intermediate and high level skills which, in other countries, had contributed to raising post-16 educational achievement. Evidence of widespread skill shortages and skill deficiencies at the intermediate (craft, technician and associate professional) level revealed in the audit carried out by the National Skills Task Force (DfEE, 2000) were a further spur to action. Apprenticeship was identified by government as the institution of choice to form the backbone of the renewed drive to promote vocational education and training for young people post-16, more specifically, Modern Apprenticeship (henceforth MA), established in 1994 by the then Conservative government.[1]

Since the government entrusted to MA the task of providing education and training to a standard which can bear comparison with the best that the rest of the world has to offer, it seems appropriate to try to spell out more explicitly the standards that would need to be reached if aspiration is to become reality. This paper reviews the framework elements of apprenticeship provision and its implementation in those countries where apprenticeship is

[1] In a recent policy document Education Into Employability: The role of the DfEE in the Economy (DfEE, 2001) David Blunkett the then Secretary of State announced the intention to introduce Foundation Modern Apprenticeships (formerly National Traineeships) and Advanced Modern Apprenticeships (formerly Modern Apprenticeships). In this paper we shall refer to Modern Apprenticeship (MA) and apprenticeship interchangeably, by which is meant the programme as it existed between 1994 and 2001.

successfully established. These features are seen as constituting a benchmark against which the British counterpart - Modern Apprenticeship (MA) - can be assessed. The extent to which MA in Britain shares the characteristics common to the benchmark countries allows us to assess how far Britain has come in establishing a 'world-class' system. The countries chosen for the study are the German-speaking 'dual-system' countries - Austria, Germany and Switzerland - and France, Denmark and the Netherlands.

The German-speaking dual-system countries have a strong apprenticeship tradition which is continuing to attract large numbers of young people and employers to engage in apprenticeship across all sectors of the economy. In these countries at least two thirds of all young people embark on apprenticeship training.

France has a much more restricted apprenticeship tradition; between 10 and 15 per cent of young people enter apprenticeship, but numbers have grown very rapidly in recent years and this makes France an interesting case for study.

Like the German-speaking dual system countries, Denmark has a long tradition of apprenticeship. A rolling programme of change and reform has been in place for the past twenty years and the proportion of young people entering apprenticeship has remained roughly constant. Currently around a third of young people in Denmark gain a vocational qualification through apprenticeship.

The Netherlands has also completely restructured vocational education following new legislation in 1996. Apprenticeship numbers, which had been declining in the 1980s, reversed that decline in the 1990s and are continuing to increase. In the space of a single year, between 1999 and 2000, numbers increased by 10,000. Currently around 30 per cent of young people in the Netherlands enter an apprenticeship programme. For comparison, the figure for the percentage of a young age cohort starting apprenticeship in England and Wales is around 9 per cent for Modern Apprenticeship and 11 per cent for National Traineeships.

This paper is arranged as follows. Section 1 examines standards set by leading nations. Section 2 surveys ways of achieving the apprentice-employer match. Section 3 analyses qualifications and incentives for entry to and completion of apprenticeship together with employment prospects. Section 4 provides an overview of management and financing and a concluding section summarises the main points of difference between Britain and other European countries and assesses the gap between Britain and best continental practice.

# 1. Framework and Standards

## 1.1 Duration of apprenticeship training

In the German-speaking 'dual-system' countries - Austria, Germany and Switzerland - every apprenticeship leads to a recognised occupational qualification and the length of the apprenticeship training period for each occupation is fixed and specified by the relevant legislation. The specified period can be shortened in the case of entrants to apprenticeship who hold the *Hochschulreife (Abitur)* in Germany or the *Maturität* in Austria. In Switzerland it is rare for entrants to apprenticeship to also hold a university entrance qualification. There is also provision in Austria for the training period to be shortened for those who already have substantial experience/qualifications in the occupational area concerned. However, the vast majority of those who enter 'dual-system' apprenticeships follow the apprenticeship training programme for three or more years.

This insistence on a fixed time duration for apprenticeship reflects the fact that apprenticeship is understood to be a period of education as well as a period of training. In the case of most German and Austrian regions many of the apprentices are, in fact, fulfilling the requirements of compulsory school attendance in force in their region (*Bundesministerium für wirtschaftliche Angelegenheiten*, 1998.[2]

Denmark has a long-established tradition of apprenticeship training based on 'dual-system' principles.[3] Denmark has recently (with effect from 2001) reformed and revised apprenticeship education and training arrangements and requirements. As before, young people who decide to study for a recognised vocational qualification will alternate between periods of study in college and periods of work in a firm.[4] But the new arrangements stress flexibility and individualisation of training programmes within a statutory framework. The aim is to adapt to students' individual abilities, needs and interests, to promote high achievement and prevent drop-out. As a consequence, training periods are expressed in terms

[2] This is not the same as saying that all young people in *eg* Germany must attend school part-time until they are 18. This regulation only holds in a few German regions. However, while apprenticeship is entered into voluntarily by the young person concerned, once a young person becomes party to an apprenticeship agreement, part-time school attendance is compulsory.

[3] http://www.uvm.dk/pub/2000/newstructure/6.htm accessed on 22/03/01 'The Danish VET system is organised as a dual system' National Education Authority Danish Ministry of Education (1999) *The New Structure of the Danish Vocational Education and Training System* Ch. 5 Access to and structure of VET programmes

[4] The young person is responsible for finding a training firm which will take them on. Help is provided by the local college. In a few cases where a suitable company cannot be found the student will be entirely college-based.

of minimum (1½) and maximum (4½) years duration.[5] The typical duration is 3½- 4 years. The basic (first part) of the apprenticeship training cannot be completed in less than 10 weeks of college-based education and the college-based component of the main (second part) of the apprenticeship normally has a maximum limit of 60 weeks.

The distribution of apprenticeship training programmes in the dual-system countries by duration is given in Table 1 below

**Table 1**
**Distribution of Apprenticeship Training Programmes by Duration of Programme, Austria, Denmark, Germany, Switzerland**

| | % of all programmes | | |
|---|---|---|---|
| | 2 years and <3 years | 3 years and <4 years | 4 years |
| Austria | 10 | 88 | 2 |
| Denmark | | typical duration | |
| Germany | 6 | 72 | 22 |
| Switzerland | 30 | 50 | 20 |

Sources: Switzerland: Statistik Schweiz 15. Bildung und Wissenschaft Die Berufslehre in der Schweiz
http://www.statistik.admin.ch.stat_ch/ber15/dlehrvertr_intro.htm
accessed 21/03/01
Austria: http://www.bmwa.gv.at/service/leservice/broschde/%FCbersicht2.htm
accessed 21/03.01
Denmark: http://www.uvm.dk/pub/2000/newstructure/6.htm accessed on 22/03/01
Germany: *Berufsbildungsbericht, 2000* 2.2 Table 42

France and the Netherlands are fundamentally different from the 'dual-system' countries with respect to the duration of apprenticeship programmes.

A significant reform in 1993 in France led to a fundamental change in the composition of the apprenticeship population. This reform changed the law which had previously required that apprentices could only obtain the lowest level of vocational qualification, the CAP and led to apprenticeship recruitment principally from those who had been unsuccessful in the school system. From 1993 onwards apprentices were permitted to work for nationally recognised vocational qualifications at any level, extending to first degree level and even beyond. These had previously only been available through full-time education (Simon, 2001).

The 1996 reform of vocational education in the Netherlands required that vocational courses must be offered at four levels and be available through full-time (college) and part-time (apprenticeship) routes. The structure was designed in such a way as to facilitate a

[5] OECD (1998) *Thematic Review of the Transition from Initial Education to Working Life Country Background Report: Denmark* OECD Paris p.15.

switch from one route to the other without disruption of the study programme. Substantial amounts of work-based training are required for the full-time students and not only for apprentices. The clear formulation of levels of training also allows those on the apprenticeship route to continue subsequently to a higher level of qualification, including vocational courses in Higher Education (either in apprenticeship or in the full-time route) (Down, 1999).

In France and the Netherlands apprenticeship can lead to an occupational qualification at a number of different levels ranging from the equivalent of the UK NVQ 2 (in the Netherlands a very small number go no further than an NVQ1 level) to the equivalent of UK NVQ 5 (France) or UK NVQ 4 (Netherlands). Those who move from one level to the next will spend a period of 2+2 or even 2+2+2 years in apprenticeship.

The distribution of apprenticeship training programmes in France and the Netherlands by duration as determined by Level studied for is given in Table 2 below.

**Table 2**
**The Distribution of Participants on Apprenticeship Training Programmes by Duration as Determined by Level, France (1996) and the Netherlands (1999/2000)**

| NVQ equivalent Level | 2 | 3(a) | 4 | 5 |
|---|---|---|---|---|
| Duration (years): France | 2 | 2 | 2 | 2 |
| Duration (years): Netherlands | 2-3 | 2-4 | 3-4 | - |
| Distribution of Apprentices : France (%) | 64 | 28 | 5 | 3 |
| Distribution of Apprentices : Netherlands (%) (a) | 55 | 45 | | |

Notes : (a) In the Netherlands 45 per cent are at Levels 3 and 4

In the UK, as part of the change from YTS to YT in the early 1990s a fixed training duration was no longer a condition of public funding of youth training. No change was made in this respect when Modern Apprenticeship (MA) was introduced in 1995. Duration was at the discretion of the employer. In 1998, only 10 per cent of British employers surveyed expected apprenticeship in their companies to last less than 18 months. In three sectors, Child Care, Health and Social Care and Hotels and Catering between a fifth and a quarter of all apprenticeships were expected to last for 18 months or less (DfEE, 1998). However, a recent analysis shows that the gap between expectation and actual length of stay in apprenticeship is huge. In four of the ten largest apprenticeship sectors accounting for roughly a third of all apprenticeship starts, Health and Social Care, Retailing, Hotels and Catering and Customer Service, the average actual length of stay in apprenticeship was **less than one year**. In all

sectors, average actual length of stay was considerably less than 'expected' and none was longer than two years ( Fuller and Unwin, 2001).

