

Enterprise and Lifelong Learning



SCOTTISH EXECUTIVE

Research on Approaches to Public Funding and Development of Tertiary Education within Selected OECD Nations



**RESEARCH ON APPROACHES TO PUBLIC FUNDING
AND DEVELOPMENT OF TERTIARY EDUCATION
WITHIN SELECTED OECD NATIONS**

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CHAPTER ONE INTRODUCTION

BACKGROUND

1.1 The Scottish Executive's "Partnership Agreement"¹ of May 2003 signalled an intention to merge the Scottish Further Education Funding Council (SFEFC) and the Scottish Higher Education Funding Council (SHEFC). This report addresses the issue of providing international comparators that will help inform the design of the role, powers and scope of the new combined funding body for Scotland. The new body, while recognising the close links between HE and FE, will also have to deal with their distinctive roles and purposes. This research will provide international comparisons of modes of operation of HE/FE funding bodies. The report will then provide useful information to the forthcoming Comprehensive Spending Review and the Quinquennial Review of the Scottish Further Education Funding Council.

METHODOLOGY

1.2 The research reported here focuses on:

- The processes by which public funds are distributed to post-16 education and *public* training providers
- The processes by which research funds are distributed to universities.
- The statutory duties and powers of those public bodies or parts of government that are charged with the distribution of funds
- The non-statutory roles of these bodies and how these have evolved. This will include:
 - a) How they perform or commission analyses of national skills needs;
 - b) Their role in developing governance and management of providers;
 - c) Their role in stimulating strategic change, including changes to provision and the merger of providers;
 - d) Their role in supporting research infrastructure and centres of excellence;
 - e) How they support the exploitation of research for economic, cultural or societal gain.

1.3 The choice of countries selected for the study was determined:

- by accessibility of relevant documents and data
- by comparability with Scottish structures for the post-16 sector. Selected countries include those with comparable structures to the Scottish system through to those with quite different structures.
- by previous work carried out by members of this research team and colleagues on FE/HE links for the Scottish Executive as part of the quinquennial review

¹ www.scotland.gov.uk/library5/government/pfbs-00.asp

of HE (Osborne et al 2002) and previous work on widening participation (Morgan-Klein et al 2002). In those studies, dimensions used to choose comparator nations or regions were within the domains of geography, national and/or regional policy and institutional practice.

1.4 On the basis of the above criteria the countries included in the review were: USA, Canada, Australia, New Zealand, Germany, Finland, Norway, Sweden, the Netherlands and France.

1.5 The review was informed by the staged approach as described by Cooper (1989) for literature reviews. Further scoping resulted in definition of data categories to be included/excluded; scrutiny of existing reviews to determine their relevance in establishing categories. The process was iterative and cyclical, building knowledge and returning to reassess previously analysed material in the light of newly emerging data and understanding.

1.6 The research in itself did not involve secondary analysis of statistical data, but will be informed by such analyses.

1.7 One of our main sources of comparative information was from OECD reports, specifically the following:

- Reviews of National Policies for Education
- Education Policy Analysis series (for example Chapter 3 of the 2003 publication considers new approaches to governance in HE in the 30 OECD countries)
- Reports of the OECD Programme on Institutional Management in HE (IMHE's current work includes work on research management, institutional governance, financial management and internationalisation). Its journal, *Higher Education Management and Policy* also provided useful data.
- Statistical Data included within *Education at a Glance* (OECD 2003), and earlier versions of this annual publication.
- Overviews of specific relevant areas including the financing of tertiary education. The OECD has covered such topics in its Economic Surveys of particular countries including the 2004 survey of the UK. Similar documents exist for other countries such as New Zealand (OECD 2002).
- Centre for Educational Research and Innovation fact sheets and other related resources. CERI Objective 4 is to conceptualise and analyse the economics and the management of knowledge and the role of R&D in education, learning economies and knowledge societies. CERI Objective 5 is to examine the implications of internationalisation in both the demand for competences and the supply of education and training services.

1.8 We also reviewed on-line information from the relevant public bodies, where available. These included funding bodies and associations of tertiary education institutions (e.g. Australian Vice-Chancellors' Committee, National Association of State Universities and

Land-Grant Colleges in the US (including the work on the Kellogg Commission on their future).

1.9 There was also a range of relevant international sources of data on tertiary education that were consulted. These include *inter alia*:

- European Centre for Vocational Training (CEDEFOP) and in particular its European Training Village database (<http://www.cedefop.eu.int/>)
- European Universities Association (EUA). (<http://www.eua.be/eua/>) Publications such as those by Reichert and Tauch (2003) and Tabatoni et al (2002) provided useful overviews.
- The Eurydice Information Network on Education in Europe and in particular, the Eurybase database on education systems in Europe (http://www.eurydice.org/Eurybase/frameset_eurybase.html).

1.10 A range of other databases that contain pertinent information was consulted including ERIC, BIDS, Psychlit, SSCI and Dissertation Abstracts International.

1.11 We also explored grey literature via sources including Education-line at the University of Leeds.

EVALUATION OF DATA SOURCES

1.12 Data collected was critically scrutinised with judgements being made about whether particular material should be included or not. Criteria were established for judging the procedural adequacy of how data was generated (Cooper 1989, p.63) and to ensure the validity of the review outcome using procedures recommended by Cooper (*ibid.* p.79). Central to this process was a judgement of the soundness of the claims and their contribution to our understanding of the policy implications of particular models of decision-making as they pertain to the distribution of public funds to develop or stimulate the development of post-16 education.

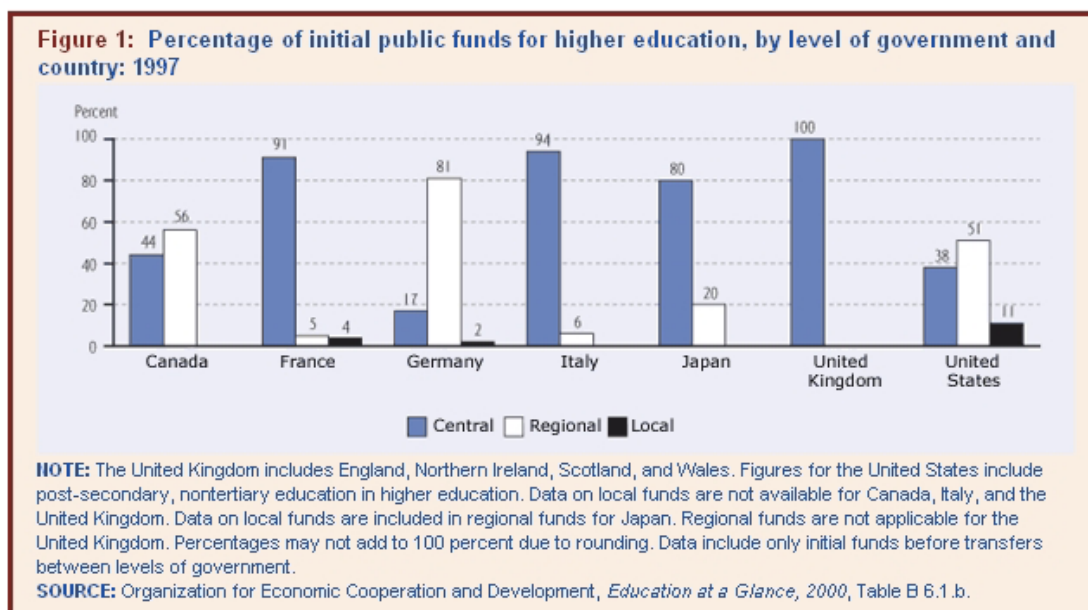
ANALYSIS AND INTERPRETATION

1.13 Sources were classified using the fields of categorisation previously indicated. They were interpreted against a template of what their possible implications might be for future national policy. The data generated is divided into five sections for each country under study:

- General Introduction
- System of Post-compulsory education
- Governance of Post-compulsory education
- Funding of Post-compulsory education
- Future Skills planning

1.14 In this opening chapter we provide summaries of the data gathered together for the ten countries and some preliminary analysis.

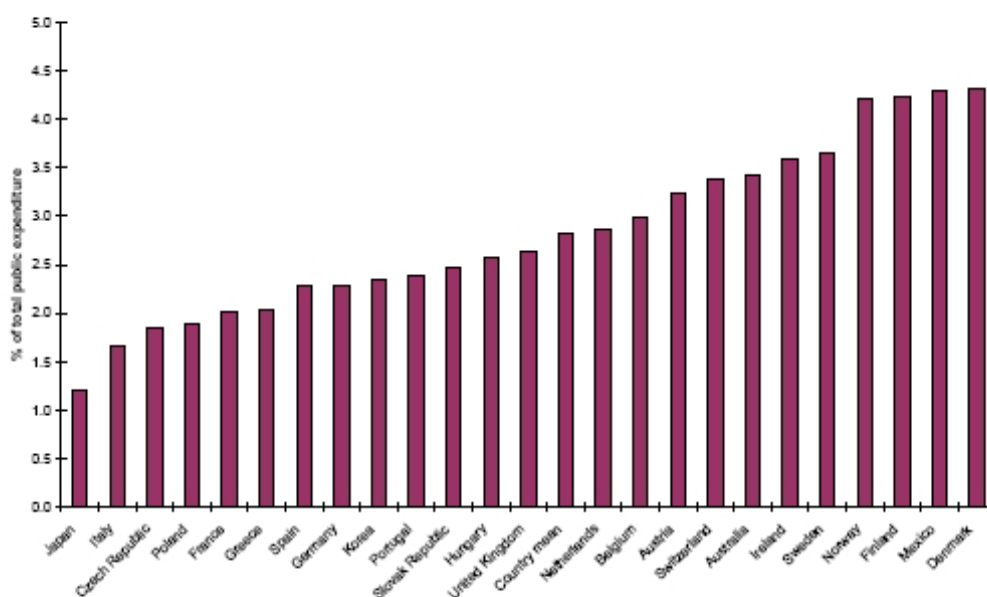
1.15 Funding is influenced by the structure of government within which tertiary education systems are embedded. There may be a number of layers of government, each with a role to play in setting the objectives, structure and funding opportunities for the sector as a whole, or for individual institutions. The power that each layer has is circumscribed by their access to resources. In turn, this depends on the constitutional arrangements between different layers of government and on the power that each layer has to manipulate and raise taxes. The number of layers of government tends to increase with country size. Figure 1.1 below shows the allocation of funds to higher education by level of government for selected countries.



1.16 The issue of state funding of the tertiary sector must be seen within the larger context of the objectives of, and constraints on, government expenditure. Spending on the tertiary sector has opportunity costs that impact on other areas of spending such as health, transport, economic development and justice. Figure 1.2 shows the share of education going to tertiary education as a share of total public expenditure. The UK allocates close to the median share of public expenditure on tertiary education.

1.17 The USA, Canada and Germany are examples where there is a large proportion of “regional” funding. These outcomes reflect the power of the states, provinces and Länder in these countries respectively and in turn stems from their particular constitutional structures. However, the US and German university systems have performed quite differently in recent years, which may suggest that it is the level of funding rather than the source which is the main determinant of success in the tertiary sector. While the UK is wrongly portrayed as allocating 100 per cent of its funding from central government, it is certainly the case that France and the UK, which are both thought of as having a strong layer of central government, maintain a tight control of funding in the tertiary sector from the centre. In small countries, such as New Zealand, there are fewer layers of government and hence the funding systems are relatively simple.

Figure 2: Public expenditure on tertiary education as % of total public expenditure (1999)



Notes:

Data is not available for Canada, Iceland, Luxembourg, New Zealand, Turkey and the United States.

Source: OECD, 2002

1.18 There is also considerable variation in the extent to which public grants to institutions are unconditional, conditional on past performance (e.g. in research) or conditional on future actions (e.g. provision of student places in specified subjects). There has been an increasing use of incentivised funding mechanisms in recent years. Some countries have used a third party to make judgements on performance and to allocate resources. These come in a variety of shapes and forms.

1.19 “Incentive compatible” allocations can thus be aimed at altering institutional behaviour in both teaching and research. In Sweden, for example, the Education Task Contract sets the minimum number of degrees to be awarded by an institution over a three-year period and also over a one-year period.

1.20 Most countries allocate funds to the higher education and to other tertiary education sectors separately. This gives politicians and policymakers the ability to influence the balance of these sectors. Some governments may also retain a direct influence on the size and direction of research spending, though others, as in Sweden, provide safeguards against undue political interference.

1.21 Financial distress affected many tertiary education institutions in the developed countries during the 1990s. A common response has been to move towards increased “cost-sharing”. On the teaching side, the parties involved have been (1) the government, or taxpayers; (2) parents; (3) students; and/or (4) individual or institutional donors. This changes the role of some stakeholders from observer to active participant. This is observable, for example, in the proposals for the Higher Education Contribution Scheme (HECS) in Australia which bears a strong resemblance to the proposals for increased tuition fees in England and Wales.

1.22 These schemes raise important and difficult questions about who benefits from tertiary education and when. This has prompted a great deal of academic research and concern about appropriate methodologies in which to evaluate education and training. A sample set of results for the return to an additional year of schooling in different countries is shown in Table 1.1 below:

Table 1.1 Cross Country Evidence on the Returns to Schooling: ISSP 1995

	Male	Female		Male	Female
Norway	2.3%	2.7%	Australia	5.1%	5.7%
East Germany	2.7%	4.5%	Spain	5.2%	4.7%
Czech Rep	2.9%	4.5%	Denmark	5.6%	4.4%
Netherlands	3.3%	1.8%	France	5.7%	6.5%
West Germany	3.5%	4.4%	Israel	6.0%	6.9%
Austria	3.6%	6.2%	Hungary	7.0%	7.2%
Canada	3.7%	5.0%	Finland	7.2%	8.2%
Sweden	3.7%	4.2%	Poland	7.4%	10.3%
Italy	4.0%	5.7%	Japan	7.5%	9.2%
Greece	4.1%	6.4%	USA	7.8%	9.8%
Russia	4.2%	5.6%	Slovenia	8.9%	11.2%
New Zealand	4.2%	3.8%	Portugal	7.9%	7.7%
Switzerland	4.3%	5.2%	Rep of Ireland	10.2%	11.6%
Bulgaria	5.0%	6.2%	Great Britain	13.0%	14.7%
Slovakia	5.0%	6.4%	N Ireland	17.7%	16.8%
			Average	5.7%	

Notes: Source Trostel et al. (2001). Estimates of the return to schooling in Portugal, France, Denmark, Finland and Greece are taken from the PURE sample described below. All PURE partners adopted a common specification and estimated the return to education using log of the hourly gross wage where available allowing a substantial dataset of returns to be collected⁵. The advantage of this is that it allows us to derive estimates from national datasets in a

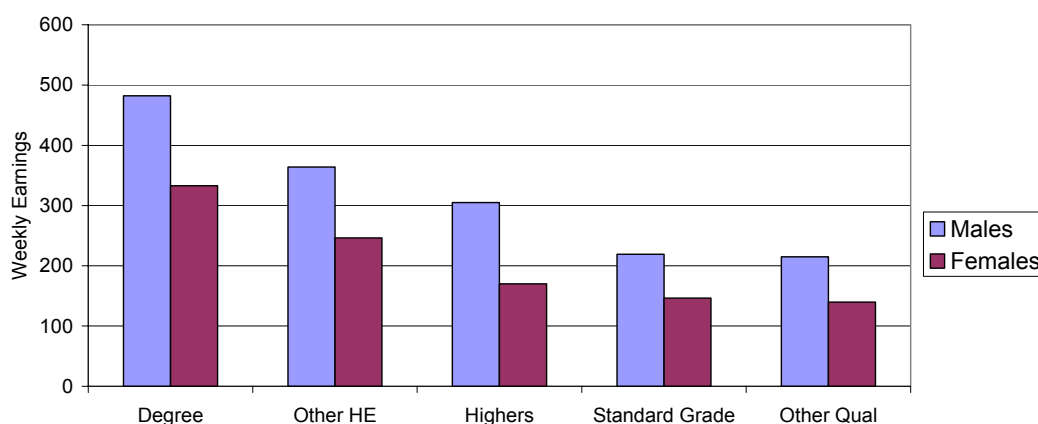
⁵ For further details see www.etla.fi/PURE

1.23 These results indicate, for example, that the average rate of return to investing in an additional year of schooling in Great Britain is 13 per cent for males and 14.7 per cent for females. These calculations are based on comparisons of the earnings of those who have left the educational system after different amounts of schooling.

1.24 Another way to analyse these data is to look at returns to particular qualifications rather than just to more time spent in full-time education. Our own work, Bell and Sarajevs (2004) suggests that Scottish graduates' returns to degrees are around 40 per cent, compared with otherwise similar, but unqualified individuals. The magnitude of this return to a degree is not surprising given the disparities between the weekly earnings of those with Scottish qualifications who work in Scotland – see Figure 1.4 below.

Figure 1.3

**Weekly Earnings by Qualification
Males and Females 1997-2002**



Source: Labour Force Survey

1.25 The UK has one of the highest rates of return to additional schooling. This in itself is an argument for increasing funding to education, but raises the question of who should contribute if the return comes principally in the form of higher wages to the individual rather than as a social return. The greater the extent that the return is seen as private, the stronger is the case for contribution by the main beneficiaries – those who receive the qualifications.

1.26 The issue of whether the tertiary sector should be funded at the regional or national level may be largely political in practice, but there are relevant economic arguments. The argument in favour of local funding is greater responsiveness to local circumstances. For example, local funding allows institutions to respond to sudden changes in the local labour market. However, some institutions may feel that the labour market in which they operate is national or even global in scope. Thus, for example, institutions which concentrate on training doctors are likely to serve a wider labour market than those providing agricultural training. Further, there are possible economies of scale and scope in the provision of tertiary education which suggests funding should be controlled from a higher governmental level. This argument is reinforced by the danger that local provision may have spillover effects on other jurisdictions. Thus, for example, a decision by all of the universities in the North of England to concentrate on the production of software engineers would have knock-on effects on Scottish providers and on the balance of demand and supply for such skills in Scotland. Recall that many of the skilled workers that have helped the Irish economy grow in recent years are return migrants who have acquired skills in the UK and/or USA. These spillover effects make it very difficult to be prescriptive about the appropriate level at which tertiary education should be funded. However, they also make clear the need for flexibility on the part of providers. Ideally this would come from the incentives that the institutions themselves face, but in some circumstances those unwilling to adapt to new realities may have to be forced to do so.

1.27 The intellectual basis of the future skills agenda is built on the new theories of economic growth. These indicate that human capital can be a key driver of innovation, technical change and hence economic growth. The argument then is that there is a

justification for public investment in human capital formation because of “spillover externalities”. In essence this means that working with someone who has a high level of human capital increases one’s own productivity and hence has beneficial impacts on economic growth (Battu, Belfield, and Sloane 2003). Although this agenda is widely accepted in bodies such as OECD, the extent to which different countries use it as a framework within which to generate policy initiatives varies greatly.

1.28 It is not clear that policy formation in this area should be the prerogative of the suppliers of human capital. Providers do not tend to be very well-informed about the labour markets in which their graduates operate. Hence development of a future skills agenda has to be based on co-operation between the key stakeholders in this area. These stakeholders include employers, public and private sector human capital providers, trainers and regional and national development agencies, etc.

1.29 There are also tensions between those who would argue that the spillover externalities which justify the argument of market failure, and hence a justification for government intervention, are relatively small. Hence it is better for the public sector not to get involved in the future skills agenda lest it distort private sector outcomes and contribute to a reduction in the rate of return on investment in tertiary education. Against this is the argument that skills development necessarily takes time and that the private sector will not accurately anticipate future skills needs. Public sector involvement is then justified if it is better informed about labour market developments. Some countries are so large and the consequent information requirements so great that it is difficult to conceive of some overall workforce strategy. Thus, for example, in the USA more interest on workforce planning exists at the state level rather than for the USA as a whole. Again, the problems of sub-national planning are that unintended spillover effects can result.

1.30 The workforce need not necessarily originate in the home country. Some countries do not view their own tertiary sector as being capable of producing the necessary skilled labour to meet the demands of the modern economy. As a result, they have adopted policies designed to attract skilled immigrants. For countries, such as Scotland, with falling birth rates, immigration and skills policies cannot be treated as independent. Among the examples discussed in this report, Australia and Canada are relevant examples who are using immigration policies to enhance their skills base.

SYSTEMS OF POST-COMPULSORY EDUCATION

1.31 In the case of the HE element of tertiary education Scott (1995, p.35) suggests that systems can be classified as dual, binary, unified and stratified. Both dual and binary systems contain alternative forms; in the case of the latter alternative institutions have been set up to complement and rival existing traditional structures. In unified systems, there is no formal differentiation of institutions and in stratified systems institutions are allocated a role within a total system.