In its Consultation Document on Modern Apprenticeship published in 2000 the UK government asked "Can improved LSC inspection and quality assurance arrangements ensure training is done properly without the need for minimum periods of training?" The Confederation of British Industry (CBI) representing some 250,000 employers reiterated its opposition to fixed duration of training periods.[6] This opposition must be understood in the wider context of employer opposition to 'time-serving' which characterised British apprenticeship in the first half of the twentieth century and employer determination to retain control over all aspects of learning in apprenticeship. In their Response to the Consultation Document, the CBI wrote "Employers are not educators and Modern Apprenticeships are part of the foundation learning system - not the education system". The CBI therefore rejected proposals put forward in the Consultation Document for minimum periods of training and for mandatory period of off-the-job training on the grounds that these "will not deliver the results we all want". (CBI, 2000)

### 1.2 The content of training programmes

The six continental European countries considered here all require apprenticeship training programmes to consist of three elements

- general education
- technical education
- occupational skills and competences

In the 'dual-system' countries, standards of general and technical education are differentiated by occupation. It is accepted that some occupations will make more stringent demands in certain areas of general and technical education than others. In Germany, Austria and Switzerland, the regional Ministry of Education and in Denmark the national Ministry draw up standards in consultation with the industry body responsible for a given occupational area. There is no attempt to align standards of general or technical education in apprenticeship with a wider national standard.

[6] "The CBI has reservations about the proposals because they focus on inputs and a time-served approach, neither of which is a guarantee of competence" from *The CBI's response to the Modern Apprenticeships Consultation Document* CBI, London, 2000

In France and the Netherlands all apprenticeship programmes are required to offer general and technical education components. However, the balance may vary by occupation and by level. There is an attempt to align standards across occupational areas and within levels.

The 1996 reform of vocational education in the Netherlands specified that at each level courses were to have three dimensions which correspond to the three elements outlined above (Down, *op.cit.*). These are

- social/cultural
- general/technical(to ensure progression possibilities)
- vocational

Overall, in all these countries, between 70 and 80 per cent of an apprentice's training period is spent in the workplace, including time devoted to workplace training. The balance is divided roughly equally between general and more occupationally-focused technical education.

The distribution of the apprentice training period between time spent in the workplace and time spent in school or college is thus weighted heavily towards the workplace in all countries. In all the 'dual-system' countries and in the Netherlands, off-the job education and training is ensured through compulsory attendance at publicly provided vocational colleges/institutions within the wider structure of upper-secondary school provision.

In France, until recently, employers and Chambers of Commerce were the main providers of off-the-job education and training for apprentices. However, the curriculum to be followed and assessment procedures are identical to those in full-time publicly provided vocational education. A recent innovation in France is the provision for apprentices to attend a publicly provided vocational *lycée* for their off-the-job education and training.

Modern Apprentices in the UK are currently only required to 'work towards' an NVQ qualification at Level 3 although to receive a final certificate of completion they must obtain the relevant NVQ 3 certificate and demonstrate competence in Key Skills. The NVQ is a checklist of occupational competences demonstrated and assessed in the workplace. Consequently, the UK apprenticeship has not, up to now, measured up to the requirements for

separately taught and assessed technical and general education found in other European countries.[7]

The government-appointed National Skills Task Force found the lack of a coherent body of underpinning knowledge, which characterised the NVQ template, to be seriously damaging to the development of Modern Apprenticeship.[8] The Modern Apprenticeship Consultation Document put forward a proposal for a technical certificate to be an additional requirement alongside the NVQ qualification. This proposal could bring the balance of learning in the UK Modern Apprenticeship closer to the structure of that in continental Europe. However, there is still no recognition by the UK government that general education should continue during apprenticeship.

### 1.3 Assessment

In the countries of continental Europe considered here, the successful completion of apprenticeship is conditional on successful completion of **both elements** of the apprenticeship programme

- off-the-job general and technical education
- on-the-job acquisition of skills and competences.

General and technical education is assessed by tests or examination set and marked by outside bodies or the regional education authorities. Occupational skills and competences are almost invariably assessed by practical tests (with external assessors), and through oral examination conducted by a panel of assessors. In addition, portfolio evidence is now also used as part of assessment of practical work in addition to the procedures outlined above.

In the UK, of the elements of the MA that constitute the full qualification - NVQ 3 and Key Skills, only Key Skills may be assessed by examination. There is enormous variation in the way NVQ competences are assessed and the extent to which assessors have a financial stake

[7] The Key Skills requirement is the closest the MA comes to a 'general education element'. These have been extremely unpopular with employers and it is thought that relatively few apprentices have achieved them. They have been further undermined by the practice of some Training and Enterprise Councils (TECs) of making final payments for apprenticeships on the basis of NVQ 3 alone. As there are no national data showing achievement rates for complete modern apprenticeships it is not possible to say how many apprentices had some sort of encounter with Key Skills.

[8] The National Skills Task Force second report highlighted the need for qualifications which provided underpinning knowledge and understanding for all apprentices "The government would like to see separately assessed and certificated underpinning knowledge and understanding as part of all Modern Apprenticeships." from DfEE (1999).

in the outcome of the assessment. Most apprentices are assessed on their performance of tasks in the workplace.[9] Unlike their European counterparts, UK apprentices are not assessed by objective methods which promote confidence that consistent standards have been applied regardless of sector, occupation or employer. While the employer of an apprentice may be indifferent to the reliability and transparency of the qualification awarded, lack of consistent, objective and reliable assessment lowers the labour-market value of the qualification to the apprentice.

### 1.4 The standards required for successful completion of apprenticeship

The standard of mathematics required for the British NVQ3 award is considerably less demanding than that required for apprenticeship qualifications in Europe. (Steedman and Hawkins, 1994). In a separate study, the technical knowledge required for NVQ 3 was also judged to be narrower and less demanding than that required for the equivalent qualification in Germany. However, some occupational competences, in particular speed of working expected, were found to be more demanding in NVQ 3 than in the equivalent German qualification (Steedman, *et al*., 1996)

Overall, it was judged that a young person who successfully completes an apprenticeship qualification in the German-speaking dual system would be able to meet the standard for a British NVQ 3 in the same occupation. However, it was judged that the young person with a British apprenticeship and NVQ3 would not be able to reach the standard required for the dual-system general and technical education requirements on the basis of NVQ 3 alone.[10]

---

[9] The description given below of the assessment procedures for Modern Apprentices in the travel industry is probably reasonably representative.
"The Travel Training Programme is a two year course as a full time employee with a travel company with off-the-job training. You will be required to compile a portfolio of evidence for each qualification, which will show your capability to fulfil the role of a travel agency clerk. A visit to your training centre is necessary approximately every six weeks and you will also receive a regular visit by a trained assessor who will check your portfolio and observe your tasks in the workplace".
http://www.ttctraining.co.uk/faqs.html#ttp accessed on 2001-07-13

[10] In 1996 programmes of study and examination papers from apprenticeship programmes in Germany and France were evaluated and compared with equivalent qualifications in the UK. These comparisons were commissioned and reported by researchers at the Centre for Economic Performance (CEP) as part of the CEP's work for the government's Skills Audit (Steedman, Green et al 1996). The evaluation and comparison of programmes of study and examination papers was carried out by experienced teachers and other industry experts. A full description of the evaluations can be found in Steedman, Green et al. *op.cit.* at pages 79-83. The original examinations compared and the judgements of the independent evaluators can also be inspected on request.

## 2. Achieving the Apprentice - Employer Match

In all six countries considered here, responsibility for finding an apprentice place rests with the young person. The young person wishing to enter apprenticeship must find an employer willing to take him/her on. This places a requirement on the young person to consider carefully the occupation/sector that he/she wishes to train for and the type of company where they would like to work. Since employers will be recruiting the apprentice with a view to trainability and productive work, a further requirement is that the aspiring apprentice should have acquired an appropriate foundation of skills and aptitudes.

These two requirements

- prior consideration of career and career options and
- adequate foundation for training and progress in a work environment

are met in various ways by the countries concerned.

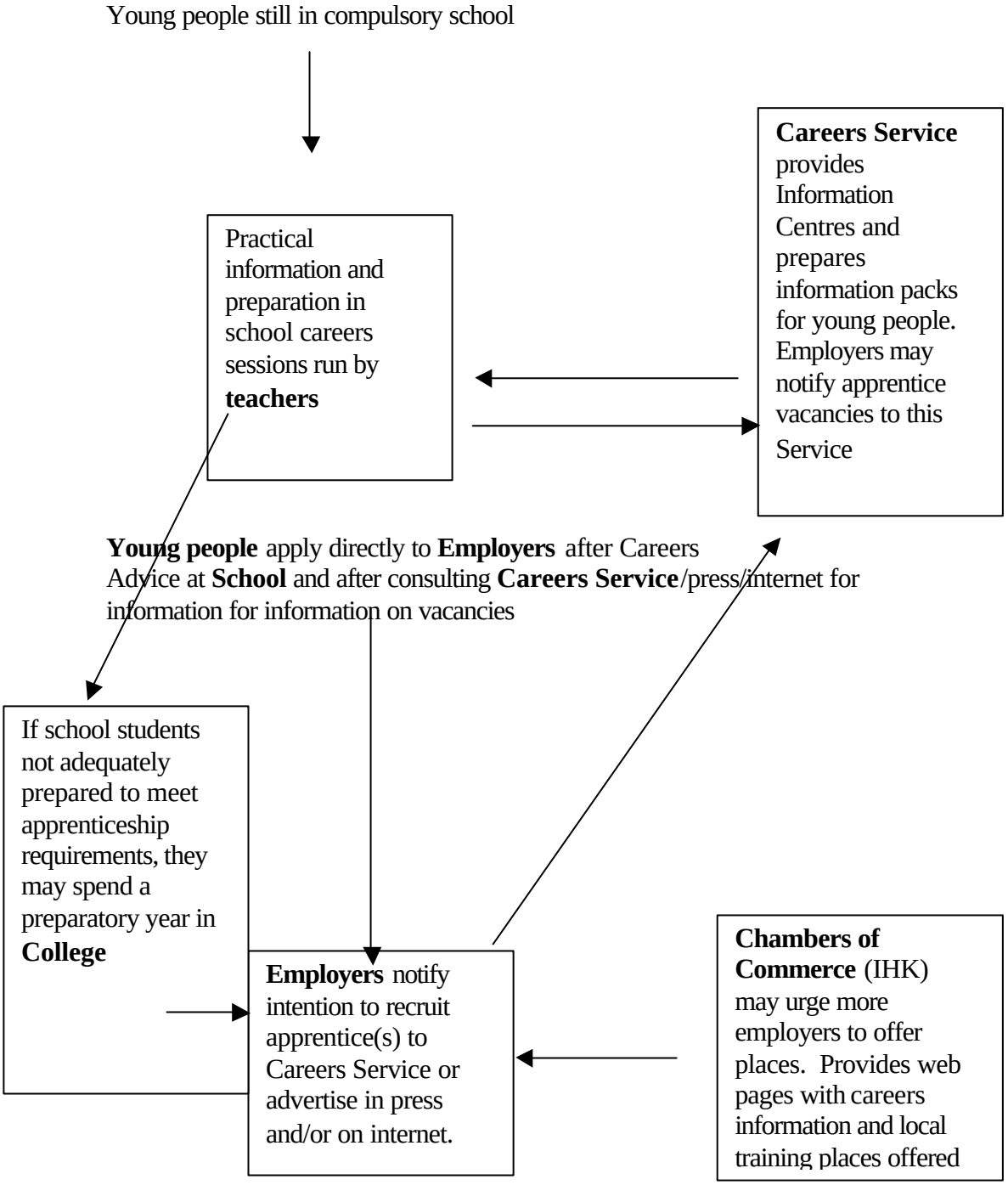
### 2.1 Finding an apprentice place: the process in the German-speaking 'dual system' countries

These countries make systematic provision for the study of career options available through the apprenticeship route. This process starts in the last two years of compulsory school when specific time periods are used by careers teachers to work through information packs, and other material which explain career options, the occupational structure and the training required (Jarvis, 1994).

Visits are arranged to Centres run by the Careers Service and school students are encouraged to explore the information available independently (Steedman, 1994). The internet now provides additional high quality information on careers, the type of work involved, working conditions, skills and aptitudes required. A wide variety of sites and sources of information on these matters are now available to young people in the dual system countries from the internet. In Germany, for example, the Chambers of Commerce (*Industrie und Handelskammern*) which have responsibility at local level for oversight of apprenticeship agreements between young people and firms, provide sites which list all apprenticeship places offered locally in a range of recognised occupations (Figure 1).[11]

[11] For example, in Switzerland from http://www.ur.ch/lehrstellen/ in Germany, from http://www.apa.ihk.de/cgi-bin/suche.php

**Figure 1**
**The Process of Information and Preparation Preceding**
**A Young Person's Application to Employers for Apprenticeship**
**in German-Speaking 'Dual System' Countries**



As the school student nears the end of compulsory schooling, those who are interested in pursuing an apprenticeship are helped to compose letters to firms seeking apprentices. 'Dry-run' interviews are held at school by teachers to prepare students for the search for an apprenticeship. Once an occupation or a range of occupations have been decided upon by the school student and his/her parents, the young person will write to firms offering suitable apprenticeships to ask to be considered for an apprenticeship place.

Applications from young people for apprenticeships will not always succeed, of course, and some who apply will be disappointed, although most will succeed in entering apprenticeship if they are prepared to wait/engage in further study (Figure 1). In the most recent period in Germany, overall, applications have slightly exceeded places offered, reversing the trend of the late eighties and early nineties (Table 3).

For obvious reasons, demand for apprenticeship places in the former East has consistently outstripped supply and the above ratio has only been maintained in the former East by government intervention to subsidise apprenticeship places. In the West, demand and supply have been kept in equilibrium despite rising cohort numbers by strong government pressure on employers.

Nevertheless, the number of apprenticeship places offered and accepted annually is still impressive - 630,000 in 1999 - equivalent to around two-thirds of the 16 year-old cohort.

**Table 3**
**Ratio of apprenticeship places offered to places requested, Germany, 1993-1999**

| Year | 'Old' Lander | 'New' Lander | All Germany | Total new apprenticeship agreements ('000s) |
|---|---|---|---|---|
| 1993 | 1.14 | .99 | 1.12 | 570 |
| 1995 | 1.05 | .96 | 1.03 | 573 |
| 1997 | .99 | .90 | .97 | 588 |
| 1999 | 1.01 | .94 | .99 | 631 |

Source: Berufsbildungsbericht 2000, Übersicht 1

In Austria, where apprenticeship covers a narrower range of more traditional occupations than in Germany, there has been a marked fall in the number of places offered. In 1992 nearly half the age group (48.7 per cent) entered apprenticeship; in 1996 just under two-fifths (39.5) did so. In the early '90s the supply of places outstripped demand while by

the mid-90s the ratio of demand for places from young people to supply by firms was over 2:1.

Improved financial incentives to firms have resulted in more training places being offered and the decline in participation in Austria has now levelled out. A similar situation occurred in Switzerland, the Netherlands and France in the early '90s and in all these countries steps were taken to ensure an improvement in incentives to firms to offer training places. This has now resulted in an increase in places offered in all these countries.

Over the last decade it has proved more difficult to achieve the employer-apprentice match in all dual-system countries compared to previous decades. This is not the result of firms formally raising their entrance requirements. In all the German-speaking countries there are no formal pre-requisites for entry to apprenticeship. But this does not prevent employers from having a clear idea of the qualities and potential needed for successful completion of apprenticeship. Firms claim that it has been increasingly difficult to find young people with the qualities and attributes that they seek among those applying. A number of factors have contributed. There have been changes in economic activity and hence in the skill needs of firms and in the type of occupations offered. But the supply of young people coming forward has also been modified by the increased probability that a young person will stay on in full-time education after the end of compulsory education. It seems likely then, that the average ability level of applicants for apprenticeship has declined to some extent. Combined with more exacting standards and a more competitive economic environment, this fall raises the cost to firms of providing apprenticeship and means that firms are more reluctant to recruit.

The German-speaking dual system countries have addressed this problem from both the supply and the demand side. On the supply side young people who apply for apprenticeship without success have been encouraged to take pre-vocational or other full-time courses in post-compulsory colleges. These courses revise and consolidate basic skills and provide additional preparation for entry to the work environment. Around 10 per cent of entrants to apprenticeship in Germany in 1998 had followed such courses. In Germany, the average age of apprentices has increased markedly, from 16.6 years in 1970 to 18.2 years in 1985 and 19.1 years in 1998. This suggests that those entering in 1998 are, on average, aged around 18 years.

## 2.2 Finding an apprentice place: the process in Denmark

Denmark has seen some decline in numbers entering apprenticeship. Nevertheless, as in the German-speaking countries, it makes a significant contribution to skill formation; just over a third of an age cohort currently enter apprenticeship training programmes.

As in other countries, young people wishing to enter apprenticeship need information and guidance on occupational choice. Some guidance is provided by teachers in the final (optional) year of the compulsory school when students are aged 17.[12] An innovation is that this final year can be spent partly in school and partly in vocational college. This means that, as in Germany, entrants to apprenticeship are likely to be aged at least 18.

Another form of preparation is offered by the basic programme of the VET course. In Denmark, all young people who opt for the vocational route to qualifications spend between 10 and 60 weeks (average 20 weeks) full-time in the equivalent of a College of Further Education on what is called the Basic Programme. In this programme basic subjects and vocational subjects are supplemented by educational and occupational guidance and counselling. The student can 'sample' various vocational areas and decide on a suitable vocational route. Students with definite choices of occupation can 'fast-track' through the basic programme while those who require more support and consolidation can spend longer in the basic programme.

Before starting on the main part of the vocational programme (typical duration 3-3½ years) the student must find an employer willing to enter into an apprenticeship agreement. The vocational college plays an important part in this process through links with employers by means of the local Trade Committees (employer/employee organizations). If a student fails to find an apprenticeship place the college may offer a 'virtual place' and the student will cover the required occupational skills in the college.[13] Currently around 6 per cent of apprentices in Denmark have places provided by a college.

The apprentice will alternate periods in the workplace and periods in college and be required to follow courses which amount (maximum) to 60 weeks of full-time study over the 3-3½ year training period.

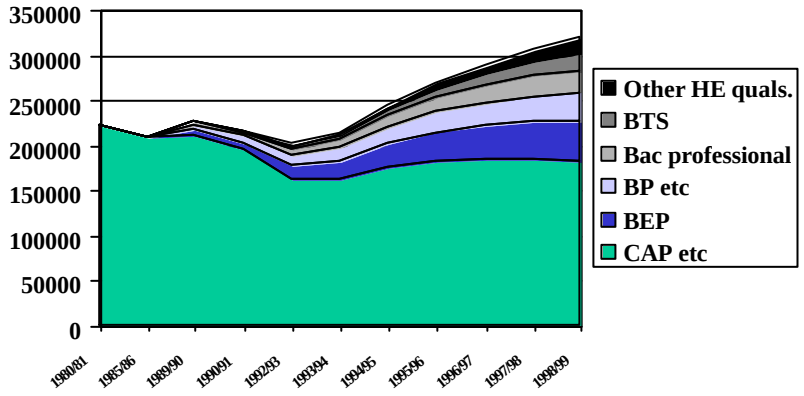
[12] But the OECD (1999) *Thematic Review of the Transition from Initial Education to Working Life Country Note: Denmark* is critical of the national careers information service (RUE) in Denmark.
[13] OECD (1999) page 14.

## 2.3 Finding an apprentice place: the process in France

The aspiring apprentice in France is less likely to have been prepared for the choice of an apprenticeship occupation while at school. The guidance process in French secondary schools (*collège*) is normally restricted to outlining the routes that 16 year olds can follow through the education system and the qualifications that can be obtained.