1.32 This categorisation forms an important basis for the range of countries proposed. So simply to quote some examples: Sweden represents a highly unified structure, Germany’s dual system of both universities and *Fachhochschulen* (universities of applied sciences introduced in 1970/71) is of course very well known and in the USA, Canada and Australia various forms of stratification exist. However as Haug (1999) has commented in documents

produced as part of the Bologna process², aiming to harmonise higher education structures in Europe, there is:

- 'extreme complexity and diversity of curricular and degree structures in European countries', and
- 'in countries with a binary system, the line of divide between the university and non-university sectors (and their degree structure) is becoming increasingly blurred'.

1.33 Other countries included in our selection provided a variety of models of non-advanced vocational education and training beyond school.

1.34 The listing below presents a summary of the different structures that are represented in the countries that we selected for study. We have drawn upon a number of overviews of structure, including the useful summaries and tables provided by Kirstein (1999) for European countries, a number of which are replicated in part below.

Australia

1.35 There are four sectors of post-compulsory education and training: senior secondary school, adult and community education (ACE), vocational education and training (VET) and higher education (HE). A unified national system of HE was created in 1988, with the amalgamation of colleges of advanced education (the sector equivalent to polytechnics) into 37 publicly funded universities in Australia, all of which are self-accrediting. VET consists of publicly funded institutes of Technical and Further Education (TAFE), private providers, and community based, not-for-profit providers. However, TAFE is the largest component, constituting just over 78% of all enrolments and almost 88% of delivery. In certain states, some short-cycle HE level provision of up to two years is offered within TAFE with the possibility of transfer into universities, thus providing some stratification in the system. This provision is limited in scale.

Canada

1.36 Canadian higher education is at least partially *stratified*. Community colleges provide two-year programmes of HE that articulate into university level four-year programmes, and unlike their US counterparts, this is their primary role, so much so that they are often referred to as 'commuter colleges'. In some Canadian jurisdictions, other terms as used for Community Colleges ("regional college" in Saskatchewan, "public college" in Alberta, and *Collège d'enseignement général et professionnel* (CEGEP) – College of General and Vocational Education or simply "junior college" in Québec). The other elements of the stratum are university colleges offering undergraduate degrees and universities offering two-tier up to Masters level and higher levels of study.

1.37 Community colleges also offer three other forms of post compulsory provision: career and technical (with specific programs targeted for work); vocational ("short applied

² see <http://www.sgroup.be/ga2001/Bolognaprocessinfodoel.pdf> for a summary of the Bologna Declaration of 1999, the Salamanca Convention of European Higher Education in 2001 and the Prague meeting of Ministers of Education of 2001.

programs”): and adult basic education (for people who have completed high school graduation requirements).

France

1.38 Higher education before the doctoral level follows primarily a *binary two-tier*³ system. However, the system of higher education is characterised by the coexistence of a large number of different types of higher education institutions, each with its own admission requirements and offering a wide range of degrees. The university sector consists of *traditional universities* including various more specialised faculties, e.g. *Instituts Universitaires de Technologie (IUT)*, *Instituts Universitaires Professionnalisés (IUP)* and others. Other types of higher education institutions exist such as the *grandes écoles* of management and engineering institutions. Admission to these institutions is selective and highly competitive. They offer specific types of qualifications. Most *grandes écoles* are public institutions, but there are also a number of private institutions with state recognition. The non-university sector includes, among others, the *Sections de Techniciens Supérieurs* offering two-year advanced technical training programmes leading to the *BTS /Brevet de Technicien Supérieur*. The non-university sector also includes various institutions for health training.

1.39 There is a complex network of non-advanced initial and continuing vocational provision in France controlled at regional level and offered through private training organisations. Actions relating to apprenticeship training for the 16-25 age groups and towards jobseekers receive high priority.

Finland

1.40 Higher education follows a *binary (dual) model*. In the university sector between 1994 and 1996 a new *two-tier degree structure* was adopted in most university disciplines. The aims were to allow students to complete the first degree, the *Kandidaatti*, in three years and the *Maisteri* after two years extra studies, and that at least 75 per cent of the students should continue to do a *Maisteri* programme after the *Kandidat* degree. The purpose of the degree reform was to establish an internationally compatible degree structure providing students with the opportunity to combine studies across disciplinary and institutional boundaries, and the reform has given room for more flexibility in the choosing of subjects and study fields. The *Ammattikorkeakoulu* (polytechnics) are the non-university sector in Finland, which has undergone a major reform in the 1990s. The *ammattikorkeakoulu* were formed by upgrading the specialised institutions, which previously offered vocational higher education, and by merging them to form new multidisciplinary institutions. Their aim is to raise standards of education, to make vocational education more attractive and to improve the international compatibility of vocational education. Degree programmes are of three to four years' duration.

1.41 Non-advanced vocational education is principally provided by local authorities, municipal federations and private foundations. Initial vocational training is both broad-based and job-specific and based around a credit framework, and is built upon the school

³ A two-tier system is one in which study up to Masters level is divided into two sections (undergraduate/postgraduate) as is typical in the UK. This contrasts with a one-tier system of the same period of duration as in Germany.

curriculum. There are competence-based examinations that allow the attainment of initial vocational qualifications mainly directed towards adults. Initial vocational training can be used to gain entry to HE, and the development Plan for Education and Research envisages that up to one-third of entrants to polytechnics will take this route.

Germany

1.42 Higher education follows a *binary (approaching trinary) one-tier structure* up to the doctoral level. In the university sector degrees from universities are the *Diplom, Magister or Staatsexamen* of four to six years' study including a thesis with a duration of a half to one year. Diplom studies are characterised by concentration on the broad range of the main subjects aiming at a specific professional field. Magister studies concentrate on two or three subjects, primarily in the arts. Staatsexamens relate to fields of regulated professions. Fachhochschulen (universities of applied sciences), offer primarily professionally oriented courses in engineering, economics, social professions, administration and design. The standard study period is four years including one or two practical semesters and a *Diplom* thesis of three to six months' duration. Students are granted the title *Diplom (FH)*. Graduates from *Fachhochschulen* may, under certain conditions and eventually after extra exams, be admitted to doctoral studies.

1.43 There are also a number of bachelor's/master's programmes offered in Germany by foreign institutions. The amended University Act of 1998 provides for the national introduction of first and second degrees leading to Bachelor's degrees (three to four years) and a following Masters degrees (one to two years) as well as an accreditation system at universities and at the *Fachhochschulen*. These degrees may be offered alongside the regular above-mentioned traditional degrees.

1.44 Initial vocational training is workplace-led and predominantly practical by stressing the importance of work experience during the training period. This Dual System (duales System) is an internationally well-known and perhaps unique feature of German vocational education. In certain Länder, *Berufsakademien* (professional academies) form part of the tertiary sector and combine academic training at a *Studienakademie* (study institution) with practical professional training in the workplace, thus constituting an 'academic' version of the dual system. The *Berufsakademien* are not strictly simply vocational schools and should be classified as a third arm of higher education with a vocational bent.

The Netherlands

1.45 Higher education up to the doctorate follows a *binary one-tier model* at universities and *hogescholen*, although it is currently being amended to a two-tier system in accordance with the Bologna Declaration. In the university sector the first degree at universities is the *Doctoraal* accompanied by the title *Doctorandus, Meester or Ingenieur*. The degree is awarded after usually four to five years of study in a doctoral programme. The first year of study includes a number of courses necessary for the chosen subject area; it is concluded by a *Propedeuse* examination. Hogescholen (universities of professional education) offer professionally oriented programmes (*HBO*) in all fields and award the title *Ingenieur* or *Baccalaureus (bc)* after four years of study.

1.46 A network of regional training centres (ROCs) provides a complete range of adult and vocational training. Adult education unlike vocational education aims not to train students

for a particular occupation but to provide a solid foundation for vocational and secondary education courses and enable adults to participate in society (self-reliance).

New Zealand

1.47 There is a *multi-tiered* Tertiary education system in New Zealand with a number of providers, up to Masters level, both competing and collaborating from basic Technical and vocational education. There are five principal types of providers: universities; Institutes of Technology and polytechnics; Colleges of Education; *wānanga* (Māori tertiary education institutions); and Private Training Establishments. The system although not explicitly binary has until the end of the 1990s been highly competitive and market-driven. Since (with the exception of doctoral work, the exclusive preserve of universities) most providers offer most levels of provision, New Zealand therefore presents itself as an unusual case.

Norway

1.48 Higher education follows a *primarily binary two-tier model* before the doctorate and a *one-tier doctorate model*. The present structure was introduced in 1994 with the merger of 98 public colleges into 26 *statslige høyskoler* (state colleges) and in January 1996 with a new common act regulating both universities and colleges. The differences between the universities and the non-university sector are not as clear as in other countries that have a binary system, in as much as:

- state colleges have been given the formal right to award doctor's degrees depending on individual recognition by the Ministry of Education,
- some of the degrees awarded by universities and the state colleges are similar, e.g. the *Cand. Mag.* degree. State colleges may also be given the right to award higher degrees.
- credit transfer from non-university to university programmes is well developed.

1.49 In the university sector the usual first degree is the *Cand. Mag.* after normally four years of study (three and a half years in Maths and Natural Sciences). Studies are usually concentrated on two to three subjects including a major of at least three semesters. The programme starts with half-a-year *Philosophicum*. The second degree is the *Candidatus* degree after normally two years of further studies in one of the subjects of the *Cand. Mag.* In the *Statslige høyskoler* (the state colleges) the majority of the shorter, non-university courses consist of an integral study period and aim at a particular profession: Candidates get a diploma with the professional title. Most of these programmes are of three to four years' duration. It is also possible to follow programmes which correspond to university programmes, i.e. in arts, social science, maths, natural sciences and leading to the *Cand. Mag.* degree. The *Philosophicum* is not required for the *Cand. Mag.* degree from the state colleges. *Høgskolekandidat* (studies of two to three years' duration) is a lower academic qualification - not obtainable from universities.

1.50 Non-advanced tertiary education is offered in a range of ways for adults. These include non-governmental study associations: folk high schools; separate sections of upper secondary schools that offer labour market training; basic education within municipal adult

education centres and sections of primary and lower secondary schools; upper secondary level at sections of upper secondary schools and county-based adult education centres.

Sweden

1.51 Higher education follows a *unitary two-tier model* up to the doctoral level. Higher education is organised according to a modular credit basis allowing students to build up their degree or other qualifications by selecting self-contained modules. The appropriate degree is awarded after accumulation of the required number of credits in appropriate combinations and after the student has passed the required exams for each module. There is normally not one final exam for a specific degree. Study periods are not expressed in years but in credit points. There are three types of first final degrees: *The Högskoleexamen*, which requires at least two years of full time study; *The Kandidatexamen* which requires at least three years of full-time study and at least one and a half years of study in the major subject including a thesis of at least ten Swedish credit points (one point – one week). The *Kandidatexamen* can be of a general academic nature or it can be of a professionally oriented degree. The *Magisterexamen* requires four years of full time study including two years of study in the major subject and a thesis work of normally half a year's full-time work (twenty credit points).

1.52 There is also a wide range of activity in Sweden termed *Adult Education* for those aged 16 and over, consisting of municipal adult education, municipal adult education for adults with learning disabilities, Swedish tuition for immigrants, Flexible Learning and post-secondary vocational education. The Labour Market Board is responsible for labour market training intended in the first instance for unemployed adults in need of retraining or further training and education. Post secondary advanced vocational training for adults is also available in the scheme for advanced vocational education and in municipal adult education in terms of further adult education, as well as in labour market training programmes.

USA

1.53 On one level the structure of the higher Education system of the USA is highly complex with a vast array of 4,182 institutions enrolling 14.8 million students. Of these institutions approximately 59% are private (either non-profit or for-profit), and 41% are public (responsible to and funded primarily by state and local governments). Most (76%) students are enrolled in public institutions and almost half of these are enrolled in public two-year community and technical institutions. Thus it is a *stratified* system with the two-year institutions (Community Colleges) providing in many cases a route to four-year degree level studies at universities or colleges. Two year programmes are not simply routes to further study: in addition to this *collegiate* route, the Associate degrees at Community Colleges also take the form of directly vocationally relevant awards, the so called *career* route. Overall the route to Masters could be described as occurring for many students within a three-tier stratified system. Community Colleges also provide non-advanced vocational education. Post-secondary vocational education is offered at several types of institutions, including public and private, and four-year and less-than-four-year post-secondary institutions.

GOVERNANCE OF POST-COMPULSORY EDUCATION

1.54 A number of models of governance are displayed across the countries surveyed.

1.55 In the majority of the 10 countries there is legislation at national level governing post-compulsory education, with, in certain cases, considerable devolution to state or provincial government. In some countries a range of intermediary bodies are established between government and institutions, and without exception the particular responsibilities of institutional providers are well-defined.

1.56 Devolution is perhaps at its most extensive in Canada where administration of all education is vested with the provinces and territories. In Australia HE is directly funded by and accountable to the Commonwealth government, whilst the states have primary but not exclusive responsibility for the VET, school and ACE sectors. In Germany, the Federal Government has general competence governing the development of the higher education system and major organisational principles such as staff structure and admission procedures. However it is the *Länder* (federal states), which according to the German Constitution have to act on Federal principles, as well as administering the school system and the post-academic and further training of teachers. In the USA, the federal government plays important but narrowly defined roles in establishing basic Constitutional protections and legal requirements in areas such as civil rights, the environment, employment policy, and in funding student financial assistance and research. In the 50 states of the US, there is a huge diversity of approaches, which can best be described as lying along an extensive continuum of involvement between co-ordination and governance. Amongst larger countries it is perhaps in France where there still is greatest centralisation of power. Even though there is devolution of responsibility to communes, *departements* and regions for certain aspects of education, the State still exerts considerable power. In the case of Higher Education, the Ministry for example defines curricula, recognises national diploma and allocates teaching and research posts.

1.57 Not unsurprisingly in most smaller countries, systems exist whereby a ministry controls and regulates post-compulsory education and provides direct funding to institutions without extensive local devolution. Such is the case in Finland, Holland, Norway and Sweden. In some cases, there is some devolution of responsibility, such as in Norway where aspects of vocational education are the responsibilities of counties.

1.58 In some countries intermediary bodies have been set up to advise government. So for example in Finland, the Ministry is assisted by the National Board of Education in matters relating to vocational institutions and adult education. In France there is an extensive rung of advisory bodies especially in relation to vocational education. Perhaps one of the most interesting examples of the use of an intermediary body amongst the countries we have considered is New Zealand with its Tertiary Education Commission (TEC), which advises government on strategy and education priorities for the whole of post-compulsory education, including private providers. It uses a system of charters and profiles as the basis for funding negotiations with all providers.

1.59 In each of the countries we have considered there are clearly defined roles for institutions delivering post-compulsory education, and these have greater or lesser autonomy in doing so from country to country. It will be evident, however, that systems of governance are not static and we have highlighted this in some detail the Swedish model. There decentralisation of decisions from Government to the institutions was expected to bring about a better use of resources, and incentives have resulted in making institutions use their resources more efficiently.

CHAPTER TWO SYSTEMS OF EDUCATION

THE SYSTEM OF POST-COMPULSORY EDUCATION IN AUSTRALIA

Background

2.1 The Australian section describes a tertiary education system that is in many ways similar to the UK; its recent history having many close parallels. This section therefore focuses on issues that have arisen and the mechanisms that have been put in place to effect reform of the tertiary sector in Australia. Below we describe the historical evolution of this system. The most significant recent reforms have occurred since the Labour government 'White Paper' (Dawkins) reforms from 1988, and the Conservative Coalition government's push for even greater levels of deregulation of the sector since its election in 1996.

2.2 Some key statistics on Australian tertiary education are contained in Appendix 1. The tables show the share of government expenditure and of GDP going to support tertiary education. The final table shows that Australia spends well below the OECD average in student support on higher education and slightly less than the UK as a whole.

2.3 Australia is a federation of relatively independent states (now six states and two territories). The "Commonwealth of Australia" was formed as a federation of the states in 1901. The Constitution largely defines the powers of the Commonwealth - everything not specifically assigned to the Commonwealth remained a state power. (This is similar to the notion of "reserved" powers in Scotland).

2.4 Commonwealth powers include: defence, foreign affairs, customs, post, currency, banking, immigration, citizenship, etc. State powers include: education, transport, health, taxation, public order, land, mining, agriculture, etc.

2.5 The Commonwealth can make financial grants available to the States for specific purposes. The Commonwealth Grants Commission (CGC) allocates Commonwealth funds to the states to support their spending programmes. In the 1999 CGC Review, the Higher Education category comprised expenditure by State governments on administration, inspection, support and operation of educational programs leading to a university first degree, post-graduate degree or other higher education including research programs.

Structure of the Post-Secondary Education System

2.6 For the structure of the education system in Australia, see Appendix 2.1.

2.7 Post-secondary education in Australia is divided into:

- Higher education (i.e. the universities, graduate business schools, theological colleges, etc.)
 - 45 major institutions (mostly public) and 85 other institutions
 - approx 750,000 students
 - approx 75% undergraduate and 21% postgraduate. The remainder are mainly taking "enabling and non-award courses".
 - high degree of autonomy and self-accreditation
 - comparatively even standards in outcomes (degree rankings, etc.).

- Vocational education and training
 - 3,000 institutions (1000 state Technical and Further Education [TAFE])
 - 1.5M students (75% at TAFE)
 - 60% state-funded, 25% federal-funded. The remainder either support themselves or are supported by their companies.

2.8 University entrance is based primarily on a state-by-state end-of-school assessment system (examinations/assignments) leading to a nation-wide Tertiary Education Ranking (TER).

2.9 Universities were established by Acts of the state parliaments. The early models were UK universities, especially Edinburgh and London. After World War II, there was a large surge in enrollments (32,000 by 1948) as the Commonwealth paid for places for ex-servicemen. In 1951 the Commonwealth began to make small direct grants to universities and provided a system of competitive "Commonwealth Scholarships" covering fees and (means-tested) living expenses. There was a large parallel growth in other (state-funded) post-secondary institutions such as technical and agricultural colleges, teacher training colleges and institutes of technology.

2.10 In 1964 the Commonwealth moved towards a "binary" system (mainly as a means of funding significant higher education expansion and broadening participation at an affordable level) in which the Universities would provide bachelors and higher degrees and undertake research, while the Colleges of Advanced Education (CAE) were based on the institutes of technology, and better technical colleges. Their function was to provide diplomas and bachelors degrees and vocationally oriented courses. These reforms had to be implemented by the state governments.

2.11 In 1974 the Commonwealth government assumed full funding responsibility for universities and CAEs, abolished all student fees and made commitments on universal access to tertiary education for qualified students. However, the relative autonomy of institutions persisted and government intervention was limited to lesser issues such as controlling numbers in medical courses.

2.12 By the mid-1980s:

- funding was relatively static;
- the CAEs had expanded offerings to include Masters degrees, and in some cases doctorates;
- the larger CAEs were developing better research records than some universities;
- two state governments broke ranks and converted their major CAEs into universities, and others were poised to follow.

This led to a complete restructuring of the sector starting from 1988 (the Dawkins reforms).

- the abolition of the binary system in favour of a "national unified system";
- inducements to universities and CAEs to convert to the system and for mergers leading to fewer larger "more efficient" institutions. Membership of the UNS was required in order to be eligible for growth places and other Commonwealth funds. Membership required a minimum sustainable student load of at least 2,000 EFSTU (Equivalent Full-time Student Unit) (as well as commitment to certain principles – equity, research management, credit transfer, etc.). Commonwealth also put forward its views on other minimum size limits – at least 5,000 EFTSU for some specialized research activity; at least 8,000 EFSTU for broad-based research activity. (The notion of economies of scale arose from the influential Hudson Report of 1986 – *Review of Efficiency and Effectiveness in Higher Education* by the Commonwealth Tertiary Education Commission, but was criticised by many observers – including Peter Karmel and the AVCC (Australian Vice-Chancellors' Committee) leadership as having no basis – 'the cult of bigness' was a derogatory term used at the time.) Government notionally left merger decisions in the hands of the institutions concerned but facilitated and provided assistance funds. Significant financial incentive and the prospect of improved status provided the incentives for the CAEs to seek merger. For universities there was some Ministerial pressure – for example, RMIT (Royal Melbourne Institute of Technology) was threatened with penalties that amounted to millions of dollars at the time. Eventually, implementation was completed under the auspices of an Amalgamations Task Force that had been set up to advise Minister Dawkins on the allocation of assistance funds (National Board of Employment, Education and Training (NBEET) 1989, and Penington, 1992). When fully implemented the 18 universities and 47 CAEs in 1985 had become 30 universities in 1991 and 35 by 1994.
- a significant increase in students, from 420,000 in 1988 to 730,000 in 2001.
- a major change in research funding from university block grants to competitive project grants (20-30% success rate). Remaining block grants were based on measured research output.
- forced overthrow of inefficient "collegial" management practices and mandated introduction of strategic planning, vision and mission statements, etc.