This sharp division has its roots in the sharp distinction made in French society between the public and private sectors. The education system is a pillar of the public sector while apprenticeship has traditionally been supported and provided by the private sector, most notably French employers. French employers and those who work within the structures of apprenticeship complain in terms similar to those of their counterparts in the UK of the lack of status of apprenticeship and the perception that apprenticeship is only for the rejects of the school system. That was undoubtedly the situation for many years when the number of apprentices in France remained small (around 200,000 a year) mostly in artisan trades and occupations. However, since a number of changes were made to the laws governing apprenticeship - including allowing apprentices to obtain the whole range of educational qualifications up to and including Masters degrees, apprenticeship has expanded dramatically (Figure 2 and Section 4.2 below).[14]

**Figure 2**
**Apprenticeship in France, numbers, 1980-1999**




Source: Ministere de l'Education , Reperes et References Statistiques, 2000, p.137

[14] In addition, the old rivalries between public and private sector have been broken down by the establishment in the 1990s of *Centres de Formation des Apprentis* - CFA situated in publicly-provided secondary schools.

The young person seeking an apprenticeship may visit a local advisory centre for young people (PAIO), the local office of the national careers guidance organisation ONISEP, the local Chamber of Commerce (representing local employers offering apprenticeships) or the local Centre for Apprenticeship Training (CFA).

On the internet, a rich range of well-presented information is available, for example http://www.apprentissage-paca.tm.fr/ is a web site provided by the Regional government of the Provence-Alpes-Cote d'Azur Region. Regional governments now have much of the responsibility for promoting apprenticeship in France and the web site given above provides step by step information for employers and young people in the region.

Another source of information on the internet is the official site http://www.cidj.asso.fr/ which provides detailed descriptions of a wide range of recognised occupations, associated qualifications and ways of studying for them, including apprenticeship.

As in the German-speaking dual system countries, the aspiring apprentice is encouraged to seek out an employer willing to take on an apprentice. The steps to be taken by a young person wishing to enter apprenticeship are quite challenging and set out on the web page of *eg* http://apprentissage-paca.tm.fr without many concessions to youth and inexperience.

In practice, it seems likely that the aspiring apprentice will first make contact with a CFA and enrol provisionally for a course at an appropriate level in the desired occupation. The CFA will then provide lists of likely employers or even put the young person in touch with a likely firm. Many CFAs are associated with a Chamber of Commerce so that links with local firms are likely to be strong and varied.

### 2.4 Finding an apprentice place: the process in the Netherlands

Students in the Netherlands look for apprenticeship places themselves, mostly with the support of colleges. Apprenticeship places must be accredited by the national sector bodies for vocational education and training[15]. Information about apprenticeship places is available

[15] There are 21 national bodies for vocational education and training. These are organised on a sector-by-sector basis, for example there are bodies for butchers, hairdressers, workers in health care and the process industry. They are centres of knowledge and expertise in relation to vocational courses organised for individual sectors or job categories. The employers'and employees'organisations from the sector form the governing boards of the national bodies. Most national bodies have a mixed character. They are private bodies (foundations or associations) which are charged with public tasks in the framework of the Adult and Vocational Education Act. Their public statutory tasks are:

from the internet (www.edugate.nl) or from the sites of the national bodies (www.colo.nl). The national sector bodies have the task of ensuring that sufficient companies and organisations are in place so as to be able to provide the necessary number of training places. The national bodies also ensure that quality of on-the-job and off-the-job vocational practice complies with the quality standards set for each sector. In the Netherlands some 150,000 active training companies are recruited and registered as apprentice companies. In order to be legally enforceable, the apprenticeship contract must be signed by the student, the school, the apprentice company and the national sector body.

### 2.5 Finding an apprentice place: Britain

There is no systematic provision for introducing students in British schools and colleges to career opportunities offered by apprenticeship. Furthermore, there is no website available at national, regional or local level which provides comprehensive information on apprenticeship by occupation/sector together with links to sites giving details of employers offering apprenticeships or to other ways of accessing provision.[16]

While a small minority of apprentices in Britain enter apprenticeship by applying directly to an employer, for example in answer to an advertisement, most are channelled through local Training and Enterprise Councils (TECs), now Learning and Skills Councils (LSCs) who then direct the young person to a 'training provider'. In England alone, there are some 1330 training providers. Of these, just under 20 per cent are employers. A further third are private companies and a further 20 per cent are Further Education Colleges. The remainder are Chambers of Commerce, Group Training Associations, Local Authorities and not-for-profit providers. Only around 5 per cent of all apprentices are directly recruited and trained by employers. The remainder are the responsibility of the training provider who contracts with the TEC/LSC to find an employer willing to take the young person.

---

- to develop and maintain the qualification structure for vocational education;
- to guarantee a sufficient number of placement addresses and to promote the quality of these placements;
- to assess and accredit companies and organisations providing work experience.

[16] The closest we have come in the course of several hours of web-surfing is http://www.worktrain.gov.uk In a search for training opportunities in Birmingham in Mechanical Engineering at NVQ Levels 1,2 or 3 we were offered an apprenticeship in Technical Services. But a similar search for the travel sector revealed no apprenticeships in Birmingham, despite the fact that at http://ttctraining.co.uk nine firms in the Birmingham area are listed as offering apprenticeships in the travel industry.

Frequently, most of the training and assessment which comprises apprenticeship in Britain is carried out by the provider rather than the employer where the apprentice is based.[17]

## 2.6 Employing an apprentice: the process in the German-speaking 'dual system' countries

Many employers in the German-speaking dual system countries will either have had direct experience of being an apprentice and will almost certainly have a substantial number of employees who have obtained an apprenticeship certificate. Especially in Germany, employers having direct experience of being an apprentice will not be confined to the smaller artisan-type firms. Apprenticeship, followed by full-time technical study is a recognised route into management in Germany.

Employers wishing to offer an apprenticeship will, if necessary, turn for guidance to the local Chamber of Commerce (IHK). The IHK has a legal obligation to champion the interests of industry and commerce in its area and offers a wide range of business services to all firms. The IHK takes responsibility for most of the employer's administrative paperwork associated with taking on an apprentice and organises the intermediate and final apprentice examinations. An employer who turns to the local IHK website will find a 'checklist' of conditions for taking on an apprentice. Essentially the employer will

- Need to have in place an employee (aged at least 24) with a completed apprenticeship in the occupation offered together with an additional pedagogical qualification.[18]
- Release the apprentice for off-the - job training as required by law.
- Ensure the young person taken on has had a medical examination in the previous 14 months.
- Provide a training plan to show that the occupational requirements of the apprenticeship can be met in the stipulated time.
- Provide training materials at own expense
- Register the apprentice for the examinations for the apprenticeship certificate and provide time off for taking the examinations.

[17] Information based on analysis of the Training Standards Council database.

[18] This requirement can be waived for a limited period in the case of firms offering apprenticeship places for the first time. http://www.bielefeld.ihk.de/bildung
accessed 10/04/2001

## 2.7 Employing an apprentice: the process in France

Although apprenticeship in France is largely provided by the private sector, it is nevertheless heavily regulated by French law. The procedure that a French employer must follow to take on an apprentice (set out with great clarity on the web site *apprentissage-paca* given above) is not for the faint-hearted. However, French employers are used to detailed legal regulation of employment relations and it is possible that the requirements seem to them less daunting than they might to a British counterpart.

As in Germany, the local Chamber of Commerce and the local *Centre de Formation des Apprentis* (CFA) help to put employers in touch with young people seeking an apprentice.

In Britain the complexities of the funding regime associated with apprenticeship are widely recognised as being too complex for most employers to manage.[19] Training providers have filled the gap, as described above. However, training providers are in turn driven by funding incentives which derive from government targets for numbers of young people placed in government-supported training. Depending on the particular funding regime adopted by each TEC, funding may bias training towards low-cost provision which does not necessarily correspond to local skill need. Once the government targets have been met, and funding committed, additional employers wishing to take on an apprentice have been refused adequate funding (rationing).

## 2.8 Employing an apprentice: the process in the Netherlands

In order to train an apprentice a company must be assessed and accredited by the appropriate national sector body (see note 15). To be accredited as an apprentice company the company must fulfill the following criteria:

- the apprentice must carry out work tasks appropriate to the occupation trained for
- the company must provide a trainer/supervisor for the student, allow time for training and provide some facilities
- the student usually makes his/her own application for an apprenticeship, but if the student cannot find an apprenticeship place, it is also the responsibility of the

[19] "69% of employers (surveyed) used an external organisation for assessment and accreditation while others out-sourced applications for funding (58%) and recruitment of apprentices(40%)." CBI (2000) *op.cit.*

vocational college (ROC). The college is responsible for ensuring suitable on-the-job training facilities

# 3. Access, Motivation, Completion and Subsequent Employment of Young People on Apprenticeship Programmes

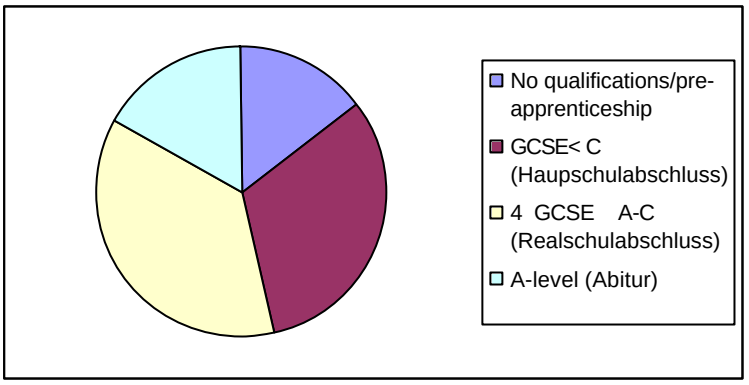
## 3.1 Who enters apprenticeship?

There are no legally prescribed pre-requisites for entry to apprenticeship in the countries considered here. Nevertheless, in the dual system countries it is well-known that good school marks will open the door to a prestigious occupation or firm. The importance that firms attach to school marks means that most young Germans have an incentive to do as well as possible at school in order to have a chance of the apprenticeship of their choice. Only a very few fail to obtain a recognised school-leaving certificate in the German-speaking countries and in Denmark. Apprenticeship is not primarily seen as a way of providing for all low attainers. For this purpose there are other more suitable work-based programmes. Its primary aim is to renew the national skills base and develop the skills of young people. However, many young people with fairly modest academic attainments find an apprenticeship place and benefit from apprenticeship in the dual system. It is not possible to obtain data on socio-economic origins of apprentices in these countries. However, for a number of countries we know for apprentices the prior school history and/or qualifications obtained on leaving compulsory school.

*Germany*

Figure 3 shows the prior qualifications of young German apprentices. Just under half have no qualifications or qualifications equivalent to GCSE below grade C. Just over a third have GCSE A-C level or higher. Some 17 per cent have gained the equivalent of A-level.

**Figure 3**
**Prior qualifications of apprentices in Germany, 1998**




Source: *Berufsbildungsbericht 2000 Übersicht 18*

*Switzerland*

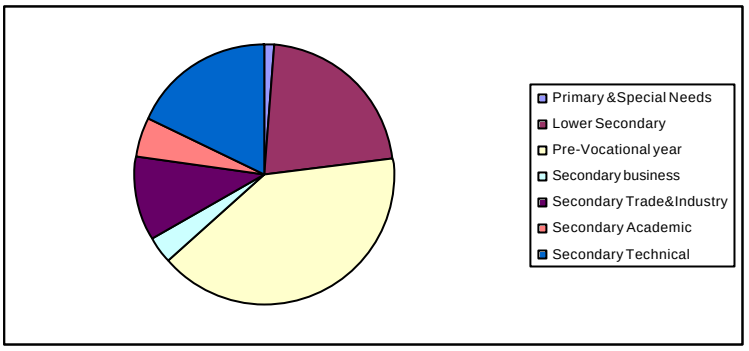
In Switzerland, where selection after age 11 predominates, around two thirds of pupils are in 'broad' general education which can lead to A-level type study at the upper secondary stage and around one third are in 'basic' education. Almost all of those in 'basic' education enter apprenticeship; a further third of a cohort enters from 'broad' general education. Comparison of prior mathematics attainments of Swiss students in the 'basic' education classes has shown that average attainments in mathematics are considerably higher than the average for pupils of similar ability in England.[20] It is perhaps for this reason of sound basic skills that, on average, young people in Switzerland continue to enter apprenticeship at a younger age than in Germany and other European countries.

*Austria*

In Austria, just under one quarter of all entering apprenticeship have completed only eight years of the nine compulsory school years (students may enter apprenticeship after eight years of schooling). Around 40 per cent have completed a pre-vocational year after eight or nine years of school. The remaining third have completed or part-completed upper secondary school, almost all in technical and vocational upper secondary schools (Figure 4).

[20] Bierhoff and Prais (1995) page 40, "After creaming off the top 20 per cent in each country for university or other full-time higher education (30 per cent are planned for England), we are left with hardly some 20 per cent in England who would be capable of entering an apprenticeship compared with 45-50 per cent in Switzerland."

**Figure 4**
**Prior Educational Level of Entrants to Apprenticeship in Austria, 1994**

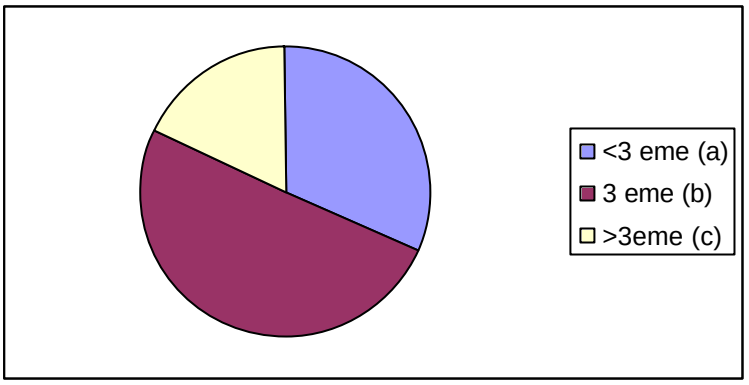



Source: Lassnigg and Schneeberger, *op.cit.* Table A-3.6b

*France*

In France around one third of those entering apprenticeship in 1998-1999 had school attainments well below the average, a significant proportion had attended Special Education classes before entering apprenticeship. Around half had reached the final class of compulsory school; of these, two thirds had reached something like a GCSE Grade A-C standard. A further 18 per cent of entrants came from classes leading to the Baccalaureat qualification or, in some cases, had passed the Baccalaureat and started on a course of higher education (Figure 5).

**Figure 5**
**Prior Educational Attainments of Apprentices, France, 1998**




Source: Ministry of National Education *Repères et Références Statistiques* page 141

Notes: (a) Students of well below average attainments, of whom one third are classified as having special educational needs. (Have entered apprenticeship before reaching the final class of compulsory schooling.)
(b) Students of average or somewhat less than average ability. (Have reached final class of compulsory schooling.)
(c) Students who have started/completed a course leading to the Baccalaureat (A-level equivalent).

In the UK in a recent year, of those entering Modern Apprenticeship programmes, 11 per cent held an A-level qualification or equivalent and the remainder were divided almost equally between those with 4 or more GCSE passes at Grades A-C and those with passes below this standard. Only 5 per cent had no qualifications.

The distribution of British apprentices by prior qualification does not appear to be very different from that in Germany or indeed in France. A somewhat higher proportion of UK apprentices have A-level type qualifications than in Switzerland and Austria.

### 3.2 Incentives to enter and complete

*Germany*

The German apprenticeship attracts young people as a result of a combination of negative and positive incentives. Similar incentive structures pertain in the other German-speaking dual system countries. There are no absolute barriers to the employment of young people in Germany once they have completed compulsory schooling (definition of completion is complex and varies from *Land* to *Land*). However, firms are barred from employing young people under 18 in the wide range of occupations for which an apprenticeship programme exists. Effectively, employment opportunities for under 18s are limited to unskilled

occupations and only around 1 or 2 per cent of the cohort is in employment at age 16 or 17. Considered alongside the attractive range of occupational training open to young people, this means that the youth labour market is of only very limited attraction to school leavers.

A further important negative incentive is the length of university degree courses and high drop-out rate in Germany which deter some of the more academic from applying to university and leads a substantial proportion to enter apprenticeship.

The single most important positive incentive is the social and quasi-institutionalised recognition accorded to the apprenticeship qualification. Whatever the apprenticeship occupation, a completed apprenticeship confers a professional identity and consequent recognised social status.[21] A further positive incentive to participation and completion is the restriction enshrined in many collective agreements that access to technician and *Meister* status is open only to those who have completed the relevant apprenticeship. In the *Handwerk* (artisan) sector, the apprenticeship certificate is a necessary condition for independent practice and apprenticeship followed by a period of full-time professional education is a recognised route to management in many industries. But the apprentice will not only be able to count on social recognition and career possibilities as a result of passing the final examinations. The stability of collective bargaining arrangements in Germany which negotiate the skilled/semi-skilled wage differential give confidence that a completed apprenticeship will be rewarded on the labour market.

The combination of these negative and positive incentives explains why nearly two-thirds of young Germans enter apprenticeship. A substantial proportion of all those with school-leaving qualifications equivalent to 5 GCSE Grades A-C (*Realschulabschluss*) choose apprenticeship in Germany whereas in the UK most of their counterparts would normally aim for university entrance.

The negative incentives, which arise from the very strict German labour-market regulation relating to occupational qualification, are not present in Denmark, France and the Netherlands to the same extent. University courses, while longer than in the UK, are not as long as in Germany. Furthermore, a more well-developed full-time route to vocational qualifications at Levels 3/4 exists in these countries (and, to a lesser extent in Austria) which tends to restrict the range of occupations for which apprenticeship can prepare. In all these countries efforts have been made to improve the attractiveness of apprenticeship to more

[21] In German, the term *gelernte*- meaning a person who has acquired specialised knowledge and skill - is routinely used of those who have completed an apprenticeship.

academically able students by improving links and bridges to the range of qualifications available from full-time education.

*France*

In France, State regulations have always prescribed that apprentices must study for nationally-recognised vocational qualifications which are the same as those awarded in full-time education. As noted in Section 1 above, this principle has recently been extended to all levels of nationally-recognised vocational qualifications up to and including Masters degrees. While numbers taking the higher levels through apprenticeship remain relatively small, there is no doubt that recent strong growth in apprenticeship numbers results from apprentices taking the higher level qualifications. Furthermore, the status of apprenticeship is being slowly transformed by greater association with the more prestigious levels of qualification in the French system (Simon, *op.cit.*).

*Denmark*

In Denmark apprenticeship programmes have been modularised and the same 'catalogue' of courses is available to those in initial vocational education and adults in adult education programmes. Programmes have been made more attractive by the emphasis placed on the individualisation of programmes with the aim of reducing student drop-out. In apprenticeship programmes, individualisation takes the form of allowing students to complete the study programmes required over variable time periods within set minima and maxima. For apprentices, the VET college curriculum is structured around basic subjects, area subjects, special subjects and optional subjects. These last two allow for greater individualisation of the programme both to adapt to the interests of the company (special subjects) and to adapt to the interests of the individual apprentice (optional subjects). As in the Netherlands, higher level vocational courses provided within the framework of higher education, including technical courses in a wide range of occupational fields and industries are specifically tailored to graduates from apprenticeship.