2.13 The introduction of income-contingent loans, pressure on universities to run full fee graduate programs and other income generating and fee for service activities means that the Commonwealth government directly contributes only 45% of the recurrent income of universities (derived from DEST, 2002a: table 1).

Key Bodies

The Department of Education, Science and Training (DEST)

2.14 This is the Federal ministry with responsibility for education in Australia. Its 2002 Corporate Plan outlines its goals:

- students achieve high quality foundation skills and learning outcomes from schools;
- individuals achieve relevant skills and learning outcomes from post-school education and training for work and life; and
- social development and economic growth are advanced through:
 - a strong science, research and innovation capacity; and
 - international engagement in science, education and training.

2.15 These objectives are supported by the Agency Budget Statements, which show how funding will be allocated to support particular outcomes which stem from the above vision. Effectiveness measures have been developed to determine how far the desired outcomes are being realised⁴.

2.16 DEST deals directly with institutions – in such issues as the Institution Assessment Framework (see below). There is no third party responsibility.

The Australian National Training Authority (ANTA)

2.17 ANTA is an Australian Government statutory authority established in 1992 to provide a national focus for vocational education and training (VET).

2.18 ANTA's mission is to ensure that the skills of the Australian labour force are sufficient to support internationally competitive commerce and industry and to provide individuals with opportunities to optimise their potential.

2.19 ANTA reports to an industry-based Board and is an administrator and adviser. It advises the ANTA Ministerial Council (MINCO) of Australian Government, state and territory Ministers responsible for vocational education and training on:

- VET policy, strategy, priorities, goals and objectives nationally; and
- VET plans which states and territories develop each year. These plans detail how states and territories propose to meet national priorities, goals and objectives.

The Standing Committee on Education and Training

2.20 This committee is a committee of the House of Representatives. It has a wide remit to report on issues that affect education and training. Unlike the case of Enterprise Transport

⁴ See http://www.dest.gov.au/budget/PBS/2003/pdf/b_part_c.pdf.

and Lifelong Learning in Scotland, its remit does not extend to employment, workplace relation or enterprise issues.

2.21 The committee has recently inquired into the appropriate role of TAFE (Technical and Further Education), concerning the perceived increased overlap between higher education and TAFE.

The AVCC

2.22 The Australian Vice-Chancellors' Committee (AVCC) is the council of Australia's university presidents.

2.23 The AVCC advances higher education through voluntary, cooperative and coordinated action. The Committee is non-partisan and exists exclusively for educational purposes. Its continuing aim is to serve the best interests of the universities and, through them, the nation.

2.24 The AVCC is a forum of Vice-Chancellors to:

- Support Vice-Chancellors in the performance of their roles;
- Promote the needs, interests and purposes of Australian universities and their communities to government, industry and other groups;
- Develop policy positions and guidelines on higher education matters through discussing higher education issues, including teaching, research and research training;
- Advance internationalisation of Australian universities;
- Provide information for and about Australian universities;
- Provide services and programs to universities including the negotiation of common purchasing arrangements.

Providers of Higher Education

2.25 There are now 44 self-accrediting higher education institutions in Australia and 40 of these are universities. In addition to these institutions there are over 100 private education providers accredited by State and Territory Governments offering higher education courses. The Australian Government's higher education programme is designed to support a diverse and accessible higher education sector of international standing meeting Australia's social and economic needs.

Providers of Non-advanced Tertiary Education

2.26 About 80 Technical and Further Education (TAFE) institutes operate on over 300 campuses around Australia, delivering vocational and personal enrichment programs to more than 1.2 million people per year. TAFE infrastructure is estimated to be worth between \$6 billion and \$7 billion and expenditure on vocational education and training is more than \$7

billion per annum. Just over \$3 billion is publicly funded, of which the Commonwealth provides about one-third.

2.27 VET consists of publicly funded institutes of Technical and Further Education (TAFE), private providers, and community based, not-for-profit providers. However, TAFE is the largest component, constituting just over 78% of all enrolments and almost 88% of delivery (NCVER 2003). The Commonwealth government uses its 36% share of government funding towards VET provision (with the remainder coming from the states) as a policy lever to drive its reforms (DEST, 2002a: Table 1). A national VET system was constituted in 1994, when the Commonwealth and state governments agreed to jointly establish the Australian National Training Authority (ANTA). All VET systems are required, as a result of national agreements, to implement nationally endorsed training packages based on competency-based training. The Australian Quality Training Framework (AQTF) was developed by the National Training Quality Council (NTQC) of the Australian National Training Authority (ANTA) Board in conjunction with States and Territories, the Commonwealth and industry and endorsed by Ministers for vocational education and training on 8 June 2001. All VET systems are required, as a result of national agreements, to implement nationally endorsed training packages based on competency-based training. These are similar to the National Vocational Qualifications in England. There are no equivalents to the English General National Vocational Qualifications.

2.28 The key objective of the AQTF is to provide the basis for a nationally consistent, high quality vocational education and training system. The standards of the AQTF are in two parts: 'Standards for Registered Training Organisations'; and 'Standards for State and Territory Registering/Course Accrediting Bodies'.

2.29 The Framework requires training organisations to be registered as a Registered Training Organisation (RTO) before it can issue AQF qualifications in the VET sector. Similar registration requirements are placed on higher education institutions to operate in Australia. Successful registration also permits the organization to deliver the associated training and/or undertake the associated assessment. To obtain and maintain registration, RTOs must meet the 'Standards for Registered Training Organisations' (ANTA 2001, pp1,2).

2.30 The ACE sector is the least funded and most diffuse of the four sectors of post-compulsory education and training, with varying levels of government support (Golding *et al.*, 2001). ACE offers a range of programs, which include accredited VET qualifications. It consists of small and dispersed community-based not-for-profit providers. In spite of this, it is of central importance in re-introducing adults to study and in providing pathways to further study, although it has not yet been mapped into pathways frameworks in any meaningful way. It is the Cinderella of post-compulsory education and training (Senate, 1991; Golding *et al.*, 2001).

Collaboration between TAFE and Universities

2.31 Leesa Wheelahan (2000) has written extensively on the relationship between TAFE and HE, and provides a very useful picture of a range of issues that pertain to collaboration. Of particular interest in this context are the dual sector universities which combine TAFE and university study in one organisational setting. Five dual sector universities exist in Australia, 4 in the state of Victoria. However as Wheelahan has commented 'collaboration between TAFE and higher education is constrained by the systemic impediments that derive from the

existence of the two sectors, impediments that have not been overcome by the existence of the Australian Qualifications Framework. Where they exist, collaborative arrangements are expensive to maintain and time consuming. They have not been supported by government policy or regulatory arrangements, and they have not been financed. Furthermore, they are not included as performance indicators and accountability arrangements in each sector. This tends to reduce the time and attention institutions are able to spend on developing collaborative arrangements'. She has also suggested that the dual sector universities 'are required to expend considerable resources disaggregating and arbitrarily allocating student load, staff, and financial and capital resources between each sector, to meet reporting requirements'.

2.32 She has also commented that there exist a number of obstacles to collaboration between single sector TAFE and higher education institutions, and between the sectors at dual sector universities, including:

- Competition between the sectors for students, particularly in areas where participation rates are relatively low and levels of demand quite weak; incompatible assessment procedures in both sectors that are derived from the different curriculum models in each;
- The ungraded assessment of VET/TAFE courses disadvantages TAFE students seeking entry to higher education courses on the basis of competitive entry;
- The tightly centralised model of profile negotiation in the VET sector, which limits the freedom of TAFE to move load and collaborate with higher education;
- Finally and most importantly, the different cultures in each sector, the mutual suspicion by each of the other, which is often driven by the different industrial awards and conditions in each sector, and the status differential between TAFE and higher education. (Wheelahan 2000).

Dual sector awards

2.33 Wheelahan has also reported on the two types of cross-sectoral awards in Australia: dual sector awards and nested awards, which she describes as follows.

2.34 Dual sector awards combine an award from the TAFE and higher education sector and are offered sequentially or concurrently. They combine complementary courses in TAFE and higher education and students graduate with both awards in less time than it would take to do each individually through cross crediting common study relevant to both awards. Nested awards or articulated awards are sequential programs that start in TAFE and conclude in higher education and have various exit and entry points. Students pay TAFE fees for the component taught in TAFE and HECS (Higher Education Contribution Scheme)⁵ for the component taught in higher education'.

⁵ The Higher Education Contribution Scheme (HECS) was introduced by the Labour Government in 1989 and was based on the use of a deferred tax debit scheme dependent on the load of the course undertaken and capacity to pay. Students received a zero-interest loan to pay their fees which were then paid through the tax system in instalments if personal income exceeded a threshold value. Since its introduction, there have been changes to HECS that include a reduction of the income threshold beyond which it is payable, and the introduction of a differential contribution according to discipline studied which includes a link the earning potential of graduates in particular disciplines. See 2.44 for more details.

2.35 She has argued that both types of award have the potential to meet current gaps in provision, stating that: “Dual sector awards have the capacity to be tailored to meet emerging labour market needs by combining relevant courses in both sectors, for example, computing and accounting. Nested awards have the potential to offer access to higher education for students who previously have not been able to do so. Progression from one level of study to the next is guaranteed provided the standards of performance are met, rather than the achievement of a tertiary entrance rank. Students do not have to commit for a minimum of 3 years study at once, as they can enter and exit at various points, with credentials that enable them to work. Moreover, nested awards offer students the possibility of obtaining a credential early in their study and combining work in their chosen area with study, thereby enriching both. This may be particularly attractive to students who, for whatever reason, have not yet developed aspirations to tertiary study and may be an effective tool in areas where there are low levels of participation and low levels of demand for tertiary education. Nested awards are also particularly appropriate for upgrading the skills of para-professionals to professional”.

2.36 However for largely administrative reasons, it appears to be very difficult to develop such courses and learning pathways, since considerable internal barriers exist that require considerable negotiation to break down. Furthermore as Chapman, Doughney and Watson (2000) report, the dual sector universities are spending considerable amounts to develop student information systems that can accommodate the two sectors and cope with dual sector provision.

Australian Qualifications Framework

2.37 The Australian Qualifications Framework (AQF) was created in 1995 (see Table 2.1). The AQF is the only systemic framework that spans post-compulsory education and training in Australia.⁶ Unlike the qualifications frameworks in England and Scotland, the AQF has no accreditation or recognition functions, and nor does it have quality assurance functions (Keating, 2000). The AQF designates which qualifications are offered in each sector and the descriptors that accompany each (Australian Qualifications Framework Advisory Board [AQFAB], 2002).⁷ It does not *prohibit* one sector from offering a qualification that is generally offered by the other, provided the sector is able to adhere to the accreditation and other requirements that accompany the issuing of the qualification. Generally, however, institutions do not receive public funding for any qualification they may offer outside their sector.

2.38 The AQF has, based on agreement between the key bodies in both sectors, promulgated credit transfer guidelines and has developed recognition of prior learning principles and operational guidelines which are currently progressing through the ministerial endorsement process. However, while these guidelines are valuable, at most they can be regarded as recommendations (particularly for self-accrediting universities) and it remains to be seen whether these initiatives, while important, will contribute to seamlessness.

⁶ The Commonwealth Department of Education, Science and Training is internally divided with separate departments for VET and HE. The AQF Advisory Board is therefore a crucial source of advice to government spanning all of post-compulsory education and training.

⁷ In some states ACE accredits its own programs – where there is an independent statutory board – however this does not happen in all states. ACE qualifications are subsumed under VET qualifications, are counted as VET qualifications, and are not a separate component of the AQF.

Table 2.1 Australian Qualifications Framework

Schools sector	Vocational Education and Training sector	Higher Education sector
		Doctoral degrees
		Masters degrees
		Graduate diploma
		Graduate certificate
		Bachelor degree
	Advanced diploma	Advanced diploma
	Diploma	Diploma
	Senior Secondary Certificates of education	Certificate IV
Certificate III		
Certificate II		
Certificate I		

Source: (AQFAB, 2002)

Funding of Tertiary Education

2.39 Substantive changes were made to the way in which the tertiary sector is funded following the reforms of 1988. Under the Higher Education Funding Act 1988, Commonwealth funds are allocated to higher education institutions for operating, capital development and research purposes through a framework of key elements:

- the allocation of resources in the context of a rolling three year programme;
- accountability through the submission of the Institution Assessment Framework (IAF);
- the provision of operating resources in the form of a single block operating grant;
- the Higher Education Contribution Scheme (HECS); and
- the competitive allocation of research funding to encourage selectivity and concentration.

2.40 In addition to grants for capital and research purposes, grants are made for particular programs such as the Higher Education Innovation Programme, the Teaching Hospital Grants and the Higher Education Equity Programme. The distribution of grants to institutions is announced by the Minister for Education, Science and Training in the Triennium Funding Report. The Triennium Report that is normally released in December of each year in a pre-print version and formally released in the following March after being tabled in Parliament.

Institution Assessment Framework (IAF) formerly Educational Profiles

2.41 Prior to 2004, the annual Educational Profiles process – descriptions of a university’s activities provided by the university in a form approved by the Commonwealth Minister – was the main mechanism for ensuring accountability, quality and fairness.

2.42 From 2004 a new accountability framework replaces Profiles, based on a more strategic bilateral engagement with each institution, and underpinned by what will be known as the 'Institution Assessment Framework' that clearly articulates the Commonwealth's accountability requirements.

2.43 The Institution Assessment Framework (IAF) is founded on the responsibilities of the Commonwealth to ensure that the institutions it funds are sustainable and deliver the outputs for which they are funded, that their outcomes are of a high quality and that they comply with their legal obligations. The IAF produces an across-the-board assessment of institutional achievements based on quantitative and qualitative data from universities and external sources. The Commonwealth's assessment of an institution will form the basis of strategic bilateral discussions between the Department of Education, Science and Training (DEST) and an individual institution.

2.44 The Framework has four principal elements:

- Organisational sustainability
 - Strategic focus
 - Risk management
 - Financial viability
- Achievements in higher education provision
 - Teaching/learning
 - Research and research training
 - Equity and indigenous access
- Quality outcomes
 - Systems and processes
 - Teaching/learning
 - Research
 - AUQA audit
- Compliance
 - Financial acquittal
 - National governance protocols
 - Workplace reform
 - Programme guidelines and legislation

2.45 Detailed *bilateral* discussions between DEST and individual institutions will occur only biennially unless there is a specific need for additional meetings (for example, if concerns arise from the assessment).

Student Funding

2.46 Funding to students is described in the sections below:

- in 1987 a \$A250/student "administration" fee was introduced;
- in 1989 this was replaced by the Higher Education Contribution Scheme (HECS), which:

- initially was about \$A2,000 per student/year;
 - could be paid up-front (discount)
 - became a tax-liability once income passed a threshold level.
- in 1990 the fees and access for non-local students was changed (see below). Prior to 1990, much of international education in Australian higher education involved providing aid to countries and subsidies to international students, dating from a 'cultural exchange' ethic that had been in place since the 1950s. This practice resulted in increasing resentment by local students who perceived international students taking places away from locals.

“The Government announced changes to the overseas student policy in December 1988, to be effective from 1 January 1990. Intakes of subsidised students would cease from that date, and all new students were to be full-fee paying. The Government increased the number of scholarships available for full-fee-paying students through development assistance and international exchange programs. Student load targets and operating grants were reduced to reflect these changes. To ensure that fee-paying overseas students met the full cost of their courses and did not displace Australian students, the Department of Employment, Education and Training established an indicative minimum course fee, and institutions were required to seek approval for the provision of places from the Commonwealth and more recently from the States. ... There was a sharp increase in enrolments of full fee-paying overseas students between 1987 when they numbered 1019 and 1992 when they increased to 30,300” (DEET 1993, pp. 59, 60).

Income from international education has now become a major source of non-Government funding for all Australian universities (Department of Employment, Education and Training (DEET) 1993).

- in 1992 universities were allowed to charge fees for graduate coursework programs. Many universities converted funded places to undergraduate courses.
- in 1997 the new conservative government expanded the fee intake:
 - HECS was increased and split into 3 bands, with the highest (approx. \$6,000/year) for high-demand courses;
 - universities were "permitted" to take local fee-paying students (except in medicine) up to 25% of the enrolment in a course.
- the government also pared the direct funding requiring a "productivity dividend" from universities.
- in 2001 a HECS-style loan scheme for post-graduate students was introduced.
- this led to a substantial decline in the proportion of operating revenue coming from government sources. (See Table 2.2).

Table 2.2 - University finance 1991 and 2000

University operating revenue before abnormal items

Source	1991 (\$'000)	Share (%)	2000 (\$'000)	Share (%)	absolute change	% change
commonwealth government grants (HEFA)	3011733	55.1%	3912870	41.9%	901137	30
HECS	638368	11.7%	1675697	18.0%	1037329	162
other commonwealth government grants	360589	6.6%	306016	3.3%	-54573	-15
fees and charges	536894	9.8%	1697446	18.2%	1160552	216
investment income	235475	4.3%	320929	3.4%	85454	36
royalties, trademarks and licenses		0.0%	14593	0.2%	14593	
consultancy and contract research		0.0%	467422	5.0%	467422	
state government	279491	5.1%	143552	1.5%	-135939	-49
other sources	399363	7.3%	789143	8.5%	389780	98
Total	5461913		9327667		3865754	71

The Higher Education Review

2.47 In 2002, the Commonwealth Government conducted a review of Australia's higher education system. The Government's response to the Review was announced on 13 May 2003 as part of the 2003/2004 Budget process. The Reform package lays the foundation for a ten-year vision for Australian higher education, with more than \$2.6 billion of additional Commonwealth funding being invested in the sector over five years.

2.48 The direction of Australian higher education will be based on four foundation principles; Sustainability, Quality, Equity and Diversity.

2.49 The reforms will establish a *partially deregulated* system of higher education, in which individual universities are enabled to capitalise on their particular strengths and determine the value of their course offerings in a competitive environment. There will be renewed emphasis on learning and teaching outcomes, greater recognition of the role of regional campuses and institutions, and a framework for research in which all Commonwealth funding is either competitive or performance-based. New arrangements for student financing will encourage lifelong learning, and ensure equity of access to higher education - no eligible student will be required to pay their fees up front when they enrol at an eligible higher education institution. Greater access for disadvantaged groups will be supported, and the market for private higher education will be opened up, while still enhancing quality control. Diversity will be encouraged through the creation of performance-based incentives for institutions to differentiate their missions.

2.50 The Review consultation process had drawn out a number of significant problems, including the following:

- course provision costs have increased considerably;
- the sector requires access to increased resources in the longer term, including from additional income streams;

- significant duplication in some university activities and course offerings and far too many units have very small enrolments;
- students from disadvantaged backgrounds remain under-represented in higher education;
- a large proportion of students (approximately 30 per cent) do not complete university;
- many institutions are over-enrolling students, which has an adverse impact on quality, including contributing to overcrowding; and
- the governance arrangements of some institutions do not provide the appropriate balance of capability, experience and business acumen needed to manage a large and complex organisation with oversight of budgets of millions of dollars. There is a fear that issues of management and governance may become confused. The average Council size is 21 with up to as many as 35 members in some cases, with some including no representation at all from industry or the community.

2.51 It has been suggested that regulatory and reporting demands currently imposed by both the Commonwealth and State and Territory governments have increased pressures on institutions. While universities have recognised the need to diversify funding sources and build on their individual strengths in the national and international market places, some government policies have constrained their ability to do so. Some State and Territory government regulations, for example, make it difficult for universities to engage in commercial activities with other institutions or industry. A good discussion on the limitations on universities as statutory bodies to engage in commercial activities is included in (DEST 2002b). The governance arrangements in some States and Territories also impede the effectiveness of some university councils (see below).

2.52 Each public university has its own enabling legislation that establishes it as a statutory body in its home State/Territory.

2.53 As statutory bodies, public universities are subject to a wide range of State and Territory legislation in addition to their enabling legislation. All States and Territories have financial administration and audit Acts which apply to their statutory bodies, including universities. These Acts, and the various regulations and Ministerial guidelines under them, provide the framework for universities' financial management and accountability.

2.54 The financial accountability frameworks of the States/Territories are, in general terms, those applied to any State/Territory statutory agency and are not university specific. They require universities to provide Ministers with audited financial statements and performance information and to notify Ministers about specified financial and business dealings.

2.55 The legislative framework in a State/Territory regulates the powers of universities to undertake commercial activities, for example, universities in general are restricted in their borrowing and investment powers to the 'purposes of the university'. Universities frequently need some form of consent from the State or Territory Treasurer in relation to their

borrowing and investment activities. Universities are often restricted in the use and disposal of assets, especially land allocated to them for campuses.