*The Netherlands*

In the Netherlands, students on vocational courses study for the same vocational qualification, whether on apprenticeship or on full-time courses. Substantial amounts of work-based training are required for the full-time students and not only for apprentices. Switching between study on the apprenticeship route and on the full-time route is therefore

made easier. The clear formulation of levels of training (see Table 2 above) also allows those on the apprenticeship route to continue subsequently to a higher level of qualification (either in apprenticeship or in the full-time route). Perhaps for these reasons the Netherlands has a particularly high proportion of mature entrants to apprenticeship. In 1998 only 37 per cent of apprentices were between 15 and 19 years old, 47 per cent were aged between 19 and 27, 12 per cent between 28 and 40 and 4 per cent were over 40.

*Britain*

In the other European countries examined here, care has been taken to try to ensure that reform of the overall structure of education and training improves incentives to follow apprenticeship programmes. In Britain, the reverse has been the case. One of the main attractions of apprenticeship to young people - the ability to 'earn while you learn' may have been undermined by the progressive introduction of the Educational Maintenance Allowance for young people in full-time education. The initiative to establish a technical certificate as part of the apprenticeship qualification, was initially floated without much thought for how it might promote progression to proposed new degree level qualifications (Foundation Degree). Finally, the pool of well-qualified (5 or more GCSEs Grades A-C) applicants for apprenticeship continues to be drained by the government's rapid expansion of places in higher education.[22]

### 3.3 Completion and success rates

In the German-speaking dual system countries there is provision in the apprenticeship contract for a trial period at the beginning of the apprenticeship. At this point a proportion of apprentices leave - because of a realisation that the choice of firm/occupation is not a suitable one. Around one fifth of German apprentices leave the apprenticeship before the end of the official duration, of whom many do so in the trial period. A significant proportion subsequently re-enter apprenticeship in a different occupation and/or with a different firm.

[22] In 2000, after the government funded additional university places, 37 per cent of the <21 year old age group in England entered HE although the percentage of all 17/18 year olds with the normal entry requirement of 2 A-level/GNVQ passes was only 35 per cent. It therefore seems likely that the continuing push for expansion of HE is damaging apprenticeship recruitment by 'scraping the barrel' of those with some form of academic qualification. (Source: DfEE Statistics of Education 1999: GCSE/GNVQ and GCE/AGNVQTable 16; DfEE Statistics of Education 1998: GCSE/GNVQ and GCE/AGNVQ Table 12; DfEE Statistical First Release 35/1999; National Statistics/HESA SFR 48, Table 4)

Of those who remain in apprenticeship almost all (95 per cent) are successful in the final examinations - some after retaking the examinations. (*Bundesministerium für Bildung und Forschung*, 2000).

In Denmark, it is not easy to calculate final completion rates for vocational qualifications because of a tendency for young people to change direction while studying. For vocational education overall, the completion rate is calculated at about 65 per cent. However for apprenticeship training the rate is much higher, estimated at 90 per cent (OECD, 1998).

Drop-out from vocational courses is also of concern to policy-makers in the Netherlands. Around 20 per cent of students on a two-year vocational course drop out in the first year of their course (Brandsma and Noonan, 2000).

In Britain no reliable estimates are available to show how many of those who start on a Modern Apprenticeship gain the full qualification (NVQ 3 and Key Skills qualification). But figures showing proportions of apprentices gaining any full NVQ qualification (at Level 2 or 3) reveal that only two thirds gained any full NVQ qualification; just under half gained an NVQ 3 (DfES, 2001). However, this success rate, low as it is in comparison with other countries, is considerably higher than for all young people who embark on an NVQ 3 in apprenticeship, part-time or full-time education. In 1997/98 just under a fifth of all 16-18 year olds who were enrolled for an NVQ course at Levels 3 or 4 successfully obtained the certificate aimed for (Payne, 2000).

### 3.4 Progression from apprenticeship to employment

When evaluating apprenticeship as a means of improving employment chances of young people it is important to bear in mind the social and educational groups from which apprenticeship draws new entrants (see Section 3.1 above). In general, it can be said that apprenticeship in all the countries considered here manages to include (sooner or later) nearly all the low attainers leaving the education system at the end of compulsory education.

In France, Denmark and the Netherlands and to a lesser extent in Austria, apprenticeship currently includes only a small proportion of more able students. In Germany, the range is quite wide but includes most of the low attainers (Section 3.1). When examining unemployment rates of young adults with completed apprenticeship it is, therefore, appropriate to compare their outcomes with those who completed compulsory education but obtained no higher level of qualification/training.

Apprentices in Austria have an unemployment rate close to the national average and half that of those who have only compulsory education. Much the same is found for apprentices in Denmark.

A recent OECD study shows that the youth to adult unemployment ratio remains low in 'dual system' countries compared to other European countries and the US (Table 4).[23]

**Table 4**
**Youth to Adult Unemployment Ratio**

| | |
|---|---|
| Austria | 1.6 |
| Denmark | 1.6 |
| Finland | 2.3 |
| Norway | 4.1 |
| Sweden | 2.2 |
| Switzerland | 1.7 |
| United Kingdom | 2.4 |
| United States | 3.0 |

Source: OECD (2000) *From Initial Education to Working Life* Table 2.8

In Germany, more detailed studies are available of employment/unemployment rates for individuals immediately after successful completion of an apprenticeship. In 1998, the latest year for which figures are available, 58 per cent of all apprentices in the 'old' Federal republic regions were taken on by their training firms while the figure in the 'new' regions was lower at 46 per cent. Almost all those taken on were employed in skilled positions (*Fachkraft*). Large firms were much more likely than small firms to take on apprentices that they had trained. Apprentices who had high marks in their final apprenticeship examinations had a much higher probability of employment than those who had just scraped through the examination. In November 1999, around three months after completing an apprenticeship, only 4 per cent of the 'high flyers' were unemployed compared to 21 per cent of those who had just scraped through. But while around 20 per cent of those in the 'old' regions were unemployed immediately after completing an apprenticeship, this figure falls substantially over the subsequent months. In the case of trained shop assistants for example, only 5 per cent are unemployed 3 months after completing compared to 20 per cent immediately on completion.

[23] OECD (2000), *From Initial Education to Working Life*, Table 2.8. The study did not include France and the Netherlands.

Problems of selection bias make rigorous evaluation of the economic outcomes of apprenticeship notoriously difficult (Ryan, 1998). Nevertheless, Ryan concludes that, for those with no other training or further education, apprenticeship appears to confer both employment and pay gains. A more recent survey of the literature for France, the UK, the US and Germany (Ryan, 2001) suggests that apprenticeship tends to increase the employment content of early working life although effects on pay and promotion are less clear. In this context (and bearing in mind caveats concerning selection bias) it is good to note that, in contrast to qualification outcomes, employment outcomes for British apprentices leaving Modern Apprenticeship programmes are good, with 84 per cent of those who left in 1999 in a job and only 5 per cent unemployed.

## 4. Managing and Financing Apprenticeship

Apprenticeship is one of the oldest forms of public-private partnership and successful management of the interests of all the parties involved - employers, individuals and the government - calls for skilful management of incentives and structures.

A high and sustained level of demand (from employers for apprentices) and supply (of young people) with respect to apprenticeship places indicates that a positive equilibrium relationship between the parties concerned has been achieved.

### 4.1 The German-speaking dual-system countries

Several levels should be distinguished for understanding the management of apprenticeship in German-speaking dual-system countries.

At the Federal level, the Ministry of Education approves and issues training regulations for each recognised occupation. These regulations, which are the result of consultation at local, regional and national level between the relevant employer and employee sector organisations, constitute a broad framework within which the firm's own training plan ( see Section 2.6 above ) must fit. The Federal parliament also approves the legislative framework, in Germany the *Berufsbildungsgesetz* (BBiG), which prescribes the terms of the apprenticeship agreement between employers and apprentices and the regulation of the prescribed examinations and assessments for the award of the apprenticeship certificate.

The regions (*Länder*) have responsibility for the curriculum, financing and provision of all education below the tertiary level. Responsibility for developing the curriculum to be followed by apprentices in the off-the-job training element of the apprenticeship which is provided in the vocational college (*Berufschule)* rests with the *Land* authorities. The *Land* also provides the schools and trains the teachers.

The *Länder* voluntarily co-ordinate curricula at all levels of the education system through the Standing Conference of *Länder* Ministers of Education. *Länder* committees for vocational training composed of equal numbers of employer, employee and *Land* representatives advise on the content of the curriculum in the vocational schools.

Finance for apprentices' off-the-job vocational education and training in the *Berufschule* flows from the Land Ministry of Education to the *Berufschule*. The origins of the *Land* finances are diverse and include tranfers from the Federal government. These will not be discussed here.

The Vocational Education and Training Act (BbiG) determines which bodies are responsible for oversight and monitoring of apprenticeship in firms. These are normally the Chambers of Industry, Commerce and Trades (IHK) for the different industrial and occupational sectors, and the various federal and *Länder* authorities for apprenticeship in the public sector. Each IHK is required to set up a vocational training committee comprising six representatives each from employers and employees and six vocational school teachers (who play a consultative role). These committees are responsible for most decisions required by the statutory competence of the IHK with respect to apprenticeship.

Finance for apprentices' in-firm training is provided by the firm. Firms cover the cost of

- Teaching materials
- Fees to the IHK (membership compulsory for all firms whether they recruit apprentices or not)
- Working/protective clothing
- Cost of external courses (if firm chooses to provide)
- Cost of training management and other training personnel (*Meister*)
- Apprentice wages

There are normally no direct financial transfers of public money to firms with respect to apprenticeship. However, since re-unification, the Federal government has increasingly fully or partially financed a number of additional apprenticeship places for unemployed young people. There are also tax breaks for companies that train (Hummelsheim and Timmermann, 2000).

In a small number of sectors (*eg* construction) the sector has agreed to a self-imposed levy on all firms to finance apprenticeship. There are also a number of arrangements in various sectors and localities for the setting up of joint training facilities. These are normally funded by employers directly through fees paid and indirectly through levies paid to the Chambers of Commerce. Joint training workshops also receive government funds for training unemployed young people and adult unemployed and Federal or *Land* capital grants for infrastructure. However, these grants are normally one-off pump-priming payments rather than a recurrent funding stream.