2.56 Commercial activities are undertaken by universities through many different sorts of legal entities; partnerships, trusts, unincorporated bodies and companies limited by guarantee or shares. They may involve partnerships with other universities, including from other States/Territories and overseas, as well as private and public companies. They may be wholly undertaken overseas. Only some of these entities are 'controlled' by a university. States and Territories usually apply accountability and regulatory requirements, additional to those of the corporations law, to the 'controlled' companies of universities. The relevant Auditor-General must usually audit the financial statements of any 'controlled' entity (as defined for example in Australian Accounting Standard AAS24).

2.57 An important issue relates to the variation in legislation between the States and Territories in relation to university commercial activities.

2.58 For discussion of the limitations of governing bodies in this respect see http://www.backingaustraliasfuture.gov.au/publications/meeting_the_challenges/3.htm.

2.59 University enabling Acts generally include a description of the governing body's functions, making it clear that they manage and control the entire affairs of the university, consistent with the university having a high level of autonomy. As noted earlier, there may be many other provisions in establishing Acts and related legislation that limit their powers, for example in relation to borrowing and investment.

2.60 The Hoare Report identified a number of problems associated with the performance of governing bodies. It argued that:

- they lacked a focus on strategic issues;
- they had inadequately articulated roles and responsibilities of members;
- there was a lack of commitment and interest by some members (in particular, poor attendance of parliamentarians and some other external appointments); and
- there were procedural difficulties and delays with appointments to the governing body (Higher Education Management Review, 1995, p45).

2.61 The Hoare Report recommended that the Commonwealth, through appropriate Commonwealth and State/Territory bodies, should recommend that States/Territories amend university enabling legislation, where appropriate, so that the primary responsibilities and roles of governing bodies are explicit (Higher Education Management Review, 1995, p57).

2.62 'The Hoare Report' is found in Higher Education Management Review 1995, Report of the Committee of Inquiry, AGPS, Canberra.

Principles of the Review (DEST 2003)

Sustainability

2.63 All existing public self-accrediting higher education institutions must achieve long-term sustainability. The cost of course provision in higher education has increased considerably, often due to factors outside the control of universities such as increased global competition for academics in key areas and changes in the value of the Australian dollar. Universities must be freed from unnecessary constraints. They should be able to respond flexibly to the needs of their constituencies, including potential and existing students, staff, employers, industry, local, regional and national communities. Institutions need to be given maximum opportunity, consistent with public accountability and social responsibility, to develop innovative responses to rapidly changing environments in teaching and learning, in the direction and commercialisation of research, and engagement with industry, research institutions and other education providers.

Quality

2.64 Australia's universities have a reputation for providing high quality educational experiences, and it is vital that this be maintained and enhanced. A renewed emphasis on teaching and learning outcomes, particularly at the undergraduate level, will help to ensure that students develop knowledge and skills that are relevant to their own needs and to those of employers, professional associations, labour markets and society.

Equity

2.65 Systemic barriers to the participation of historically disadvantaged groups, in particular Indigenous Australians, must be addressed. Individuals should be enabled to fulfill their potential, regardless of their personal circumstances and backgrounds. Targeted intervention measures and new approaches to student financing will seek to encourage participation and retention of under-represented groups.

Diversity

2.66 Australia needs a high quality higher education sector with a range of institutions servicing different communities and varied requirements. It is neither necessary nor desirable for all universities to be the same. A more diverse system will be achieved by institutions forging distinct missions within the overall system and through greater collaboration between individual universities and other education providers, industry, business, regions and communities.

Changing the Funding mechanism

2.67 At present the Australian Government gives universities and other higher education providers large block grants, and then requires most students to contribute to the cost of their higher education through the Higher Education Contribution Scheme (HECS). The Australian Government currently sets HECS rates for students depending on the disciplines they study. This is the only source of variation in the rates at which students are supported.

2.68 The Government is now trying to introduce further variation into the funding mechanisms. Different providers have different strengths, specialties and cost structures. Even within disciplines it is recognized that there are differences between in costs - a degree at one provider may have a strong theoretical focus, while the same degree at another provider may be more practically orientated. The government wishes to recognize and support this diversity in its funding structures. This of course does carry dangers – since it may discourage an institution from taking risks by moving into high cost courses.

2.69 Higher education providers will no longer be given block grants. Instead, the Australian Government will pay for the courses actually delivered to students. The amount it will pay per course will be specified in the Commonwealth Course Contribution Schedule. This is money that the Australian Government gives to providers, on behalf of students, to contribute to course costs.

2.70 Each student will have a Student Learning Entitlement (SLE) which will enable them to access a Commonwealth supported place for up to seven years equivalent full-time. Additional SLE will be available for students undertaking an undergraduate course that is longer than six years, or an honours course, graduate entry bachelor degree or postgraduate course.

2.71 Students currently contribute to the cost of their courses through the Higher Education Contribution Scheme (HECS). The Australian Government sets HECS rates and students either pay these when they enrol or later through the income tax system. Under the new arrangements, the Australian Government will no longer set student contributions. Instead, higher education providers will set the student contribution levels for each of their courses within ranges set by the Australian Government. This is a key change, giving the providers some latitude over the charges they set.

2.72 The loans agency, the Higher Education Loan Programme (HELP), will provide flexibility in student funding arrangements. It will commence operation in January 2005.

2.73 These new arrangements will be supported by an information system. The Australian Government will establish a Higher Education Information Management System (HEIMS), which will allow the administration of its new course and student funding arrangements. Students will be provided with a Commonwealth Higher Education Student Support Number (CHESSN) and will be able to use HEIMS to access information such as course availability, course entry criteria (such as the previous year's admission cut-offs), course fees and Commonwealth course contributions.

Sources of Finance – Research

2.74 Approximately \$A1.5 billion annually is provided specifically for targeted research and research training through the Education, Science and Training portfolio, particularly to basic research.

2.75 In 1999, the Government announced major changes to current arrangements for the funding of higher education research. The new framework (see DEST 2000a and DEST 2000b) provides for:

- a strengthened Australian Research Council and an invigorated national competitive grants system;
- performance-based funding for research training and research activity in universities, with allocative formulae and transitional arrangements designed to ensure that all universities are able to compete effectively under the new arrangements;
- the establishment of a broad quality verification framework supported by universities' Research and Research Training Management Plans; and
- support for regional and rural institutions.

2.76 Funding is allocated through a range of:

- Application-based schemes administered by the Australian Research Council, and
- Formula-driven research funding schemes administered by DEST.

2.77 Under the new framework, universities are assisted through two performance-based block funding schemes: the Institutional Grants Scheme (IGS) and the Research Training Scheme (RTS).

2.78 The IGS will support the general fabric of institutions' research and research training activities, and assist institutions in responding flexibly to their environment in accordance with their own strategic judgments. Universities will receive funding under a formula recognising their success in attracting research income from a diversity of sources (60%), attracting research students (30%) and the quality and output of their research publications, assessed through a revised publications measure (10%). The research student component of the formula will be sensitive to the size and composition of the research student body in an institution and will be weighted to reflect cost differentials associated with broad fields of research.

2.79 The RTS will provide funding for institutions for research training based on their performance according to a formula comprising three elements: numbers of research students completing their degree (50%), research income (40%) and the revised publications measure (10%).

2.80 While this formula is similar to the mechanisms in place in Scotland, the relative weights attached to research income, research student numbers and research quality are quite different. The support is much more heavily weighted to research income and research students than to research excellence which has not anyway received research income.

Changes to higher education research funding

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Legal Mechanisms

2.85 The most recent law relating to higher education was passed in 2003. The objects of the Higher Education Support Act 2003 are listed below:

- to support a higher education system that is
 - characterised by quality, diversity and equity of access; and
 - contributes to the development of cultural and intellectual life in Australia; and
 - is appropriate to meet Australia's social and economic needs for a highly educated and skilled population; and
- to support the distinctive purposes of universities, which are:
 - the education of persons, enabling them to take a leadership role in the intellectual, cultural, economic and social development of their communities; and

- the creation and advancement of knowledge; and
- the application of knowledge and discoveries to the betterment of communities in Australia and internationally;

2.86 Recognising that universities are established under laws of the Commonwealth, the States and the Territories that empower them to achieve their objectives as autonomous institutions through governing bodies that are responsible for both the university's overall performance and its ongoing independence; and

- to strengthen Australia's knowledge base, and enhance the contribution of Australia's research capabilities to national economic development,
- international competitiveness and the attainment of social goals; and
- to support students undertaking higher education.

Future Skills

2.87 Much of the work on future skills is associated with the attraction of skilled immigrants. A number of schemes have been put in place and these are described below. The Commonwealth has had some basis for influencing this through the annual profiles process involving discussion between the Commonwealth and individual institutions. This process has been relatively ineffective though over the past few years but calls for increasing or decreasing teacher enrolments, for example, on the basis of predicted future trends have had some impact. With the recent Nelson reforms the Commonwealth has created two major levers:

- Creating Teaching and Nursing as national priority areas which have their HECS rates fixed – for other disciplines universities can raise HECS fees by up to 25% of 2003 levels under the new deregulation arrangements
- The allocation criteria of the substantial amount of new places that have become available varies from State to State but typically includes a criteria relating to workplace needs – and with the national priority areas of teaching and nursing also given some emphasis.

Skill Matching Scheme

2.88 Introduced in 1996, this scheme is designed to meet skill needs in different areas of Australia. Skill matching is made possible by the Skill Matching Database, which lists the educational, occupational and personal details of Skilled Independent category applicants and Skill Matching Visa applicants.

2.89 The database is regularly updated and distributed to all state and territory governments and a network of regional development authorities.

2.90 Employers can nominate people from the database to fill vacancies that cannot be filled through the local labour market. State and territory governments can nominate people

from the database on the basis of skill shortages they have identified. (See Fact Sheet 26, State/Territory Specific Migration.).

2.91 **Business Skills:** Under the Business Skills (Provisional) category, persons with backgrounds as business owners, senior executives or investors can apply for a provisional (temporary) visa in the first instance. After satisfactory evidence of a specified level of business or investment activity in Australia, Business Skills (Provisional) visa holders can apply for permanent residence. In line with their economic development objectives, state and territory governments can also sponsor applicants in these categories with lower level criteria applying to sponsored applicants. High calibre business migrants, sponsored by a state or territory government, may obtain up front direct permanent residence under the Business Talent (Migrant) category. (See Fact Sheet 24, Overview of Skilled Migration to Australia and Fact Sheet 27, Business Skills Migration.).

2.92 **Employer nomination:** people nominated or 'sponsored' by employers through schemes such as the Employer Nomination Scheme, Regional Sponsored Migration Scheme and negotiated Labour Agreements or Invest Australia Supported Skills agreements

Temporary Entry - short stay

2.93 The department has also established a range of services providing for streamlined entry to Australia of business people applying for either short or long-term temporary stay.

2.94 The Business (short stay) visa may be issued for either single or for multiple entry. Holders of a multiple entry visa may make any number of journeys to Australia for up to three months on each occasion. Multiple entry visas may be valid for either up to five years, or the life of the passport (to a maximum of 10 years). Applicants must apply for this visa outside Australia.

2.95 The Sponsored Business Visitor Visa allows federal, state and territory members of parliament, government agencies or instrumentalities, local government mayors or organisations specified by the Minister, to offer sponsorship to business visitors wishing to temporarily enter Australia for up to 3 months for business purposes. All applications for this visa must be lodged onshore by the Sponsor.

2.96 The Electronic Travel Authority (ETA) allows tourists and business visitors to obtain visas for Australia at the time they make their travel arrangements. The ETA system is accessible by travel agencies and airlines in the United States, Japan, Singapore, Malaysia, Korea, United Kingdom and many Asian and European countries. (See Fact Sheet 55, The Electronic Travel Authority).

2.97 The APEC Business Travel Card provides business people with simplified entry to a number of economies of the Asia-Pacific Economic Co-operation (APEC) forum. Holders must be passport-holders of one of the participating countries - currently Australia, Brunei, Chile, Hong Kong China, Japan, Korea, Malaysia, New Zealand, Peru, the Philippines, Chinese Taipei and Thailand. China and Indonesia have also joined the scheme and will commence issuing cards in the near future. Cardholders enjoy express immigration clearance and pre-cleared entry to participating economies.

Temporary stay - long-term visas

2.98 The Temporary Business (long stay) visa allows highly skilled personnel to come to Australia to work for an approved employer for up to four years. The prospective employer must first apply to become a standard business sponsor, which will permit them to sponsor an agreed number of overseas employees over a two-year period. The position nominated to be filled by the overseas employee must meet minimum skill and salary levels.

CHAPTER THREE

THE SYSTEM OF POST-COMPULSORY EDUCATION IN CANADA

Background

3.1 Canada is a federal state with legislative authority shared by the federal government, ten provincial governments and three territorial governments. The country is vast, with its population of 31 million concentrated in a few cities and along the long US border. Almost one-fifth of the population lives in rural areas and is spread over an enormous area.

3.2 Canada is among the most developed countries in the world. Its economy is highly industrialised and most of its GDP originates in service industries.

3.3 There are two official languages (English and French) and the population is highly diverse. In 1996 there were about five million recent immigrants living in Canada (17% of the total population). In the same year, about 3% of Canadians belonged to one or more of the three aboriginal groups recognised by the Constitution: North American Indians, Metis and Inuit. Like most other developed countries, the population is ageing.

Structure of the education system

3.4 See Appendix 2.2 for the structure of the education system in Canada.

3.5 Canada has one of the highest post-secondary participation rates for 18-21 year olds. Specifically, as of 1997 just over one-third of Canadians in the 18-24 year old cohort were registered in post-secondary programs, approximately twice the corresponding rate from 1976 (Schaefer 2002). According to Statistics Canada (2002, cited in Schaefer 2002), nearly half (49.2%) of the Canadian population aged 25 years or older has a post-secondary degree, diploma or certificate. Canada has 92 universities and 175 community colleges affiliated with the Association of Universities and Colleges of Canada (AUCC 2001).

3.6 In 2000-01, Canada's total spending on public education is expected to reach \$66.3 billion, with about \$39.5 billion directed at the elementary and secondary levels, \$13.6 billion to community college and trade-level programs, and \$13.2 billion for universities.' (CICIC).

The Post-compulsory education system

3.7 Post-secondary education in Canada dates from 1663 with the establishment of Le Grand Séminaire de Québec, a forerunner to Université Laval. At the time of Confederation in 1867, there were three universities and a number of classical colleges in Quebec, three universities in New Brunswick, five in Nova Scotia, and seven in Ontario. Government involvement continued to be minimal, but this started to change when the four Western provinces began to set up provincially chartered universities early in this century.

3.8 Post-secondary education in Canada is provided by degree-granting institutions (universities) and non-degree-granting institutions (community colleges).

3.9 At the end of World War II, a federally funded veterans' rehabilitation program brought an influx of war veterans to Canadian university campuses and increased government

participation in university funding. New institutions were established, and post-secondary institutions continued to expand throughout the 1950s, '60s and '70s.

3.10 Before the 1960s, universities provided the bulk of post-secondary education in Canada. However, factors such as the increasing demand for post-secondary education and growing recognition of the importance of education in economic growth, led to the creation of new types of non-degree granting post-secondary institutions. For the most part, these institutions were created by provincial governments in response to a need for vocationally oriented alternatives to university study, although some of these institutions provided two-year university transfer programs. Open access was a key objective for the new institutions.

3.11 Perhaps the most sweeping changes were in Quebec where the province reconstituted some 200 classical colleges, *instituts familiaux*, and several technical institutes into a single *cégep* system. The *cégeps* (*collèges d'enseignement général et professionnel*) serve as an intermediate level between secondary school and university, while providing education and training programs directly related to the workplace.

3.12 The institutions are generally referred to as community colleges, but also include CEGEPs, technical institutes, hospital and regional schools of nursing, and establishments providing technological training in specialised fields. Community colleges offer career-oriented and technical training, as well as university transfer programs (which allow graduates to enter a university), and general education leading to diplomas or certificates. There are significant differences between provinces. In 1997-98, enrolments in community colleges were 551,000 while those in universities were 823,000. Quebec and Ontario account for the bulk of enrolments.

3.13 Data from the recent Adult Education and Training Survey show that 28% of Canadians participated in some form of organised adult education and training in 1997. These courses and programmes were mostly job-related. Workplace characteristics are closely linked with participation in adult education and training, for example, workers in large companies are more likely than those in small companies to receive employer support for training.

Parliament and Government

3.14 Under the Canadian constitution, provincial governments have exclusive responsibility for all levels of education. There is no ministry or department of education at the federal level. The federal government provides only indirect support to post-secondary education through fiscal transfers to the provinces and by funding university research and student assistance. Canada's three territories do not have the same constitutional status as the provinces and in many areas are subject to more direct control from the federal government. With respect to education, however, the federal government has delegated this responsibility to the territorial governments which in turn, cooperate with the provinces to deliver post-secondary programs.

3.15 Most jurisdictions have created formal mechanisms to co-ordinate adult training activities. The Council of Ministers of Education Canada has served, since 1967, as the vehicle through which provincial/territorial ministers of education consult and act on matters of mutual interest, and co-operate with national education organisations and with the federal government.

NDPB

3.16 The Canadian Labour Force Development Board, created in late 1980s, was part of a federal government experiment to promote private sector involvement in training and human resource development. The CLFDB was not entirely successful and was later disbanded.

3.17 Sector Councils were later created, providing a mechanism for bringing together representatives from business, labour, education and professional groups. One of their key objectives is to strengthen the human resource development capacity of a critical sector.

3.18 There is no pan-Canadian accrediting body in Canada to evaluate the quality of degree programs, although a number of agencies and professional bodies perform this function for professional programs at both the undergraduate and graduate levels at some institutions.

3.19 In the absence of a national accrediting body, university membership in the Association of Universities and Colleges of Canada (AUCC) is generally taken as evidence that an institution is providing university-level programs of acceptable standards. Degree programs at university colleges, colleges, and institutes are subject to internal quality assurance processes similar to processes used for university programs.

Status of Canadian Post-secondary Institutions

3.20 Recognized institutions are public and private institutions established under provincial and territorial legislation. Non-recognized licensed and registered institutions are private, commercial enterprises the regulation of which emphasizes consumer protection. Non-registered and non-licensed institutions are private commercial enterprises whose programs are not regulated.

3.21 In general, undergraduate degree programs require three or four years of full-time study. Most graduate degrees can be completed in two to five years. Associate degrees are generally two years in length, and applied degrees require four years of full-time study. In public institutions, diplomas are generally granted for successful completion of two and three year programs. Certificate programs usually take up to one year. In private institutions diploma and certificate programs vary considerably in length. Attestations are granted for many programs in Quebec cégeps that are up to two years in length of full-time or part-time study.

3.22 Community colleges do not have a uniform linkage with Canadian universities

3.23 Only a minority of provinces - Québec, Alberta, and BC - have "articulated models" to ease transfer from colleges to universities. Formal arrangements allow college students with designated prerequisites to gain credit in university programs, ideally providing greater access to further educational opportunities. While problems in transfer credit have been identified, the point remains that for most provinces, links between the colleges and universities are not particularly well-developed. (Burch, 2003).

Providers of Higher Education

3.24 Reports to the Canadian Information Centre for International Credentials (CICIC) indicate that there are over 200 public and private institutions in Canada that grant degrees. The total number will rise in the next few years as Ontario's colleges of applied arts and technology begin to offer applied degrees. Many of these institutions grant degrees in all of their own programs. A small number grant degrees in only a few fields, often theology.

3.25 Universities and other degree-granting institutions may also be federated or affiliated with other post-secondary institutions. A federated institution is responsible for its own administration and usually has the power to grant degrees, but during the term of the federation agreement suspends some or all of its degree-granting powers. An affiliated university retains its administrative independence and may have restricted or no degree-granting authority. However, the power to grant degrees rests with the parent institution.

Providers of non-advanced Tertiary Education

3.26 Apprenticeship is an industry-based learning system that combines on-the-job experience with technical training, and leads to certification in a skilled trade. Classroom training usually takes the form of block release in which the apprentice is released for a short period. Provincial and territorial governments are responsible for apprenticeship training.

3.27 Private colleges provide an alternative system for skills training for adults. Surveys of private colleges have been conducted at irregular intervals, and little up-to-date information is available; however data suggests that they are becoming more important in adult education. They tend to be more flexible and responsive to employer needs than public institutions.

Governance

3.28 Education is primarily the constitutional responsibility of the provincial and territorial governments. Adult education and training policies and programmes in Canada are therefore quite diverse, reflecting the different social, political and economic structures of the different jurisdictions. In many jurisdictions more than one ministry or department is responsible for adult learning. The advantage of this is that policies and programmes can be targeted to the specific needs of that ministry or department. On the other hand, programmes and policies may differ within a jurisdiction and across the country, and this may lead to inequities in opportunity.

3.29 The federal government does also have some constitutional responsibility for education (e.g. for Native peoples).

Development of the system of University governance

3.30 While the federal government has no overall jurisdiction for education, the following paragraphs indicate federal initiatives through time.

3.31 The 1867 Constitution Act gave the provinces exclusive jurisdiction in education within their boundaries. The provincial and territorial legislatures developed their own educational structures and institutions, creating 13 education systems with many similarities

and some differences. Responsibility for education was usually exercised through one or more departments or ministries of education.

3.32 In the early 20th Century the Federal government became involved with technical and vocational education.

3.33 In the 1930s the Federal government began to fund post-secondary education during the economic depression, by providing direct assistance to students.

3.34 Post-World War II the Federal government provided assistance to universities to help defray the costs of education for war veterans. This programme was modified during the 1950s and 60s and eventually became part of the block funding for the Canada Health and Social Transfer (CHST). The bulk of federal support for post-secondary education is now part of a federal tax and cash transfer to provincial/territorial governments for health, education and welfare.

3.35 The 1967 Adult Occupational Training Act, under which the federal government purchased training courses from institutions for, mainly, unemployed people remained in force till 1996.

3.36 Under the 1996 Employment Insurance Act the federal government developed new working arrangements with the provinces/territories. This Act established guidelines for the development of active employment benefits and maintenance of employment services. Most jurisdictions enter into Labour Market Development Agreements with the federal government (derived from OECD and CICIC information).

Responsibilities

3.37 The administration and governance of degree-granting institutions are dependent on their public or private status as universities, university colleges, colleges, or specialized institutes. Although universities are heavily dependent on government funding, they continue to have considerable autonomy with respect to academic policy and organization. Government intervention is generally limited to finances, fee structures, and the introduction of new programs. Intermediary bodies, such as the Maritime Provinces Higher Education Commission for the provinces of New Brunswick, Nova Scotia, and Prince Edward Island, may play an advisory role in this regard.

3.38 Most Canadian universities have a two-tiered system of governance that includes a board of governors and a senate. Boards are generally charged with overall financial and policy concerns. Academic senates are responsible for programs, courses, admission requirements, qualifications for degrees, and academic planning. Their decisions are subject to board approval. Since the 1960s, both bodies have tended to include a wider representation than was previously the case. Students are often represented on both bodies, as are alumni and representatives from the community at large. While there is government influence through funding levels, and requests for quality audits and efficiency measures, Canada has been highly rated in cross-national surveys of University autonomy (Richardson and Fielden 1997, Anderson and Johnson 1998).

3.39 Universities are normally organized into faculties, schools, and departments. Subject to senate approval, these subdivisions may also establish their own admission and degree requirements.

3.40 University colleges have similar structures to universities but tend to be more specialized in their programming. Degree-granting colleges and specialized institutes often offer degrees in specialized technical areas and tend to be more closely regulated than universities. Most have boards of governors appointed by provincial or territorial governments. Public representation on these boards is prevalent, as is representation from students and teachers. Government intervention can extend to admission policies, curricula, institutional planning, and working conditions. College and specialized institute program planning tends to rely on input from community, business, industry, and labour representatives serving on college advisory committees, with overall direction provided by college administrators.

3.41 Public colleges, specialized institutes, community colleges, colleges of applied arts and technology, and cégeps are important instruments of government policy. Part of their mandate is to respond quickly to changing socio-economic priorities. In this sense, they tend to be far more closely regulated than universities. Most have boards of governors appointed by either provincial or territorial governments. Representation on the boards by students, teachers, and the broader community is prevalent. Generally speaking, government intervention extends to admission policies, curricula, institutional planning, and working conditions. College program planning tends to rely on input from community, business, industry, and labour representatives serving on college advisory committees, with overall direction provided by college administrators.

Funding of Higher Education

Sources of Finance – Education

3.42 Public funding for universities in Canada is primarily focused on public institutions. Universities are highly autonomous; they set their own admission standards and degree requirements, and have considerable flexibility in the management of their financial affairs and program offerings.

3.43 Universities and community colleges derive about three-quarters of their funding from the provincial/territorial and federal governments (the largest share provided by the former). Government support varies widely by both level (college or university) and by institution. At the university level, tuition fees account for an increasing proportion of operating income, a trend that is likely to continue. These are much less significant at college level.

3.44 Community-based organisations provide adult learning aimed at special issues, such as adult literacy, or to meet the needs of specific groups (such as immigrants, the rural poor, persons with physical or learning disabilities, members of specific ethnic or cultural groups, displaced workers, adults with low levels of literacy and women). Typically, funding is sought for these from federal or provincial/territorial governments.

3.45 Employer investments in training constitute an important component of adult education in Canada.

3.46 Tuition fees at most universities are subsidized, but vary widely according to province, institution, and program of study. Recently, an increasing number of degree programs, such as the executive master's in business administration degree, are entirely funded through student fees. Fees for international students studying at Canadian post-secondary institutions are higher than fees for domestic students.

3.47 There is also an overarching pressure to "restructure" expenditures and programmes to conform to market-oriented, cost-recovery principles. This highlights privatization and greater involvement of the private sector generally in educational matters. (Burtch, 2003).

Sources of Finance – Research

3.48 The federal government supports post-secondary education through the funding of research and scholarship (e.g. through the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council).

3.49 Universities conduct about one-quarter of all research activity in Canada. Research at universities plays a key role in technology transfer, moving discoveries in the laboratory to commercial applications. The federal government is a principal supporter of university research and has established a comprehensive research strategy to position Canada in the forefront of the knowledge-based economy of the new millennium. The federal government promotes excellence in research through various initiatives such as the Canada Foundation for Innovation, the 21st Century Chairs for Research Excellence, and Networks of Centres of Excellence. It provides funding for research through three major Research Granting Councils: the Natural Sciences and Engineering Research Council, the Canadian Institutes of Health Research, and the Social Sciences and Humanities Research Council. In 2000-01, the budgets of the 3 councils totalled over \$1 billion. Sponsored research projects conducted under contract for various federal government departments receive additional federal funding.

3.50 As leverage for Canada's research capabilities in a number of areas of strategic importance, the federal government also maintains a Networks of Centres of Excellence Program, which links university, industry, and government researchers across the country. The Canadian Foundation for Innovation was established in 1997 by the federal government to provide research infrastructure funds to Canadian institutions on a cost-shared basis with the provinces and other partners.

Funding distribution

3.51 The government provides loans to students, through a programme which started after the First World War and was modified and replaced by the Canada Student Loans Programme in 1964.

3.52 Rising tuition costs and general financial pressures on students have been identified as factors of social exclusion. This is often presented in a general context of privatization, where post-secondary costs are passed on to students or non-government sectors, as federal and/or provincial governments retrench their expenditures on post-secondary education (Dennison 1995a, 8). Specific populations such as women and aboriginal peoples have been identified within this exclusionary framework (Burtch, 2003). Researchers have identified a higher participation rate (70%) for 18-21 year olds whose parents are in high income brackets

compared with 18-21 year olds (56% participation rate) whose parents are in the lowest income quartile (Knighton and Mizra 2003, see also Zhao et al., 2003).

Future Skills

3.53 There are waiting lists for some college courses and programmes - i.e. demand exceeds supply. Three factors have traditionally been used for determining the courses and programmes offered in colleges: community or labour market needs; individual interest and suitability in terms of minimum education prerequisites and skills; and the overall level of funding for particular courses and programme areas. (OECD).

3.54 There is a growing recognition in all sectors related to post-secondary education (school, student, government and industry), that to compete in the new knowledge-based economy, Canada needs to build a capacity for learning and training that widens access to learning opportunities for individuals and for enterprises, and increases labour force productivity.

3.55 To meet the requirements of rapid change in post-secondary education and in the labour force, colleges are increasingly entering into agreements with industry for employee training, and with each other for program sharing and the transferability of learning.

3.56 At the same time, colleges, along with governments at the provincial and federal levels, are developing policies to address the need for increased student mobility and accessibility to post-secondary education and skills training. What is needed now is a Pan-Canadian protocol on the transferability of learning that can be ratified by colleges across the country. It is becoming increasingly apparent that the ability to move easily between work and school, and between post-secondary institutions, increases the efficiency of learning and saves valuable time and cost to the individual, to industry and to society.

3.57 If Canada is going to compete successfully in the global market and continue to be productive domestically, the labour market requires more advanced skills and education and a frequent renewal of skills. Skilled human capital is rapidly becoming a major source of competitive advantage, wealth and prosperity. The easier it is to access education for individuals, and the more mobility they are afforded by post-secondary institutions, the more likely individuals are to upgrade their skills on a continuous basis. Credit transfers and prior learning assessment (which allows students to apply for credit for non-academic accomplishments such as work experience) are an effective and efficient way of providing opportunity for these workers to upgrade their skills and knowledge base. This method involves “the identification, documentation, assessment, and recognition of competencies (skills, knowledge and abilities) that have been acquired through formal or informal learning. This learning can come from such areas as: work experience, training, independent study, volunteer activities, and travel or hobbies” (New Brunswick Department of Education 2004).

3.58 A protocol would furthermore allow colleges to identify common standards; encourage dialogue between institutions and college systems; set or target provincial and national standards; maximize the use of resources; and, increase awareness of articulation goals and principles.

3.59 The Association of Canadian Community Colleges (2002) has stated that ‘A Pan-Canadian protocol for the transferability of learning among colleges benefits everyone. The

clear advantages to the student are greater mobility and accessibility, both in studying and in the workplace. The ability to transfer credits easily between institutions, and the ability to move easily from work to school and back, encourages increased college participation, and a more active, knowledgeable and skilled workforce' (see <http://www.accc.ca> and Burtch (2003) for more details).

CHAPTER FOUR – FRANCE

THE SYSTEM OF POST-COMPULSORY EDUCATION IN FRANCE

Higher Education – an introduction

4.1 French higher education is marked by a great diversity of institutions, the organisation and admission requirements of which vary according to the nature of the institution and the purpose of the courses offered. Further detail is given in some following sections.

4.2 The trend towards vocational training, particularly noticeable in the universities, is growing and has strengthened in recent years. The creation of vocational degrees, the reform of teacher training, the validation of professional experience (VAP) (now re-termed VAE) in lieu of certain modules or units of a diploma, and finally the creation of doctoral schools have all contributed to this change.

4.3 The vocational degree (*Licences professionnelles*) was created by the Ministerial decision dated November 17 1999, and meets the goals defined in common at European level, not least the construction of the European space for higher education.

4.4 These training courses differ from both the classic type of degree and specialised courses lasting for two years after the *Baccalauréat*. These are often at the interface of several fields of qualification, associating various types of knowledge and skills, as well as competence in technical subjects and human sciences. Designed to equip students for working life, these degrees, be they French or European were deemed to be a success after two years. Thus, the 347 courses set up in all academies saw 9,038 students in 2001 as against 178 and 4,364, respectively, in 2000. Over eight students in ten obtained their diplomas in 2000-2001. The job prospects for qualified students were good: 70% found a job, of whom 50% had permanent contracts.

Details of the System of Higher Education in France

4.5 See Appendix 2.3 for the education structure for France.

Providers of Higher Education

4.6 French higher education is characterised by its great diversity of institutions on one hand and a relatively unified governance system on the other hand. In mainland France in 1999 there were 89 universities, including three national polytechnic institutions, as well as:

- 101 university institutes of technology
- 26 IUFM (University teacher training institutes)
- 240 engineering schools
- 221 business and management schools

- several hundred schools for higher education in various specialties. These include:
 - the *Grandes Ecoles* for science, under the responsibility of the Minister for Higher Education and Research (e.g. the *Ecole centrale des Arts et Manufactures*, the *Ecole centrale de Lyon*, the *Ecole nationale supérieure des Arts et Industries textiles*, the *Ecole nationale supérieure d'Arts et Métiers*, etc.);
 - *Ecoles normales supérieures* or higher teacher training establishments (ENS) at Paris, Fontenay/Saint-Cloud, Lyons, and Cachan;
 - 14 important institutions such as the Practical School for higher studies (EPHE), the School for higher studies in social sciences (EHESS), and the Institute for global physics (IPG);
 - state engineering schools such as the *Ecole des Mine* and the *Ecole nationale des Ponts et Chaussées* (for civil engineering);
 - military academies under the authority of the Minister of Defense, comprising the army, naval and air force schools (*Ecole polytechnique*, *Ecole spéciale militaire de Saint-Cyr*, *Ecole navale*, *Ecole de l'air de Salon-de Provence*, etc.);
 - the *Ecole nationale d'administration* (ENA), the school for higher administration, directly under the responsibility of the Prime Minister;
 - institutions for higher agricultural education, under the Minister of Agriculture. These comprise the *Institut national agronomique* in Paris-Grignon, and the higher national agronomic institutions, together with several specialised institutions for various agricultural careers;
 - the national veterinary schools;
 - institutions for higher art education (schools of art, national conservatoires, the *Ecole nationale supérieure des Arts décoratifs*, the *Ecole nationale supérieure des Beaux-Arts*, the *Ecole du Louvre*, the National Heritage school, etc.). These are under the responsibility of the Ministry of Culture.
 - schools of architecture, which are under the responsibility of the Ministry of Culture.

- Private institutions or schools for higher education, including:
 - engineering schools;
 - *Grandes Ecoles* for commerce and management, such as the *Ecole des hautes Etudes commerciales* (HEC); the *Ecole supérieure des sciences économiques et commerciales* (E.S.S.E.C.); the *Ecole supérieure de commerce de Paris* (ESCP); the *Ecole supérieure de commerce de Lyon* (EM Lyon); the *Ecoles supérieures de commerce* (E.S.C.), of which there are 22; the *Ecoles or Instituts supérieurs de sciences commerciales*, of which there are 23;
 - "Catholic Institutes: these are private institutions recognised by the Ministry for Higher Education, which include university and higher education. There are five of these institutes, in Paris, Lille, Lyons, Angers, and Toulouse.

4.7 Overall there are very few private universities; all are government-dependent. In non-university higher education, the share of independent private institutions is much larger.

Course programmes and degrees

4.8 **Short degree programmes** are of two kinds: First, those offered in the STS (*Sections de Techniciens Supérieurs*) of the Lycées (non-university sector). They consist of two years of study, which develop vocational qualifications, such as manufacturing, trade and services. These programmes lead to the BTS (*brevet de technicien supérieur*).

4.9 The second type is the two-year programmes imparted in the IUT (*Instituts Universitaires de Technologie*). IUTs are nominally part of universities, but are very autonomous with separate budgets, management and admission systems. IUT courses sometimes extend to three years and lead to the DUT (*Diplôme Universitaire de Technologie*). IUT courses are technologically oriented, but less narrowly specialized than STS courses. They offer about 20 courses programs covering the whole range of industrial and service occupations, as against over 100 BTS specialties.

4.10 **Long degree programmes** are offered at the universities and the specialized schools (*grandes écoles*) of various lengths.

4.11 University courses consist of a first cycle two-year programmes leading to the DEUG (*Diplôme d'études Universitaires Générales*). The second cycle consists of a third year leading to the *licence* and a fourth year leading to the *maîtrise*. The third cycle begins with a one-year course (fifth year of study) leading either to the DEA (*Diplôme d'études approfondies*), or to the DESS (*Diplôme d'études supérieures spécialisées*). Students holding a DEA are expected to prepare a doctoral thesis in three years. Students choosing the more specialized DESS route enter the labour market.

4.12 In the *grandes écoles* and other specialized schools, the first cycle consists of two-year preparation courses for the selective entrance examinations. These preparation courses are given in the best *lycées*. Once admitted in (mostly) engineering and business schools, courses last usually three years. Thus, the full study programmes offered by the *grande école* route require five years of study.

4.13 **Expected effects of Bologna on the French degree structure.** In order to implement the Sorbonne and Bologna process, tertiary degrees are being re-structured according to a new LMD system (Licence-Mastaire-Doctorat (three+two+three years)). The new system was introduced in 1999. Undergraduate education will lead to the new *Licence professionnelle* which comprise both practical work and traditional studies. The *Mastaire* level will regroup existing five-year degrees (DESS, DEA and *grandes écoles* degrees in engineering and business).

4.14 The Grade of *Mastaire* was created by the Decree of 30 August 1999. In 2002 the term *Mastaire* was changed to Master and measures supporting lifelong learning were adopted. Furthermore, the Decree of 8 April 2002 dealt with the consequences for France of the development toward the European Higher Education Area.

4.15 All courses will be structured according to a credit system (60 credits for a year of full-time study), very close to the European ECTS) to enhance European transparency and promote student mobility.

Governance of the system

4.16 By historical tradition the system been centralised, but during the last two decades a process of decentralisation has occurred. Whilst universities have been partially autonomous since 1968, since the Act of 1984 they have been given greater autonomy in administrative, financial, educational and scientific matters. .

4.17 The Ministry of Higher Education is responsible for all education in public establishments and establishments of scientific, cultural and vocational education such as universities and autonomous institutes linked to universities, IUFMs and IUTs. The engineering *grandes écoles* are under the responsibility of various ministries (education, agriculture, defence). Commercial (business schools) are run by the *Chambers of Commerce*.

4.18 These establishments have since 1968 (the “Edgar Faure” law) had autonomy as regards teaching, academic content, administration and finance. The so-called "Savary" law in 1984 re-defined this autonomy and it is now exercised pursuant to national regulations governing higher education and contracts concluded with the State.

4.19 The State therefore continues to have essential responsibilities in higher education in defining undergraduate curricula and recognising national diplomas. Teaching and research posts are allocated through a dual procedure involving the setting up of a “*liste d’aptitudes*” drawn at national level with qualified applicants and a selection procedure shared by a scientific committee and the university.

4.20 The latest move toward decentralization established 4-year contractual arrangements between universities and the ministry of education stipulating the priorities of the university, including new courses and degrees, and the necessary additional state subsidies to finance them.

4.21 Other important laws and decrees are:

- The law of 12 July 1987 established the principle of the freedom of higher education. It meant that private institutions can be created subject to legal notification.
- A scheme aiming at improving and developing the HE system, *Université 2000*, was adopted in May 1991 to invest in new buildings and equipment.
- With the Decree of 17 November 1999, the vocational degrees, *Licences professionnelles*, were introduced.

4.22 More responsibility has been given to state *departements* and territorial authorities, regions. However, the State still has a considerable role for example in financing, academic staff recruitment and allocation of administrative positions.

4.23 Each level of government (communes, *departements* and regions) has been made responsible for a given level of education, see Table 4.2.

Table 4.2

Communes	Departements	Regions
Provision and financial management of nursery schools and primary schools (to age 11)	Maintenance and construction of <i>colleges</i> (lower secondary schools, to age 15)	Maintenance and construction of <i>lycees</i> (upper secondary schools, to age 18 or 19) Educational planning (regional education plans, forward investment plans)

NDPB

4.24 A number of bodies, at national and regional level, play a part in mediating between government and education providers, as follows:

National

- The National Curriculum Council (CNP) was created by the Framework law of July 10 1989. It is composed of 22 members chosen for their skills by the Minister(s) concerned, and ensures continuity of education between schools and higher education and contributes to harmonising courses.
- Joint Organisations, composed of an equal number of civil service and staff representatives. The civil service representatives are appointed by ministerial decree. There are two sorts of joint bodies:
 - The joint technical committees (CTP) which are consulted on questions concerning the organisation and operation of the Government departments or of the public institutions under their control.
 - The National joint administrative commissions (CAPN), which are created for each staff category. These commissions must be consulted for management questions affecting the staff they represent, for example for promotions and transfers.

4.25 The Vocational Advisory Commissions, of which there are 20 at present, comprise representatives from the public authorities, employers and representatives of various trades, employees, and persons chosen for their particular talents.

4.26 Their mission is to give opinions and suggestions concerning the suitability of training for existing professions and jobs and for their evolutionary prospects, and suggestions concerning the curricula for these courses and the regulations governing examinations.

4.27 Activity is coordinated between the various commissions by the Inter professional Advisory Committee (CIC). This committee is chaired by the Minister, and its members are the chairmen and vice-chairmen of the 20 commissions.

4.28 The National Council for Higher Education and Research (CNESER, *Conseil national de l'enseignement supérieur et de la recherche*) comprises 61 members representing staff (29), students (11) and "higher national interests, particularly in education, culture, science,

economy and society" (21). It advises the Minister on the main decisions in higher education, such as reform projects, course architecture, allocation of funds between institutions etc.

4.29 Furthermore, the conference of university presidents contains all the university presidents and directors of State institutions for scientific, cultural and vocational education governed by the Ministry for National Education. It examines all the issues of concern to these institutions, presents suggestions to the Minister and gives its advice on questions submitted to it by the latter.

Regional

4.30 The Académie Advisory Council for Further Education is chaired by the *recteur* and is composed of representatives from the Ministry of Education and those trades unions with significant numbers of members in Education. Its task is to encourage all staff governed by the Ministry of Education to develop further education projects.