Apprentice wages are fixed by sector level collective agreement and are normally around one third of the adult rate for the occupation trained for. German trade unions strongly support apprenticeship as can be seen from their active involvement at all levels of decision-making and oversight of apprenticeship. It is well understood, there fore, that both employers and trade unions have an interest in maintaining a good supply of young people and of apprentice places. Therefore, the level of apprentice wages relative to the adult wage fixed in collective agreements may vary according to whether the sector is having difficulty recruiting young people or having difficulty finding employers to offer places. Apprentice wages may rise to something in the order of half the adult rate for the final year of apprenticeship. It is thus widely recognised that apprentices make an important financial contribution to apprenticeship costs through wages foregone.

The issue of net costs of training incurred by German employers is a complex one and cannot be explored here. Nevertheless, it can be reported that the accepted view is that the smaller artisan-type employers gain some net benefit from apprenticeship within the apprenticeship period while the situation is reversed for larger employers particularly in the engineering sector.

### 4.2 France

The management and funding of apprenticeship training in France is considerably more complex than in the 'dual-system' countries and will not be examined here in detail.

Essentially, apprenticeship operates on a levy/grant basis with apprentice wages restricted to fixed percentages of the national minimum wage (SMIC) regardless of sector.

Legislation in 1993 and 1996 made changes which help to explain the recent very rapid growth in apprenticeships in France. The Act of 1993 strengthened the role of the *Mâitre d'Apprentissage* (based in the firm) while the 1996 Act changed the proportion of the levy which was ear-marked for apprenticeship (as opposed to other forms of initial VET). The proportion was doubled and disparities between regions smoothed out by means of redistributive mechanisms (Michelet, 1995). It can be seen from Figure 2 above that this measure appears to have helped to bring about a slight increase in the number of apprentices at the CAP (NVQ2) level and the continued rapid growth in apprentices at higher levels.

### 4.3 Denmark

In many ways, apprenticeship in Denmark is managed and funded in a manner similar to that in the German-speaking dual system countries.

Central government regulation is confined to objectives and framework conditions and the recognition of qualifications. This provides maximum freedom to innovate at the local level.

At national level a Trade Committee for every VET course (with parity of representation of the social partners) formulates the broad curriculum for each course and determines duration, objectives and examination standards (Danish Ministry of Education, 1999).

At local level, every college is required by law to set up one or more local education and training committees to match the types of education and training programmes offered by the college. These committees (with a majority of employer/employee representatives on a parity basis) play a vital link role between the college and the local firms. They ensure that local labour needs are satisfied, support the colleges in finding apprenticeships for students and ensure that college teaching is relevant to firms' requirements.

There are three different sources of funding for apprenticeship in Denmark.

- The government provides finance for off-the-job college based vocational training by means of direct transfer of funds to the college.

- The employer pays the apprentice a wage (which is regulated by collective bargaining agreements).
- The apprentice's wages while attending off-the-job training in college are 90% refunded by grants from a collective employers' fund (AER).[24]

### 4.4 The Netherlands

A far-reaching restructuring process of vocational education and training has taken place in the Netherlands as a result of the Adult and Vocational Education Act (WEB) 1996 (Brandsma and Noonan, *op.cit.*).

The key institutions in the organization and provision of apprenticeship are now the 46 Regional Training Centres (ROCs) formed from many smaller bodies and providing for full-time and apprenticeship courses for young people and adults.

At national level, joint committees - National Education Committees (LOBs) - of employer and employee representatives specify the skills to be reached at the final examination for each level of the qualification framework.

Government funds for vocational education and training are transferred directly to the ROCs. In addition, the ROCs are free to bring in funds from other sources, *e.g.* offering courses to local firms (Bertelsmann Foundation, 1999). They are granted considerable autonomy to meet regional skill needs as they think fit. Government also funds the LOBs based on the training specifications developed, the number of plants providing training and the number of apprenticeships and other workplace training offered. As in Germany, tax breaks are offered to firms that train apprentices.

In a number of ways the organization of vocational education and training in the Netherlands seems to share common characteristics with the UK. Some output-related funding is used to try to improve productivity and efficiency. The freedom granted to the ROCs to respond to regional needs resembles the ideals which led to the re-organization of Further Education in England under the FEFC. The stratification of training by levels and the emphasis on specifying outcomes has common characteristics with NVQs.

There are, however, important differences. The first is the reliance on publicly-funded and administered institutions - the ROCs - to act as the focus and driver of vocational

[24] The AER fund was introduced in 1977 and is a self-governing institution with parity representation from employer and employee organizations. The main objective of the AER is to provide firms with incentives to create apprenticeships. If a shortage of apprenticeship places arises, the number can be increased by financial support from the AER fund.

education and training. The second is the full participation of trade union representatives with employers at all levels in the specification of training outcomes. The third is the continued reliance on externally-set examinations as the major part of the final assessment of college-based training.

### 4.5 Britain

In Britain, unlike the other European countries described above, apprenticeship is not regulated by national legislation. Instead, regulations and guidelines issued by the Department for Education and Skills (DfES formerly DfEE) are followed in a variety of ways in different sectors, leading to wide variations in provision from sector to sector and locality to locality. Financial flows in Britain are also more complex than the arrangements for other European countries outlined above. Public funds flow from the budget of the DfES to local bodies (now Learning and Skills Councils (LSCs), formerly Training and Enterprise Councils (TECs). Funds are then distributed to training providers who contract with a variety of bodies for the provision of apprentice training and assessment required by DfES regulations. Funds then flow from providers to these bodies. In the process, equity and transparency are largely lost so that the funding devoted to off-the-job training of apprentices can vary from one local body to another and from one provider to another. This contrasts sharply with the greater standardisation of off-the-job training funding and provision on the continent achieved by direct transfers to public sector providers.

## Conclusions

In every other European country, offers of apprenticeship places enable individual firms to signal immediate and anticipated skill needs to young people. Apprenticeship structures then enable firms to meet those skill needs by appropriate training in partnership with government. By offering places, employers provide good quality information to young people and their parents on future career possibilities. Young people are thereby encouraged to invest in further education and training in a way which helps to meet skill needs and improve the probability of future employment.

In Britain, government practice of target-setting for apprentices in terms of numbers has led to the side-lining of employers in favour of 'training providers' to whom most government funding is channelled on condition that they enable the government to meet its targets. Training providers then 'place' young people with employers with little regard to local skill needs.[25] The prime advantage of apprenticeship as a means of signalling skill need and satisfying demand for skills has thereby been almost entirely dissipated.

In every other European country, apprenticeship is a recognisable 'brand'. Although apprenticeship occupations differ in various ways, the national framework, underpinned by binding legislation on key features (duration, standards and assessment) provides a common identity which allows the 'marketing' of apprenticeship to employers and young people.

In Britain apprenticeship has no legally-defined identity.[26] This in turn gave rise to wide variations in the administration of government funding for MA by the Training and Enterprise Councils until their abolition a year ago (Training Standards Council, 2000).

Variability in duration, standards, achievements and funding are such that it is impossible to define apprenticeship in Britain except as 'some combination of paid work and training'.[27] While other factors have contributed, this must be one of the main reasons for the chronic information failure that cripples attempts to promote apprenticeship in the UK - and which has led in the past to apprentices who did not know they were on apprenticeship schemes and widespread confusion among employers.

It is a condition of apprenticeship in all other European countries that young people in apprenticeship continue to be educated like their contemporaries within publicly provided upper secondary education. This requirement permits a simple and stable pattern of financial flows and ensures that vocational practice is underpinned by sound technical knowledge and general education and greatly facilitates further progression to higher-level vocational courses from apprenticeship.

In Britain, lobbying by employers' organisations in the early 1980s led to the introduction of National Vocational Qualifications (NVQs) which could be awarded on the basis of assessment on employers' premises alone. The same organisations pressed for the

[25] "The strategy of the previous Conservative and the current Labour governments has been to concentrate on volume, in terms of apprentice numbers …. rather than on skill formation … important for UK economic growth", Fuller and Unwin *op.cit.*, page 52.

[26] For a sustained comparative analysis of this issue see Ryan (1999).

[27] "A combination of paid work or work experience combined with a training element" was the best understanding of apprenticeship revealed in the 1998 survey of young people. Under half (40 per cent) were able to provide this description of apprenticeship. The remainder either gave an even vaguer response or did not know (30 per cent) (Coleman and Williams, 1998).

abandoning of any minimum fixed period for apprenticeship programmes and for NVQ to be the only qualification to be 'aimed for' in government-sponsored youth training. Employer pressure (CBI, *op.cit.*) has continued to ensure that apprentices in Britain have no entitlement to education during apprenticeship.

There is ample evidence (Fuller and Unwin, *op.cit.*) that in a small number of sectors with a tradition of apprenticeship training, schemes provided are of good quality and produce well-qualified young people.[28] But these sectors only account for around one fifth of young people on apprenticeship in Britain today. It is clear that the Modern Apprenticeship initiative has failed to spread good practice, as it exists in the traditional sectors, to sectors new to apprenticeship - such as Health and Social Care, Customer Service (sic), Business Administration, Hotels & Catering, Hairdressing and Retailing - which together account for around half of all apprentice starts in Britain and for almost all female apprentices.

This failure only serves to underline the fatal weakness of a non-statutory framework for apprenticeship, compounded by a rush to fulfil government targets with little regard to quality or local skill requirements. But it should not be assumed that all is well in the 'traditional' apprenticeship sectors where standards are high. Employers in these sectors are being damaged by the weaknesses of the scheme as a whole. Well-qualified recruits to apprenticeship are difficult to find, information about the excellent opportunities available to young people in their industries does not reach its target population and employers are unable to access government funding for apprenticeship in areas where total funds available have already been allocated elsewhere.[29]

In every other European country except Britain, employers' legitimate concern to minimise costs and maximise specific training is counter-balanced by other bodies which are accorded a compensatory role in the governance of apprenticeship by the legislative framework. In the dual-system countries, trade union representatives perform the essential role of representing the interests of employees and of apprentices themselves at every level - local to national - of the apprenticeship structure. In France and the Netherlands trade union influence is less important but the role of protecting the interests of the apprentice and of other employees is undertaken by government and by education interests.