4.31 Under the direction of the Ministry of Employment and Solidarity, the *Association pour la Formation Professionnelle des Adultes* (AFPA) is a certificate-awarding public agency for vocational training. It responds to the vocational training needs of employees, companies, job seekers and local communities by providing credit-bearing provision. It also undertakes evaluation and career guidance projects, auditing and teaching experiments in companies or in local communities, and various other training activities. The 203 AFPA training sites benefit from the assistance of seven teaching and technical support centres.

4.32 The Ministry has two departments (GEFP and CEREQ) for studying and implementing the vocational training policy: the General Delegation for Employment and Vocational Training (GEFP), created in 1997. The Ministry has supervisory powers over the ANPE, AFPA, and the INFFO centre and jointly supervises the Centres for Studies and Research on Qualifications (CEREQ) with the Ministry of Education.

4.33 Created in 1967, the ANPE (*Agence nationale pour l'emploi*) implements, in addition to its job placement activities, vocational training measures designed for job seekers or salaried workers on vocational training. It administers public funds used to help the unemployed find work which may include a training scheme. The ANPE has 25 regional delegations and 103 delegations in the departments.

4.34 The centre for the development of information on continuing training (Centre INFFO) is charged with providing information tools such as reference material, data processing equipment, and publications to training professionals (education law, documentation, electronic services, Web site, publications).

Providers of non-advanced Tertiary Education

4.35 Policy for Continuing Vocational Education and Training (CVET) is defined by the state, as is the way the funding from companies is used. The state also finances other actions such as programmes for adults and 16-25 year old job-seekers; specific programmes delivered by HE; and pilot studies to support innovative practices from University Continuing Education (UCE) services (Arquembourg and Pouget, 2003).

4.36 Provision for CVET however is controlled by regional legal systems. ‘Since 1999, the regions have been responsible for organising and financing the training of people between the ages of 16 and 26. They have seized the autonomy that it has given them to define their own CE policies. This in turn has resulted in significant differences in the provision made from one region to another’ (Arquembourg and Pouget, 2003, p157).

4.37 The Préfet of each region presides over a regional committee of vocational education and training, social promotion and employment, which is composed of representatives of the various services dealing with labour, employment, guidance, CE and vocational training. The Préfets are mandated by the government to negotiate and implement the state-region plans (which are contracts for the regions reflecting the national plan). Notably, the focus is on the most disadvantaged sections of the population, with priority given to training the less qualified whom are looking for work. The region does also however finance some HE training programmes which lead to accreditation at university level.

4.38 The four main categories of expenditure made by the regions are:

- actions to help job seekers;
- training of the 16-25 year old age group in preparation for their first jobs (especially apprentices);
- the equipment of training centres; and
- other related activities (e.g. studies, information, teacher training) (Arquembourg and Pouget p.157).

4.39 Although only part of adult training falls under the responsibility of the Ministry of Education, the Ministry has nevertheless played an important role in the very significant increase of continuing vocational training activities recorded over the past 10 years.

4.40 The term "adult training" represents a diversity of programmes. It refers, firstly, to the continuing education, that is primarily vocational, given to workers in a well-defined legal framework. It also refers to all other forms of education, which can be acquired by adults. In many training schemes, it is difficult to differentiate between the vocational, personal development and recreational aspects of the training. A company can use the budget that it is required to devote to training by soliciting the services of a public agency such as the GRETA or a private agency. The GRETAs are groupings of State institutions that organise permanent training programmes as well as customised courses for companies, associations or other centres. In their training centres Continuing Education Counsellors (CFC) hold individual interviews and provide guidance in the selection of a suitable training course. At the present time there are 305 groupings of institutions (GRETA) spread out over 28 académies throughout France. They federate 5,900 training institutions and employ 43,000 instructors with various statuses.

Continuing Education

4.41 It is evident that in France, the concept of Continuing Education has some significance and merits particular attention.

4.42 Several administrative laws passed over the years underpin the policy of continuing education organised for workers. These laws recognise the right of all workers (who have held a salaried position for over two years) to individual training leave, which can be used by the worker to pursue a course of his or her choice. The course is not required to be directly related to the employee's activity. It may be vocational or cultural. There is a special training leave scheme for non-salaried workers: farmers, craftsmen, and self-employed professionals.

4.43 Continuing education providers cover the full spectrum of institutions and have been classified in 3 categories (Arquembourg and Pouget, 2003, p158):

- public providers – universities; CNAM (*Conservatoire Nationale des Arts et Métiers*); by a range of ministries in addition to the Ministry of Education; and at secondary education level. Public providers cover 13.5% of the CE market;
- semi-institutional structures – e.g. Chambers of Commerce; Guild Chambers; Agriculture Chambers as well as the Association for Adults' Vocational Training. They cover 7.5% of the market; and
- private structures and individual trainers – 79% of the market.

4.44 Jallade (2001 p302) suggests that 'in the long run, everybody understands that LLL (lifelong learning) cannot be financed in full by taxpayers along the same lines as traditional higher education and that its costs will have to be shared among learners, companies, regional bodies and public agencies. Some expect that the emergence of fee-paying LLL will set a breach in the sacrosanct principle of free higher education'.

Validation de l' Experience

4.45 Given the relative failure of accreditation of prior experiential learning in the UK, VAE is worth particular comment, and serves as an illustration of the strengths of the centralised French system. As Pouget and Osborne (2004) have reported, a new piece of legislation of 17 January 2002 on social modernisation (*loi de modernisation sociale*), which includes an important chapter on professional training and development (*formation professionnelle*), has re-energised the previous *VAP* legislation into a broader and more powerful *VAE (Validation de l' Experience)*, extending the 1992 and 1993 Act and decree to all diplomas and professional qualifications. In principle at least it would be possible to do a PhD through APEL (Accreditation of Prior Experience and Learning). The new legislative framework (livre IX du Code du travail) importantly enshrines the right to the recognition and accreditation of experience as part of a citizen's right to lifelong learning (*formation tout au long de la vie*), including temporary and voluntary or unpaid workers (Grandin 2002 Blachère 2002). This right extends to a *VAE* leave of absence of 24 hours in which *VAE* guidance is included. Equally *VAE* will be offered as an option to job seekers by employment agencies. Also considered are funding mechanisms as the Act requires companies of more than ten employees to finance the *formation professionnelle* and *VAE*. The most striking new aspect of this legislation is the explicit ministerial determination to use *VAE* as a tool for social mobility and employability, in a world of flexible contracts and uncertainty, recognising that 35% of jobseekers have less than basic craft level (Centre Inffo 2001).

Student Trends

4.46 Numbers of students in higher education grew steadily (7% per year) from 1988 to 1993. 1994 saw a slowdown (2%) and in 1995 growth was 1.5%. From 1996 to 2000 there were slight falls, but the overall trend of decline appears to have stabilised.

4.47 It should be noted that numbers in the first cycle of university have been falling since 1996. They fell 4.4% that year, but in 1999 fell only 1.7%, thus following a trend similar to that in higher education overall. In the shorter cycles (IUT, STS) there were increased numbers, as also in engineering, commercial, management and accounting courses.

4.48 In 1999 - 2000, 2,094,781 students were enrolled in higher education. Of these two million, nearly 1.4 million were enrolled in university. 80,450 were enrolled in university institutions for teacher training ("IUFM"); 113,520 were enrolled in university institutes of technology IUT 236,764 in higher technician departments STS 70,231 were enrolled in preparatory classes for the Grandes Écoles. Table 4.3 shows that students were enrolled in the following subjects in the following numbers:

Table 4.3

	1st cycle	2nd cycle	3rd cycle	Total
Law - political sciences	90 604	63 281	30 701	184 586
Economics, business	37 209	44 822	22 566	104 597
Economic and social administration	33 277	19 721	540	53 538
Letters, language sciences, arts	66 566	44 239	11 589	122 394
Languages	81 722	52 887	6 017	140 626
Human and social sciences	103 007	95 723	32 047	230 777
Sciences and materials structure	66 414	31 498	12 763	110 675
Science and technology/engineering	13 121	57 461	15 856	86 438
Natural and life sciences	40 447	30 794	15 355	86 596
STAPS*	26 059	15 996	822	42 877
Health	47 894	27 821	63 409	139 124

STAPS: Sciences

4.49 The growing numbers of students passing the Baccalauréat and the propensity of students to prolong their studies led to growth in university student numbers in the early nineties. As regards young people aged between 18 and 25, there had been an increase of 10% in 10 years going from 13.8% in 1982-83 to 23.1% in 1992-93. After more than doubling between 1982 and 1995, numbers have leveled off although some 40% of young people between 19 and 21 are in higher education.

4.50 Counting all types of activities, the Ministry of Education (Higher Education included) provided nearly 915,720 trainees with vocational training in 1998. Of these, 505,200 trained in GRETA and 410,520 in various higher education institutions. In 1999, for the second year running, the activity of the GRETA and CAFOC (académie centers for continuing education within national education structures) increased. The number of trainees, which also increased in 1998, rose by 0.8% (509,000). In 1999, some 45% of people training in a GRETA were jobseekers and this percentage is gradually increasing.

Governance

4.51 The law of January 26 1984 on higher education lays down the legal framework for State higher education organisation. This law reiterates the basic principles of the 1968 law: autonomy, participation and pluridisciplinarity, and introduces the new notion of vocational study into higher education.

4.52 Under the provisions of this law, each component of the university has the power to lay down its own by-laws and structures. Basic structures are:

- the governing board, which determines policy, votes the budget, approves the accounts, distributes posts, approves agreements and conventions signed by the university president;
- the scientific council, which proposes guidelines for research policy to the governing board, and which is consulted on initial and further education programmes, on research programmes and contracts, and on projected creation or change in the diplomas delivered by the institution;
- the council for university studies and university life, which proposes guidelines on initial and further education to the governing board, prepares measures for student guidance, university social life, students' living and study conditions, libraries, and documentation centres, and may examine requests for authorisation and projects for new branches of study.

4.53 These three councils are comprised of elected representatives of teaching staff, research staff, students and the administrative, technical, ancillary and service staff as well as persons from outside the university.

4.54 The president of the university is elected by all the members of the three councils. He directs the university, presides over councils, orders expenditure and income, has authority over all the staff, nominates examining boards, and is responsible for the orderly running of his establishment.

4.55 It is these three councils, particularly the governing board, that exercise autonomy for the institution. This is exercised in three areas:

- administrative autonomy: the university is directed by a president who is elected for five years by all the university councils; each of the educational and research units (Unités de Formation et de Recherche (UFR) of universities is also directed by an elected director;
- financial autonomy: the institution manages the budget, which is allocated to it by the State, together with its own funds;
- educational and scientific autonomy: within the national framework set out by ministerial decree for each subject, the university alone decides educational curricula, contents, methods and materials, and assessment methods. (For details of their functions see www.eurydice.org/Eurybase/application/ section 2.5.4.3.)

4.56 Under the 1984 law, in 1989 the Minister for Higher Education introduced a new type of relationship with institutions of higher education. The former annual budget and educational habilitations allocated by the central administration were replaced by a policy of 4-year contracts signed between the State and each institution. The purpose of this contractual policy was both to give true autonomy to universities and to allow the State to exercise its responsibility to ensure the provision of an effective and comprehensive system as a whole. Each institution draws up a development project corresponding both to national objectives and to local needs in training. This project, covering all activities, is addressed to the appropriate ministerial department, where it is negotiated. Discussions result in a contract, which binds the State to deliver the contractual jobs, teaching hours, operating funds to the institution over the four-year contractual period.

4.57 In France, adult vocational education is the responsibility of various authorities and bodies, which often compete or complement each other in the field, these are:

- ministries;
- local authorities;
- companies and organisations collecting their contributions;
- associations, chambers of commerce and industry, chambers of agriculture and private training centres.

4.58 However, even if no centralising or orchestrating body exists, the Ministry of Education, and the Ministry of Employment and Solidarity are responsible for the administration of continuing training. There is also the Ministry of Agriculture, which is responsible for the centres for adult vocational training and social advancement (CFPPA), generally affiliated to an agricultural vocational *Lycée*.

University as providers of continuing vocational education for adults

4.59 Universities are completely free to compete with other providers, public and private, on the continuing education market. They are encouraged to do so by the government. Most of them have established a *département d'éducation permanente* to provide training to returning adults. At the beginning of their existence twenty years ago, these departments were very much involved with second-chance education for adults, that is trying to upgrade the education level of adults who failed to pass the secondary-school leaving examination. At present, most of their courses are of a vocational nature. They are designed and delivered in response to individuals' employment strategies. In sharp contrast with initial education, universities are free to charge fees for adult courses. Returning adults can apply to employment offices for subsidies to pay for these courses or finance them through individual paid education leave. These courses may lead either to national university degrees or diplomas and certificates created by the university.

4.60 Jallade suggests that the present dichotomy between initial and continuing education is not healthy. Efforts to redesign curricula to take into account working or non-working adults' need are still insufficient. This reflects a split within the teaching body between those who spend most of their time with traditional students, the overwhelming majority, and those who accept responsibilities in continuing education. To a large extent, provision (of initial

education) tends to be supply-driven, i.e. designed by university staff. The opposite is true in continuing education where universities have to compete with other suppliers. Provision is very much demand-driven. The extent to which both cultures can coexist in a single institution is still an open question.’ (Jallade 2000).

Funding of Education

4.61 It is the State that is mainly responsible for the funding of education. The local authorities have played a role in co-financing, since the decentralisation laws of 1983 and 1985. In 1997, the State financed 60.8% of education, local authorities financed 22.3%, households contributed 10.4%, businesses 5.9% and finally, other government departments contributed 0.6%.

4.62 The largest public provider of funds is the Ministry of Labour and Solidarity, since it finances educational action for people seeking employment. The Ministry of National Education produces a large part of continuing education but only participates to a small degree (4.4% in 2000) in its funding.

Higher Education

4.63 The State has remained responsible for investment in higher education, and is in principle the only decision-maker. However, since 1968, when they were granted autonomy, institutions have been able to put forward proposals regarding building and equipment corresponding to their needs, both for teaching and for research and libraries. University investment projects are examined and assessed by the *Rectorat*⁸. in the light of academic policy in higher education, and are then submitted to the Ministry, which will take the final decision.

4.64 The State finances the estates development and the equipment of universities. However, since 1989, it has shared financing with the territorial authorities. Local undertakings, especially by the regions, are voluntary and based on a partnership with the State, which ensures that the local authorities participate in every stage of the regional development and planning of higher education.

4.65 Because they are represented on university governing boards, local authorities are involved in and consulted on all decisions on setting up and renovating institutions located on their territory, and on the defining of the courses organised in universities pursuant to national policy, designed to adapt studies to jobs and inter-regional balances. Moreover, they participate in defining and implementing student aid policies, and in deciding priorities for investment in university buildings. The Plan University 2000 provides an illustration of the increasing responsibilities taken by regional and local government to share investment costs in higher education.

4.66 Research is publicly funded in two ways. Firstly, universities receive personnel and grants from the Ministry of Education, partly based on research evaluations. Secondly, research units of the universities receive funding on the basis of their relationships with research organisations such as the *Centre National de la Recherche Scientifique* (CNRS).

⁸ The French education administration consist of 30 *académies*, each of them lead by a *Recteur*

4.67 Some private funding is provided, besides fees. The Chambers of Commerce and industry, for instance, have an important role in the financing of business schools.

4.68 The over-all picture is, however, that with regard to teaching activities, in the late 1990s, the government financed 78% of all expenditure. Regional authorities and other public bodies contributed 6.5 %, industry 4.5% and private households 9.2% (*Le compte de l'éducation 1996*).

Funding distribution

4.69 From 1995 to 2000, the budget of the Ministry of National Education has increased its share of the overall budget of the State from 20.5% to 21.8%. Its share of GDP stabilised at around 4% over the same period. Internal expenditure on education for the year 1999 represented 7.2% of GDP, i.e. FRF 626 billion (95.43 bn euros), FRF 52,400 per student in higher education, FRF 48,600 per student in secondary education and FRF 26,500 per pupil in primary school - an average of FRF 38,700 per pupil overall.

Table 4.4 Changes in the budget of the Ministry of National Education (1993 to 2000)

	1993	1994	1995	1996	1997	1998	2000
% of budget compared to State budget	20.1	20.1	20.5	20.5	20.9	21.0	21.8

Table 4.5 Share of budget for each level of education (1999)

Expenditure	(%)
Primary schools	27.2
Secondary schools	43.7
Higher education	16.6
Continuing vocational training	8.5

Vocational Training, Continuing Education and Lifelong Learning

4.70 The funding of training by the State comes mainly from the professional training and social promotion fund (FFPPS). Other sources of funding are the national employment fund (FNE), and to a lesser degree the Social Action Fund (FAS) and the association for the administration of the fund for integration of the disabled (AGEEFIPH). This financing may also be supplemented by the European Social Fund, and there is co-financing by the regions.

4.71 In 1999, the GRETA's received 509,000 trainees sponsored from the following funds: 20.1% government funds, 47.7% corporate and individual funding, 32.2% regional authorities. Compared to 1998, the funding from companies and individuals rose, while that from the State and the regions dropped.

4.72 The State and private enterprises are the major suppliers of funds to continuing education as a whole (including that in higher education). The regions considerably stepped up their participation from 1983 - 1997, and now come third in the list of providers of funds. The drop in the State's share due to this increase in regional funds was the result of the decentralisation laws of 1983, and then of the five-year law on employment and vocational training dated December 20 1993, which gradually transferred responsibility for qualifying and pre-qualifying training for young people of under 26 from the State to regional councils.

4.73 The contribution of businesses to LLL initiatives dates from a 1971 law on continuing education, which introduced a payroll tax of 1.5%. To benefit from this source of financing,

all training organisations including universities may compete. Companies are exempted from paying the tax if they have spent an equivalent amount on the training of their workers. These measures are considered to have been a major success, with companies presently spending 3% on average of the payroll (twice the legal obligation) on continuing training. In 1996, the amount of private sector financing available annually for continuing training through the 1.5% rule amounted to 50 billion FF, with an equivalent amount coming from the government, regional authorities and employment offices. This funding is not targeted at any particular sector but at a wide range of training providers; as a result, a highly competitive environment has developed where companies are free to choose their suppliers (Jallade, 2000).

4.74 At this time, higher education institutions saw 35% of their resources funded by employers, 44% by public funds, and the remaining fifth by the trainees themselves.

Support of Students

4.75 The "Student Social Plan", launched in 1998-1999 for the purpose of improving student status, focuses on providing additional financial support. Thus, the percentage of students benefiting from the grant rose from 24% in 1998 - 99 to 28% in 2000-2001, and should reach 30% of students for the 2001-2001 academic year. Beneficiaries of a grant are exempted from payment of university tuition fees and the student social security payment.

4.76 Grants on social criteria amounted to 96% of assistance provided to students in 1999 - 2000. The current number of grant-aided students is 423,703. This is an increase of 10.2% over the previous year. The number of university students benefiting continued to rise, to over 22%. The annual amount of grants on social criteria ranged from FRF 7,524 (1,147.03 euros) to FRF 20,682 (3,655.12 euros).

4.77 French students aged under 26 having passed the Baccalauréat, preparing for a national diploma or recognised university diploma on October 1 of the year the first grant is awarded, showing due proof of eligibility and studying full-time, may apply for a grant.

4.78 In addition to this grant system there is a system of honour loans for students. These interest-free loans, repayable not later than 10 years after the completion of the studies for which they were taken out, are awarded by a special committee on the basis of available credit and the particular case of the student. Numbers have fallen in recent years, from 4,022 in 1994-1995 to 3,408 in 1997-1998.

Future Skills

4.79 According to Nicole Péry, State Secretary for Women's Rights and Vocational Training, the introduction of genuine lifelong learning is a major challenge for our society; the supposition is that it is embraced by all economic and social players. Her analysis of some of the challenges for France and the steps it is taking shows some of the means being used to address future skills needs. As guest speaker at the national colloquium on lifelong learning, organised by the National Union of Independent Trade Unions, UNSA, on 28 March 2001, she thanked UNSA for addressing the issue of lifelong learning and its support for the validation of non-formal learning, one of the elements in the draft Law on social modernisation before the French parliament (and adopted in its first reading by the National Assembly on 9 - 11 January 2001).

4.80 Péry has emphasised that the validation of non-formal learning 'offers a response to the requirements of the labour market, characterised by a high degree of mobility. It does not downgrade training programmes but gives them meaning by fitting them into the context of a personal project'.

4.81 The minister went on to say that the question of *'access to training remains a key question for the implementation of the reform'*. *'Our legal system'*, she pointed out, *'tends to differentiate between training on the initiative of the employer and training on the initiative of the worker. The system of funding is largely structured around this duality. As pointed out by employers' and trade union organisations, this has led to the development of an inegalitarian system'*.

4.82 On the subject of the negotiations on the reform of the vocational training system which she qualified as 'difficult' in view of the great divergence of positions on the solutions to be found, the minister affirmed that it was necessary to 'be ambitious', and at the same time 'leave aside the multiple interests surrounding the question of the management of vocational training funds'. Péry spoke in favour of the determination of 'collective guarantees'. Mindful of UNSA's proposal to introduce 'training time credits' and an 'educational credit in favour of the lesser skilled', she expressed the opinion that these and other proposals merit attention 'if they help to strike a better balance' between the needs of industry in terms of workforce upskilling and the concerns of the workers in terms of career progress. However she admitted that she was 'worried' about proposals seeking to make workers responsible for their own employability, adding that *'this is not the spirit in which I launched the current process of reform'*.

4.83 This raises the question as to whether in France there is a move towards funding the learner (who should be the driver in the market for learning), rather than the employer who might make decisions in favour of producer interest. To answer these questions, one should first differentiate between initial and continuing education and training. In **initial training**, the content of courses, the curricula and the assessment procedures are determined by the CPCs⁹, where the social partners and providers are represented. These tripartite commissions are responsible for updating, reforming and modernizing VET courses and diplomas. The outcome is a well-structured initial VET system. In these Commissions decisions are taken by consensus. Learners are not directly represented, but their abilities, background and motivations are taken into account because both providers and social partners are keen to adapt content and curricula to learners to attract and retain them.

4.84 In **continuing education and training**, the situation is different and much closer to a market. In principle, people benefit from a range of opportunities and incentives to undergo training: company training plans, individual paid education leave and subsidies from the employment offices. Furthermore, they are free to "shop around" for training courses that suit them. Thus, market forces have certainly played a useful role in allowing more "consumer choice" in training. In practice, though, both employers and trainers regularly express concern about the lack of motivation of individuals, both young people and adults, to undergo training, their reluctance to determine their tastes and abilities or to submit their prior experience to assessment. Educators and practitioners are constantly dealing with potential trainees without personal project and or clear motivations. Under such circumstances, putting learners in the "driving seat is problematic.

⁹ *Commissions Professionnelles Consultatives*. They are 24 of them, one for each economic sector.

CHAPTER FIVE

THE SYSTEM OF POST-COMPULSORY EDUCATION IN FINLAND

Introduction

5.1 Historically educational policy in Finland has followed the spirit of the tradition of Nordic welfare state ideology and has endeavoured not to operate solely according to purely economic interests. Educationalists regard the philosopher Johan Vilhelm Snellman (1806-1881) as the initiator of lifelong learning in Finland. In Snellman's view the task of the elementary school could not make a person complete; instead it should provide citizens with the capacity to develop themselves continuously. He thought that education could be divided into three stages: the rearing of children; school education; and self-education, of which the last was a lifelong process. An individual should strive to attain the highest level of contemporary human culture, for in this resided the strength of a nation (Helbom, Kess et al, 1999).

5.2 However, the direction of the Finnish educational system as a whole has assumed an increasing market-related orientation. Some commentators on the university sector maintain that this orientation combined with new monitoring systems is transforming the universities into 'fast food' institutions (Helenius, Hämäläinen and Tuunainen 1996). Some claim that the Finnish university has gone down a path from traditional Humboldtian cultural university (*Bildung durch Wissenschaft*) to planned university to enterprise university. At the present point in time the institutional ideal of the universities seems to be approaching the operational logic of a business enterprise.

5.3 It was the major financial problems of the early 1990s that forced retrenchments in annual budgets, and which has resulted in the need for institutions to turn to the market. From 1990 to 1993 public expenditure rose from 41 to 62 percent of GNP. The unemployment rate rocketed from 3.5% in 1990 to roughly 17% in 1995. Finding a job became difficult for many young people with the unemployment rate for the under 25 year old population in 1995 being about 31%. Budget cuts in education resulted. Differences among regions with regards to financial investment in education increased. Nonetheless, at the same time, a national study commissioned by the Ministry of Education suggested that there seemed to be no evidence of any systematic decline in student achievement.

5.4 The main criteria used in the development of the education system are assuring quality, equality in education and the principle of lifelong learning. An emphasis is placed on the central role of education for reforming working life and production structures. Great emphasis is placed on creating structures to promote continuing education, and the use of information and communications technology.

5.5 Recent statistics produced by OECD (2003a) on GDP and Education Expenditure, Public Expenditure on Tertiary Education, Initial Sources of Public Educational Funds and Final Purchasers of Educational Resources, Population and Tertiary Education Attainment and Unemployment and Earnings, are shown in Appendix 3.

5.6 A five-year Development Plan for Education and University Research is the cornerstone of planning. The plan for 1999-2004 states the following in its introduction:

The fundamental policy line in the government programme highlights know-how and knowledge which equitably benefit the regions of the country. Finland's future depends on know-how and a capacity for utilising the know-how and creating new innovations. Raising the level of know-how among the population as a whole supports Finland's development as a civilisation and Finland's competitiveness. Equal opportunity for education and training is the right of every person permanently resident in Finland in accordance with the principles of lifelong learning, regardless of their gender, place of residence, age, language, economic standing, state of health, disability or origin. The aim is to secure, by a joint public and private sector effort, an input into R&D which enables the present level of overall R&D input to be maintained. The share of public funding will be gradually increased. Finland will be developed into a society which sees knowledge and know-how as part of civilisation and as a central production factor and which at the same time caters comprehensively for the education and training needs of society and the labour market (Ministry of Education 1999).

5.7 The implementation of the objectives set in the Development Plan are monitored and evaluated annually.

5.8 The aims of the Development Plan are comprehensive covering all sectors, and are classified in the following 'development lines':

- Basic educational security
- The financing base of educational institutions
- Information technology in teaching and research
- International cooperation
- Lifelong learning
- Development lines in research
- Quantification of educational provision
- Structural fund programmes
- Teachers' initial and further education
- Evaluation of education and research (Ministry of Education 1999).

The System of Higher Education in Finland

5.9 See Appendix 2.4 for the structure of the education system in Finland.

Parliament and Government

5.10 The Ministry of Education in Finland is charged by parliament with the administration of virtually all public education and research (as well as sport, culture and youth issues). Its remit includes all universities and polytechnics. In matters relating to vocational institutions

and adult education, it is assisted by an expert agency, the National Board of Education (see Ministry of Education 2000, National Board of Education 2001 and OECD 2003b).

NDPB

5.11 The Finnish HE Evaluation Council (FINHEEC) was established in 1995 as an independent, external high-quality evaluation agency for Higher Education. Its operations are funded by the Ministry of Education but FINHEEC is generally considered as an independent actor in the national education system. The aim of the FINHEEC, operating under the Ministry of Education, is to:

- assist institutions of higher education and the Ministry of Education in issues relating to evaluation;
- evaluate polytechnics for accreditation and establishment on a permanent basis;
- organise evaluations of the operations and policies of institutions of higher education;
- initiate evaluations of higher education and promote its development;
- engage in international cooperation in evaluation;
- promote research on higher education evaluation; and
- evaluate and approve professional courses offered by higher education institutions and maintain a register of the accredited courses (FINHEEC 2000 p.6).

5.12 The proposals made by FINHEEC serve as a basis for the allocation by the Ministry of Education of funds to the universities.

5.13 Seppälä (2003) reports that 'what distinguishes Finnish evaluation of higher education from that of other countries is *the wide range of activities*, comprising institutional, programme and thematic evaluations. The mandate is also to reward institutions for high quality in teaching and adult education and accredit continuing professional courses'. He continues by stating that 'the FINHEEC approach is geared for *development rather than control*. The universities and stakeholders have a say in the selection of the areas to be evaluated, although the FINHEEC makes the final decision. The tone of the FINHEEC action plan springs from the need to support the universities and polytechnics in improving their procedures and activities'.

5.14 The Academy of Finland and the National Technology Agency play significant roles in the mediation of research funding.

The Post-compulsory education system

5.15 Post-compulsory education in Finland consists of:

- advanced vocational education,

- university, and
- non-university tertiary level, including Polytechnics.

5.16 Advanced vocational education (following upper secondary education) is provided in college programmes of two to four years' duration. For the most part, this has been transferred to higher education in the non-university sector.

5.17 The conversion of vocational colleges into Polytechnics in the 1990s has led to much developmental work in the context of teaching so that the new institutions can meet the challenge set by HE qualifications. The division of labour between the universities and the polytechnics has been clearly defined: teaching in the polytechnics is to be vocationally orientated and research is not meant to be one of their main tasks.

5.18 In Finnish adult education, the focus has moved from liberal adult education towards more pragmatic ends (Haapanen, 2003). This is particularly evident within the university sector where Continuing Professional Development (CPD) has grown in importance as the need to generate external finance for university budgets has increased. Finland has struggled to restore fiscal equilibrium to the country and introduce structural economic changes since the banking crisis and the collapse of the national economy in the early 1990s and since its accession to the EU. Like the direction of the Finnish educational system as a whole, universities have increased their market-orientation (Varmola 1997, Sihvonen 1997) as government subvention has declined. The reduction of direct funding from government for UCE in particular during the 1990s has directed attention to income-bearing activity. All universities are involved in CPD, which covers a wide range of discipline areas, and courses of varying duration. So for instance, CPD ranges from highly focussed short courses of a few days, sometimes specifically commissioned by employers, to programmes of employment training supported by Ministry of Labour and professional development programmes of up to one year. Some 65% of all UCE income comes from commercial sources (Ministry of Education 1998) and following principles established in the late 1980s, CPD for those in employment is the financial responsibility of employers and not government.

5.19 It is also evident that there is considerable flexibility in the Finnish university system, through the range of Continuing Education offers that are available. This is managed by a sophisticated network of Centres for Continuing Education and is described in more detail in 5.25 (see Osborne et al 2004 for more detail).

Providers of Higher Education

5.20 The university sector consists of 20 universities, of which 10 are multi-faculty institutions, and 10 are specialist institutions – specialising in one or more related fields, such as technology, economics, art, theatre and music. The 21st university is the Military Academy, which is the responsibility of the Ministry of Defence. All universities are engaged in both education and research and have the right to award doctorates. The number of universities is remarkably high, given that the total population of Finland is only 5.2 million. There were 157,200 faculty students at the universities in 2000; this represents a 42% increase since 1990. About 13% of these students were studying for doctoral degrees (Ministry of Education 2001; Haapanen 2003).

5.21 Legislation to establish polytechnics in Finland was passed in 1991. This reform was intended to simplify the vocational education system and to set up a distinct non-university sector of HE, originally offering undergraduate level provision only. The main disciplines in polytechnics are technology, economics and health care. Haapanen reports that today (2003) the polytechnics are preparing to offer their own postgraduate education programmes, with relevant legislation already passed and programmes under way. Finland is thus moving towards a full dual system in tertiary education. The non-university sector consists of 28 polytechnic institutions, which comprise more than 150 educational institutes and colleges, providing advanced and higher vocational education. In 1995, the number of students in this sector was 81,000, with plans for continued investment and growth.

5.22 The Open University is an important provider of HE in Finland (Open University n Finland 2002). OU services are decentralised. Instead of one national OU institution, all universities provide OU programmes in co-operation with a number of liberal adult education institutions throughout the country. OU services are funded by the Ministry of Education as part of the normal HE allocation of money. By law, the tuition fees cannot cover more than the administration costs.

5.23 The Relander Programme, dating from 1993, increased funding to the OU and brought about a major expansion of OU studies. The target group of this programme was people in neither work nor education.

5.24 The Finnish OU can be characterised as a binary institution, with education taking two forms; contact or non-contact teaching. The OU has been a pioneer in technological advances relevant to distance learning.

5.25 Adult education at university level can be described as an entity having eight complementary areas: professional continuing education; employment training; open-university; regional and organisational development projects; international projects; development of teaching materials; research; and publication. Adult education is a core activity of all universities and is implemented mainly through Centres for Continuing Education (CCE) which exists at all institutions. Together CCE and OU students outnumber those in the faculties of the universities (Ministry of Education 2002).

5.26 The founding of the Summer Universities at the beginning of the 20th century was a first step towards opening up the universities. Before the Second World War there were two Summer Universities in Finland, in the towns of Jyväskylä and Turku. They concentrated chiefly on continuing education for teachers and, in the 1950s and 1960s, Summer Universities expanded in order to redress the imbalance in the availability of university-level education between different regions and to lay the foundations of a regional university network. The absence in the Finnish system of a summer term also favoured the establishment of such an arrangement and it was Summer University activity, which largely created the preconditions for the development of the Open University in its present form. Summer Universities still belong to the Open University network organised by the universities (Parjanen 1997).

Providers of non-advanced Tertiary Education

5.27 Non-advanced vocational education is principally provided by local authorities, municipal federations and private foundations. Of 226 providers in 2000, 51 were local

authorities, 68 were municipal federations and 107 were private foundations (OECD 2003b). There were additionally 5 special needs institutes and a specialist training centre in the Saami region of Lapland. Initial vocational training is both broad-based and job-specific and based around a credit framework, and is built upon the school curriculum. It can also be achieved through the apprenticeship system. A three year full-time programme of initial vocational education consists of 120 credits of which 20 credits are 'on-the job', 90 are vocational training, 20 are core subjects and 10 are 'free choice'. There are competence-based examinations that allow the attainment of initial vocational qualifications mainly directed towards adults. Initial vocational training can be used to gain entry to HE, and the aforementioned development Plan for Education and Research envisages that up to one-third of entrants to polytechnics will take this route.

Governance

Development of the system of University governance

5.28 Considerable efforts have been made to improve the policymaking and management systems in HE. Regulations have been decreased and authority transferred from the Ministry of Education to the HE institutions. At the same time, budgetary and regulatory control has given way to the monitoring of performance, backed by a shift to funding by results and development of evaluation systems. A key element in the relationship between the Ministry of Education and an HE institution is the consultation procedure. The Ministry of Education and each university sign a Performance Agreement every third year in which both parties commit themselves to specific objectives, projects and levels of funding. The financial aspects are checked and negotiated every year. Within each university the legislation requires that all staff groups as well as students, must have their representatives in its administrative bodies to enhance democratic decision-making and commitment.

Rights and Responsibilities

5.29 Under the Universities Act 1997, the following pertains:

Table 5.1

Ministry of Education	Universities
Role as manager of educational strategy	To decide on own structure, including division into faculties and departments
To initiate 'results negotiations' with each university, resulting in a results agreement covering a 3-year period, to be signed by both the Ministry and the University	All appointments, including establishment and abolition of posts; promotions; and salaries
To allocate an overall sum to universities	Allocation of resources
To set broad frameworks for degrees (extent, structure and main objectives)	Appointment of outsiders (mainly business people) to their decision-making organs
	To engage in 'results negotiations'
	To decide on content of degrees
Common goal of Ministry of Education and universities: to strengthen academic management and leadership skills	

Funding of Higher Education

5.30 Universities within Finland enjoy considerable autonomy in their internal decision-making, whilst in the polytechnics decision-making is in most cases influenced by municipal decision-making.

5.31 The universities' expenditure is financed by the State budget. However, in practice, universities, for the reasons stated in 5.13, also acquire other income in the form of external funding and commercial services. The extent of funding from non-state sources is high, so much so, that the proportion of direct state funding is approximately 63% of the total expenditure (Ministry of Education 2001; Parjanen and Tuomi 2003).

5.32 The Finnish Ministry of Education has been particularly active in applying Information and Communications Technology (ICT) to all sectors of education. Year by year educational institutions of different levels, from pre-school to doctoral, are provided with very generous subsidies and other funding to develop this area further. Of particular importance in this context are the Open University structure and the Finnish Virtual University.

5.33 The University Act of 1998 allows considerable devolution of decision-making, and there is now a process, which takes the form of *results negotiations*, at the end of which a *results agreement* is signed by the Ministry and each university. These cover a three-year period and comprise an agreement between universities and the Ministry of Education in relation to the goals of each university; the agreement encompasses goals for adult education. The results agreement process has been criticized in university circles, mostly because the indicators used for basic funding (the number of masters and doctoral degrees) are so narrow, and because they are seen as changing the universities into degree factories with a resultant perceived deterioration in the quality of degrees (see Osborne et al 2004).

5.34 In addition to basic funding (dependent on the number of degrees), use has been made of performance-related funding for units of excellence in adult education, research and teaching. In the space of a few years, five to 10 universities have received performance-related funding for their success in carrying out adult education. This has had considerable significance for the status of adult education.

5.35 All Finnish universities are currently government funded, with no tuition fees for either undergraduate or postgraduate students. Recently external funding has increased, especially in high technology and other innovative fields. There has been talk of privatisation of at least parts of some universities and of the establishment of parts of international private universities as satellites in the country. So far, however, the progress towards privatisation has been rather slow and both existing legislation and current Government policy is firmly against it.

5.36 The importance of external finance in university budgets has grown as the Government has cut public subsidies. The impact of this on universities has been mixed; on the one hand it offers greater freedom and independence to universities. On the other however, 'the pursuit of external finance may lead to confusion in the university's main role if departments concentrate too much on acquiring sponsorships' (Haapanen 2003).

5.37 Most polytechnics are partly funded by the Government, partly by municipalities, and by other organisations. Moreover, several of them are administered as private companies. This allows them to be relatively independent and flexible in their decision making and financing.

Sources of Finance - Education

5.38 All universities are owned by the State and are financed directly in large part from the state budget (OECD 1996, Ministry of Education, 1999, 2002). An increasing proportion of funding is achieved from non-state sources. As indicated in 5.22 that proportion accounted for 33% of expenditure in 2001, as against only 16% in the mid-1990s.

5.39 The budgets of the universities in 2000 totalled close to 1600 million euros. Of this, 64% came from the State budget and the remaining 36% from external funding. The breakdown of external funding in 1999 shows the following sources:

- 17% Academy of Finland
- 16% National Technology Agency
- 8% EU
- 15% corporate Finnish funding
- 41% 'other Finnish funding' (targeted research, funded by private organisations such as foundations, educational services and co-operational development projects provided for public and private organisations. Also includes tuition fees and project incomes of University Continuing Education).

5.40 Polytechnic institutions receive state subsidies, but are municipally or privately owned. Since 1993 the state subsidy system has been based on a calculated unit cost confirmed annually by the Ministry of Education. The state subsidy is granted on the basis of these unit costs and numbers of students.

Sources of Finance – Research

5.41 The main ministries responsible for research policy are the Ministry of Education which is responsible for science policy, and the Ministry of Trade and Industry which is responsible for technology policy. These ministries allocate almost 80% of public research funding. The Science and Technology Policy Council is the main advisory body to the Finnish government and its ministries. The Academy of Finland and the National Technology Agency (Tekes) are the main public research funding organisations.

5.42 The Finnish government (Council of State) Development Plan for Education and University Research incorporates its priorities for research for a five-year cycle (Ministry of Education 1999). The Academy of Finland administers research and finances most university research, through four research councils each appointed for a three-year term. Funding for technology and development is channelled through the Tekes which also plays a significant role in the external funding of universities by encouraging the establishment of joint research projects with industry.

5.43 Contracts with private institutions and industry bodies also account for a significant portion of research funding, and the increase of public R&D funding in the 1990s is viewed as having been a stimulus for encouraging corporate contributions (Ministry of Education 2002, p.10).

5.44 There have been designated centres of excellence in research in Finland since 1995. A six-year programme launched by the Academy of Finland in 2000 created 26 such centres and another 16 were planned for establishment between 2002 and 2007.

Funding distribution

5.45 Students in public sector Finnish tertiary education are not subject to fees. The government provides means-tested financial aid directly to students, although there has been extensive discussion recently as to whether students should themselves bear a share in the expense of their studies. Extensive information on the precise criteria for allocations is readily available from KELA (the Social Insurance Institution of Finland at <http://193.209.217.5/in/internet/english.nsf/alias/student>).

5.46 Employment training for the unemployed is entirely government financed, as the responsibility of the Ministry of Labour. The training of employees is financed by employers. The costs of voluntary education are largely born by the individual. This means that an unemployed student can choose either to study via the Ministry of Labour or on his/her own terms. In the former, better benefits are enjoyed via the education insurance system – a contractual procedure connected to labour market systems between Government and labour market organisations.

Future Skills

5.47 The National Strategy for Education and Research Development Plan, in section 2.7, *Quantification of Educational Provision*, points to a number of key areas for Finland's response to skills needs. These pertain in particular to regional development, the needs of an ageing population and to labour market needs. The following extract summarises these priorities:

- The point of departure in the quantification of educational provision will be to cater for the knowledge and know-how needs of the population as a whole, to ensure a balanced regional development and to respond to the need for change in society and working life. A rapid response will be given to the educational needs arising from the ageing of the population and the work force.
- The development of vocational education and training is a topical and important task. Education and training supply will especially be increased in fields of particular relevance to the national economy and in fields suffering from labour shortages. The ongoing measures to enhance the appreciation of vocational education and training will be continued.
- The provision of polytechnic education will be expanded. The intakes will be redeployed especially to fields relating to the cultural industries. In addition, the provision of adult education will be increased in fields suffering from labour shortages.