[28] The criterion applied is two-thirds or more of all leavers gaining a full NVQ or other recognised qualification (based on Fuller and Unwin, *op.cit.*, Table 2.).

[29] For example, the electrotechnical industry estimates an annual shortfall of 35,000 apprentices that the industry needs to recruit but currently is unable to do so. Two-thirds of firms surveyed in this industry in 1998 reported vacancies/difficulties in recruitment of apprentices. (National Electrotechnical Training, 1999).

Apprenticeship was characterised above as a public-private partnership. In the British 'partnership' both trade unions and government have failed to provide sufficient compensatory counter-balance to the voice of employers in the design and day to day running of apprenticeship programmes. With only a very few honourable exceptions, mainly in the 'traditional' sectors such as engineering and electrical contracting, trade unions have done nothing to protect the interests of young people entering apprenticeship. Unlike their German counterparts they have not fought for the right to education and transferable training and unlike their Danish counterparts, they have not upheld the importance of assessment based on objective evidence. And for successive governments, the work-based training route has been all but invisible.[30] The result, as set out here, is that apprenticeship in Britain, judged as a programme, falls short of that provided elsewhere in Europe on every important measure of good practice.

[30] Fuller and Unwin (*op.cit.*) point out that the DfEE has no record of employers who provide apprenticeship places. See also Richardson (1998), "Most of his report (Dearing Report: Review of Qualifications for 16-19 Year Olds, 1996) was concerned with the two full-time post-compulsory routes…work-based learning received very slender treatment in relation to the size and complexity of its client group" and "when it came to education and training policy in general during 1994-97 it was school standards that continued to dominate media and political debate".

# References


Bertelsmann Foundation (ed.), (1999), *Vocational Education and Training of Tomorrow* Volume 1 Bertelsmann Foundation Publishers, Gütersloh.

Bierhoff, H. and Prais, S.J. (1995), 'Schooling as Preparation for Life and Work in Switzerland and Britain', Discussion Paper No. 75, National Institute of Economic and Social Research.

Brandsma, J. and Noonan, R. (2000), *Transforming the Public Provision of Training: Reorganisation or Privatisation? Long-Term Changes in Sweden and the Netherlands*, CEDEFOP, Thessaloniki (Pylea).

Bundesministerium für Bildung und Forschung (2000), *Berufsbildungsbericht 2000* Bundesministerium für wirtschaftliche Angelegenheiten (1998*) Die Lehre: Berufsausbildung in Österreich*, Vienna.

CBI (2000), *The CBI's response to the Modern Apprenticeships Consultation Document*, Confederation of British Industry, CentrePoint, London.

Coleman, N. and Williams, J. (1998), *Evaluation of Modern Apprenticeships: 1998 Survey of Young People*, DfEE Research Report 93, London.

DfEE (1998), *Evaluation of Modern Apprenticeships: 1998 Survey of Employers*, Research Report RR94 DfEE, London.

DfEE (1999), *Second Report of the National Skills Task Force: Delivering Skills for All* DfEE, London.

DfEE (2000), *Skills for all: Proposals for a National Skills Agenda*, DfEE, London.

DfES (2001), Statistical First Release 28/2001.

Down, T. (1999), *Developing Skills Policies in Six Countries*, Policy Research Institute, Leeds Metropolitan University.

Fuller, A. and Unwin, L. (2001), 'From Cordwainers to Customer Service: the Changing Relationship Between Apprentices, Employers and Communities in England', SKOPE Discussion Paper, Oxford and Warwick Universities, ISSN 1466-1535.

Hummelsheim, S. and Timmermann, D. (2000), *The Financing of Vocational Education and Training in Germany: Financing Portrait*, CEDEFOP, Thessaloniki (Pylea).

Jarvis, V. (1994), 'Smoothing the Transition to Skilled Employment: School-Based Vocational Guidance in Britain and Continental Europe', National Institute Economic Review, November.

Lassnigg, L. and Schneeberger, A., (1998), *Thematic Review of the Transition from Initial Education to Working Life Country Background Report: Austria*, OECD, Paris.

Michelet, V. (1995*), Le financement de la formation et de l' enseignement professionels en France: Portrait de financement,* CEDEFOP, Thessaloniki (Pylea).

Ministère de l'Education Nationale (2000), *Repères et Références Statistiques 2000*.

Danish Ministry of Education (1999), *The New Structure of the Danish Vocational Education and Training System,* Copenhagen.

National Electrotechnical Training (1999), *Report on a Skills & Labour Market Survey of the Electrotechnical Industry 1999*, London.

OECD (1998), *Thematic Review of the Transition from Initial Education to Working Life Country Background Report: Denmark,* OECD, Paris.

OECD (1999), *Thematic Review of the Transition from Initial Education to Working Life Country Note: Denmark,* OECD, Paris.

OECD (2000), *From Initial Education to Working Life: Making Transitions Work* OECD, Paris.

Payne, J. (2000), *Student Success Rates in Post-16 Qualifications: Data from the England and Wales Youth Cohort Study*, DfEE Research Report No. 272.

Richardson, W. (1998), 'Work-Based Learning for Young People: National Policy, 1994-1997', Journal of Vocational Education and Training, Vol. 50, No.2.

Ryan, P. (1998), 'Is Apprenticeship Better? A Review of the Economic Evidence', Journal of Vocational Education and Training, Vol.50, No. 2.

Ryan, P. (1999) 'The Institutional Attributes and Requirements of Apprenticeship: Evidence from Smaller EU Countries' University of Cambridge, mimeo.

Ryan, P. (2001), 'The School-to-Work Transition', Journal of Economic Literature, Vol. XXXIX, (March 2001).

Simon, G. (2001), 'L'Apprentissage: Nouveaux Territories, Nouveaux Usages', CEREQ Bref No. 175, Mai 2001.

Steedman, H. (1994), 'Making Decisions About Education and Training: A Note on Practice and Procedures in Careers Guidance in France and Germany', National Institute of Economic and Social Research Discussion Paper No. 55.

Steedman, H. and Hawkins, J. (1994), 'Shifting Foundations: the Impact of NVQs on Youth Training for the Building Trades', National Institute Economic Review, August.

Steedman, H., Green, A., Bertrand, O., Richter, A., Rubin, M. and Weber, K. (1996), *Assessment, Qualifications and Standards: UK Compared to France,Germany, Singapore and the US,* Centre for Economic Performance, London School of Economics, Special Report.

Training Standards Council (2000), *Modern Apprenticeships: A Survey Report by the Training Standards Council*, Oxford.

**CENTRE FOR ECONOMIC PERFORMANCE**
**Recent Discussion Papers**

| | | |
|---|---|---|
| 512 | R. Gomez<br>M. Gunderson<br>N. Meltz | From 'Playstations' to 'Workstations': Youth Preferences for Unionisation |
| 511 | G. Duranton<br>D. Puga | From Sectoral to Functional Urban Specialisation |
| 510 | P.-P. Combes<br>G. Duranton | Labor Pooling, Labour Poaching, and Spatial Clustering |
| 509 | R. Griffith<br>S. Redding<br>J. Van Reenen | Measuring the Cost Effectiveness of an R&D Tax Credit for the UK |
| 508 | H. G. Overman<br>S. Redding<br>A. J. Venables | The Economic Geography of Trade, Production and Income: A Survey of Empirics |
| 507 | A. J. Venables | Geography and International Inequalities: the Impact of New Technologies |
| 506 | R. Dickens<br>D. T. Ellwood | Whither Poverty in Great Britain and the United States? The Determinants of Changing Poverty and Whether Work Will Work |
| 505 | M. Ghell | Fixed-Term Contracts and the Duration Distribution of Unemployment |
| 504 | A. Charlwood | Influences on Trade Union Organising Effectiveness in Great Britain |
| 503 | D. Marsden<br>S. French<br>K. Kubo | Does Performance Pay De-Motivate, and Does It Matter? |
| 502 | S. Nickell<br>L. Nunziata<br>W. Ochel<br>G. Quintini | The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s |
| 501 | S. Redding<br>M. Vera-Martin | Factor Endowments and Production in European Regions |

| | | |
|---|---|---|
| 500 | Edited by<br>D. Marsden and<br>H. Stephenson | Labour Law and Social Insurance in the New Economy: A Debate on the Supiot Report |
| 499 | A. Manning | A Generalised Model of Monopsony |
| 498 | A. Charlwood | Why Do Non-Union Employees Want to Unionise? Evidence from Britain |
| 497 | M. Keil<br>D. Robertson<br>J. Symons | Minimum Wages and Employment |
| 496 | A. Di Liberto<br>J. Symons | Education and Italian Regional Development |
| 495 | S. Redding<br>A. J. Venables | Economic Geography and International Inequality |
| 494 | A. Bryson | Union Effects on Managerial and Employee Perceptions of Employee Relations in Britain |
| 493 | D. Metcalf | British Unions: Dissolution or Resurgence Revisited |
| 492 | R. Gomez<br>S. M. Lipset<br>N. Meltz | Frustrated Demand for Unionisation: the Case of the United States and Canada Revisited |
| 491 | S. Burgess<br>J. Lane<br>D. Stevens | Jobs, Workers and Changes in Earnings Dispersion |
| 490 | S. Burgess<br>S. Profit | Externalities in the Matching of Workers and Firms in Britain |
| 489 | S. Nickell<br>G. Quintini | Nominal Wage Rigidity and the Rate of Inflation |
| 488 | S. Nickell<br>J. Van Reenen | Technological Innovation and Performance in the United Kingdom |
| 487 | M. M. Tudela | Explaining Currency Crises: A Duration Model Approach |

**To order a discussion paper, please contact the Publications Unit**
**Tel 020 7955 7673 Fax 020 7955 7595 Email info@cep.lse.ac.uk**
**Web site http://cep.lse.ac.uk**