- The educational provision in universities will be quantified so that the present level of intake will not essentially be increased. Growth is anticipated in knowledge-intensive fields, such as the electric and electronic industries, biotechnology, the cultural industry, business, and teacher education. The expansion in business education and training will be primarily directed at international business, financing and marketing. The overall student numbers in universities will fall owing to improved turnover. (Ministry of Education 1999).

5.48 Specifically in relation to Higher Education, the National Strategy set a target of 70% of each age cohort (under 25 and over 25) to obtain an HE degree. Although this refers to polytechnic as well as university qualifications, this is amongst the highest level of aspiration in the world. In 1999 the entry rate to tertiary education was already 67%; so Finland is second only to New Zealand in the current 'league tables' (OECD 2000, Haapanen 2003).

5.49 It is also important to note that the Finnish Government sees the development of an information society as a major competitive advantage. The high level of information technology capacity is also seen in efforts to increase educational services for dissemination over information networks. The centres, and in particular the Open University activities of the 1990s, have pioneered this in many ways, for example through virtual services (Open University 2002). The Finnish Virtual University (2002), a common service of all universities, provides information about the on-line services offered by all the universities in Finland, specifically, on-line courses and support services that are available to students and instructors. A full range of services will be available by the end of year 2004. The Ministry of Education is also strongly engaged in a *Study Pilotage Service* project, a portal service that gathers together all information on Finnish education and training available on the Internet with the essential purpose of improving the accessibility of information, which will also serve to widen access to education (Opintoluotsi 2002). In OU education the emphasis has shifted from providing courses originally designed for university-enrolled students towards altering and tailoring courses to be more suitable for adult education. This means a shift from the supply-driven model to the demand-driven model, in which the core operation is no longer supply of education, but systematic development of the education provided. This provides a more attractive model for employers in terms of continuing professional development.

CHAPTER SIX

THE SYSTEM OF POST-COMPULSORY EDUCATION IN GERMANY

Background

6.1 Since 1990, the Federal Republic of Germany has been made up of 16 Länder: Baden-Württemberg, Bayern, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-Vorpommern, Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Sachsen, Sachsen-Anhalt, Schleswig-Holstein and Thüringen. The 11 Länder in western Germany of the Federal Republic were reconstituted or established after 1945. In the Soviet occupation zone (later the GDR) the Länder Brandenburg, Mecklenburg, Sachsen-Anhalt, Sachsen and Thüringen were re-formed. During a move to centralise the administrative system governing the entire state, the GDR, only in existence since 1949, abolished the Länder in 1952 and replaced them with 14 districts. The five eastern Länder were reconstituted under the Establishment of Länder Act (Ländereinführungsgesetz) of July 1990.

6.2 As soon as the unity of the German state had been established attempts were made to bring the political, economic and social conditions in the Länder in eastern Germany into line with those in the western Länder of the Federal Republic. The major policy tasks facing the united Germany are to find a solution to the economic and social problems that are the legacy of the former German Democratic Republic (DDR).

6.3 Despite low birth rates, the population has grown by a total of 4 million since 1970. This is due to the number of migrations as, since 1970, some 6.5 million more people have immigrated to Germany than emigrated from Germany. In 2001, 879,200 people immigrated from abroad, 606,500 left Germany. This represents a growth of 272,700 people. On average between 1991 and 1996, Germany's migration excess was just below 500,000 per year. In 2001, some two-thirds of immigrants to Germany came from Europe, almost a third of these from European Union member states.

6.4 In order to bring about German unity in the areas of culture, education and science, the Unification Treaty (Einigungsvertrag) concluded between the Federal Republic of Germany and the DDR on 31 August 1990 contains fundamental provisions which aim to establish a common and comparable basic structure in education - particularly in the school system - and a common, though differentiated, higher education and research landscape in the Federal Republic of Germany.

The Post-compulsory education system

6.5 As of January 2003 there were the following types of higher education institutions spread throughout the Federal Republic of Germany:

- Universitäten, Technische Hochschulen Technische Universitäten, Pädagogische Hochschulen Theologische Hochschulen;
- Kunsthochschulen and Musikhochschulen (colleges of art and music);
- Fachhochschulen

6.6 As far as vocational training is concerned, the vocational schools are the exclusive responsibility of the Länder and in-company vocational training that of the Federation. Within the Federal Government, the Federal Minister of Education and Research is responsible for co-ordinating issues of in-company training, whilst responsibility for adopting regulations lies with the relevant individual ministries. The Federal Institute for Vocational Training (Bundesinstitut für Berufsbildung), brings together representatives of employers, trade unions, the Länder and the Federal Government on an equal footing. The Institute advises the Federal Government on all vocational training matters. It is here that training regulations (Ausbildungsordnungen) are prepared for the in-company part of vocational training. These training regulations are then coordinated with the framework curricula Rahmenlehrpläne for the Berufsschule between the Federal Government and the Länder (see section 6.16).

6.7 At the level of the Länder vocational training committees are set up which are composed of employers, trade unions and ministerial representatives. They advise the governments of the Länder on vocational training matters.

6.8 In many training companies, the elected representatives of the employees have a say in the planning and conduct of vocational training and the appointment of instructors. This however depends on the size of the company and whether there is a works council operating in the firm.

6.9 Most of the training companies are private training organisations. Currently, some 24% of German companies train in the Dual System (see section 6.36). Not all companies have the entitlement to train (in the craft sector this still depends in most cases on the master qualification). In the new federal states public and private training providers seek to meet unmet demand and are supported by the Federal Labour Agency (Bundesagentur für Arbeit)

6.10 As a rule, institutions of higher education have the status of a public-law corporation and are public institutions under the authority of the Länder. They can also be established with a different legal form, although they still lie within the umbrella of the federal state governments' jurisdiction. They have the right of self-administration within the framework of the law. The higher education institutions draw up their own statutes (Grundordnungen) which require the approval of the Land in which they are situated. Within the Land governments, responsibility for the higher education institutions lies with the ministries responsible for science and research. In addition to the higher education institutions to which access is open to all, there are some specialised institutions with restricted access which are maintained by the Federation and the Länder. These include the universities for the Federal Armed Forces and Fachhochschulen for federal and Land public administration. Finally, Germany has several church-run institutions of higher education, as well as some privately maintained higher education institutions.

6.11 The general principles for the legal position of higher education institutions and for the academic and creative arts, including the participation of all members of these institutions in self-administration are laid down in the Framework Act for Higher Education (Hochschulrahmengesetz). It is on the basis of these principles that the organisation and administration of higher education institutions are regulated in detail by Länder legislation for those higher education institutions that come within the purview of each Land. The Länder's freedom of action in the reforming of organisation and administration has been extended considerably through the amendments of the Framework Act for Higher Education of 1998

and 2002. The majority of Länder have already carried out the appropriate reforms of their Higher Education Acts (Hochschulgesetze) or are currently in the process of preparing them.

6.12 In administrative matters there is a co-operative relationship between the responsible Land ministry and the higher education institution. The latter's functions include both academic matters and governmental matters such as personnel, economic, budgetary and financial administration. Legal supervision (*Rechtsaufsicht*) and, to a certain extent, academic supervision (*Fachaufsicht*), the power of establishment and organisation and authority over financial and staffing matters, all lie with the responsible Land ministry or government.

6.13 In certain states such as Baden-Württemberg university reform has led to the establishment of so-called “university councils”. In the case of the University of Konstanz, for example, all members of this council are “external”, i.e. there is no university person involved. The council has to counsel the university rectorate and confirm important decisions.

6.14 As part of the current higher education reforms, the Länder have partly restructured the organisation and administration of their higher education institutions. The main aim of the reform is to strengthen the capacity to act and the achievement potential of the individual higher education institutions by the partial shifting of decision-making competencies from the Land ministry and the bodies of participation to the management of the higher education institution or the head of the department.

The System of Higher Education in Germany

6.15 See Appendix 2.5 for the structure of the education system in Germany.

Parliament and Government

6.16 As of 31 December 2001, Germany has been divided regionally and for administrative purposes into 16 Länder (including three city states), 29 administrative regions (Regierungsbezirke), 439 districts (Kreise) comprising 116 municipalities with the status of a district (kreisfreie Städte) and 323 rural districts (Landkreise) and 13,416 municipalities (Gemeinden). The city states of Berlin, Bremen (two municipalities) and Hamburg are also counted as local authorities, as are all municipalities with the status of a district and inhabited areas not belonging to any municipality.

6.17 The Bundestag has formed committees for specific subject areas. Education and research are dealt with by the Committee on Education, Research and Technology Assessment. Of the Bundesrat's 16 committees, the Cultural Affairs Committee, the Internal Affairs Committee and the Committee for European Union Issues are the main committees responsible for science and education. Within the Federal Government, it is the Federal Ministry of Education and Research (BMBF) that is responsible for policy, coordination and legislation regarding out-of-school vocational training and continuing education, training assistance, the general principles of the higher education system, as well as the expansion and construction of institutions of higher education. Education and science are also aspects involved in the work of the Federal Ministry for Foreign Affairs, the Federal Ministry of the Interior, the Federal Ministry of Justice, the Federal Ministry of Defence, the Federal

Ministry of Economics and Labour, the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth and the Federal Ministry for Economic Cooperation and Development.

6.18 The scope of the Federal Government's responsibilities in the field of education is defined in the Basic Law, according to which the Federation bears responsibility particularly for the regulations governing the following domains of education, science and research:

- in-company vocational training and vocational further education;
- framework responsibility for the general principles of higher education;
- training assistance;
- promotion of scientific and academic research and technological development, including the promotion of up-and-coming academics;
- youth welfare;
- legal protection of participants of correspondence courses;
- regulations on entry to the legal profession;
- regulations on entry to medical and paramedical professions; and
- employment promotion measures; occupational and labour market research.

6.19 In addition to the division of responsibilities described above, the Basic Law also provides for particular forms of co-operation between the Federation and the Länder such as in the joint task of the Expansion and construction of institutions of higher education, including university clinics (Art. 91a). Federal and Land authorities can also co-operate, on the basis of agreements, in educational planning and in the funding of research projects and institutions of supra-regional importance (Art. 91b).

6.20 A major characteristic of the federal state is that both the Federation and Länder have the status of a state. One core element of this status is, according to the constitutional order laid down in the Basic Law, the so-called cultural sovereignty (Kulturhoheit), i.e. the predominant responsibility of the Länder for education, science and culture. This element is at the heart of their sovereignty. This means in principle that each Land bears responsibility for its educational and cultural policy, with the proviso that, in accordance with the federalist principle, they lend expression to the historical, geographical, cultural and socio-political aspects specific to their Land and thus to diversity and competition in the education system and in the field of culture.

6.21 Educational and cultural legislation and administration is therefore primarily the responsibility of the Länder. With a view to co-ordinating cooperation in the areas of education and training, higher education and research, as well as cultural matters, the Länder established the Standing Conference of the Ministers of Education and Cultural Affairs (*Ständige Konferenz der Kultusminister der Länder*) in 1948, which has served as a forum for permanent cooperation ever since.

6.22 The local authorities are responsible for adult education and youth welfare and help promote and support cultural activities by providing over half of public expenditure in this area. In order to meet these responsibilities, local authorities are entitled to levy their own taxes and charges (property and trade tax, consumer and expenditure taxes). The local authorities also receive a proportion of wage and income taxes, as well as of turnover tax.

NDPB

6.23 The particular body responsible for joint educational planning and research promotion between the Federation and the Länder is the Commission for Educational Planning and Research Promotion of the Federation and the Länder (*Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung*), in which the Federal Government and the governments of all Länder are represented with the same number of votes.

6.24 Cooperation extends to the formal creation of training ordinances. Processes on all levels have to be co-ordinated and the governments of the federal states, through the Conference of Education Ministers (*Kultusministerkonferenz*), are involved since training ordinances are the basis for the occupational part of the school curriculum used in the part-time vocational school. The Vocational Training Act has put the formal responsibility for training ordinances in the hands of the Federal Ministry of Education and Research (BMBF). However, in material terms, a training ordinance is never the sole product of the government's definition of the terms for initial training in companies. In fact, training ordinances are the result of comprehensive consultations among all social and political groups who have a substantial interest in vocational training, with all employers' organisations and trade unions the principal consultees. It is the job of the Federal Government, through the Federal Institute for Vocational Training (BiBB), to support and administratively coordinate these consultations, which normally stretch over a couple of years.

Providers of Higher Education

6.25 The overwhelming majority of higher education institutions in the Federal Republic of Germany are state-run institutions maintained by the Länder. The Basic Law does not expressly regulate the establishment of non-public higher education institutions. However, their establishment is permitted in principle pursuant to the general guarantee of the freedom of art and scholarship, research and teaching enshrined in the Basic Law (Art. 5, Paragraph 3). The Framework Act for Higher Education (*Hochschulrahmengesetz*) of the Federation and Länder laws governing higher education stipulate what minimum requirements have to be satisfied if non-public institutions of higher education are to be recognised by the state.

6.26 The Higher Education Institutions Construction Act (*Hochschulbauförderungsgesetz*) of 1969 aims to develop a comprehensive framework for the expansion and construction of institutions of higher education, taking into account supra-regional aspects, including the geographical distribution of the institutions. The Higher Education Institutions Construction Act regulates cooperation between the Federation and the Länder in carrying out the joint task of Expansion and construction of institutions of higher education on the basis of Article 91a of the Basic Law. It makes provisions for the procedure of joint outline planning.

6.27 Under the Higher Education Institutions Construction Act, the aim of the Federation and the Länder in carrying out their joint task must be for the institutions of higher education to form a coherent system in terms of their functions, range of disciplines, number, size and location, which guarantees an adequate and balanced range of training and research opportunities.

6.28 The Fernuniversität (comprehensive university for distance studies) in Hagen, which was founded in 1974 as a comprehensive university of the Land of Nordrhein-Westfalen, is the sole university in the German-speaking world to offer courses of study by distance learning only and is the largest provider of distance learning facilities at university level in Germany.

6.29 The regionalisation of higher education is viewed as an aspect in the guaranteeing of equal opportunities for access to study. Accordingly, since 1960 a range of new universities have been set up in the formerly sparsely populated fringes of the Länder in western Germany, which used to be short on institutions of higher education. Constance, Trier, Passau, Bamberg and Bayreuth are typical examples of such peripherally-situated new institutions of higher education.

6.30 Equally, an avowed aim of the process of reorganising the higher education landscape in the Länder in eastern Germany from 1990 onwards was to relieve the concentration of higher education institutions in a few places and to attain a regionally balanced range; the newly established Fachhochschulen in the Länder in eastern Germany are making a particular contribution to this objective. Brandenburg and Mecklenburg-Vorpommern in particular needed to increase higher education provision.

6.31 Fachhochschulen (universities of applied sciences) were introduced in 1970-1971 as a new type of institution in the system of higher education in the Federal Republic of Germany. They fulfil their own specific educational function, characterised by a practice-oriented bias in the teaching, a usually integrated semester of practical training, and professors, who have, in addition to their academic qualifications, gained professional experience outside the field of higher education. In 2000, a relatively high proportion of them, 52 out of 185 Fachhochschulen, were not publicly maintained, but were to a large extent subject to the same legal provisions as state Fachhochschulen. They vary considerably in terms of size, number of students and number of courses of studies, and consequently the individual Fachhochschulen have a specific regional character or particular area of specialisation. A special role is played by the 29 Fachhochschulen for public administration Verwaltungsfachhochschulen which train civil servants for careers in the so-called higher level of the civil service. They are maintained by the Federation or by a Land.

6.32 The characteristic features of the design of the courses of study and the organisation of teaching and studying at Fachhochschulen are the particular emphasis on practical application and the closer links with the requirements of the professional world. The semesters spent outside the institutions to gain practical experience Praxissemester are a vital feature. The teaching staff and course contents at Fachhochschulen are linked with applied research and development projects, which are characteristic of this type of institution.

6.33 In summary, study courses in the following areas of study are taught in the Fachhochschulen:

- Engineering sciences
- Economics/economic law
- Social work, social services
- Public administration, administration of justice
- Information technology, computer science
- Design
- Mathematics
- Information and communication studies
- Nursing and management in the public health system.

6.34 Overall, the range of regional opportunities for higher education studies has increased considerably over the past 30 years, with Fachhochschulen playing a particularly important part in this process. Accordingly, there is now a dense network of universities and Fachhochschulen in the west of Germany along the Münster/Bochum/Frankfurt/Stuttgart line, and in eastern Germany along the Magdeburg/Halle/Leipzig/Dresden line. These lines connect regions with high population densities. Another concentration of institutions of higher education is to be found in the major conurbations of Hamburg, Berlin and Munich. In addition, there are large areas in the north and south-east of Germany with little higher education provision, in keeping with the low population densities in those areas.

6.35 A comprehensive breakdown of HEIs is shown in Table 6.1.

Table 6.1 Institutions of Higher Education by Type and Land (as per the 2001/2002 winter semester)

Land	Institutions of higher education			
	Total	Universities and equivalent institutions	Colleges of art and music	Fachhochschulen including Verwaltungsfachhochschulen
Baden-Württemberg	65	22	8	35
Bayern	43	15	7	21
Berlin	16	4	4	8
Brandenburg	11	3	1	7
Bremen	5	1	1	3
Hamburg	11	5	2	4
Hessen	27	9	3	15
Mecklenburg-Vorpommern	7	2	1	4
Niedersachsen	26	11	2	13
Nordrhein-Westfalen	57	21	8	28
Rheinland-Pfalz	20	8	-	12
Saarland	6	1	2	3

Sachsen	25	6	7	12
Sachsen-Anhalt	10	3	2	5
Schleswig-Holstein	13	3	1	9
Thüringen	12	5	1	6
Federal Republic of Germany	355	120	50	185

Source: *Grund- und Strukturdaten 2003*

Provision of non-advanced Tertiary Education

6.36 The Dual System (duales System) is a well-known and perhaps unique feature of German vocational education. The function of the Dual System refers to initial training of school leavers in a given range of "declared trades" or "recognised occupations" (Deissinger, 2001a). Although the dualism of "learning venues" and legal responsibilities certainly is the striking feature of this "German system" of vocational training (Greinert, 1994), its working principles also comprise at least three more aspects:

- Initial training through the apprenticeship system is a well-understood and socially accepted pathway into employment as it follows a traditional pattern deeply enshrined in the ancient mode of apprenticeship (Deissinger, 1994). This means that training is workplace-led and predominantly practical by stressing the importance of work experience during the training period. It also means that the system works in accordance with skill requirements defined "around the workplace" (Harney, 1985; Deissinger, 1998).
- Despite its traditional basis and long history, the Dual System is determined by the involvement of the state that defines and protects both the nature and quality of occupational standards, as well as the legal conditions of skilled apprenticeship (Raggatt, 1988). Therefore the German "training culture" (Brown & Evans, 1994) is based on the notion that an apprenticeship should not only be dealt with as a contractual duty but should be based on an underpinning pedagogic understanding which sets it apart from "normal work".
- Since the state's function is to secure quality standards with respect to in-company training in a predominantly formal manner other social groups have a major say in the Dual System. The principle of consensus implies that public, private and semi-private institutions work together by using long-established modes of cooperation within the system and that employers and unions normally take the initiative with respect to training ordinances and their revision or modernisation (Benner, 1984; Deissinger, 2001a).

6.37 Craft sector training has a particularly strong tradition (Deissinger, 2001b) as some 570,000 young people out of the present total of the nearly 1.8 million trained in the Dual System are apprenticed in a craft company under the supervision of a master craftsman (although with a decreasing tendency).

6.38 Since 1974, Berufsakademien, (professional academis), which are to be found in eight Länder, have provided an alternative to studying at an institution of higher education. They form part of the tertiary sector and combine academic training at a Studienakademie (study institution) with practical professional training in the workplace, thus constituting

'academic' version of the dual system. These institutions have contributed to a greater number of courses becoming available and a more differentiated structure of the tertiary sector. Berufsakademien were first set up in Baden-Württemberg as part of a pilot project and are now to be found in Baden-Württemberg, Berlin, Sachsen and Thüringen, where they are state-run, and in Hessen, Schleswig-Holstein, Niedersachsen and Saarland, where they are privately maintained state-recognised institutions. Courses offered at the Berufsakademien include, in particular, business, technology and social services.

6.39 The students at the Berufsakademien complete parallel training with a company in trade and industry, with comparable establishments in other sectors - particularly in the case of the liberal professions, or at institutions maintained by social services. During the training, periods of study at the study institution alternate with periods of on-the-job training in the training establishments. The companies bear the costs of on-the-job training and pay the students a wage, which is also received during the theoretical part of the training at the study institution.

6.40 Training at the Berufsakademie is generally divided up into two years of basic studies followed by one year of advanced studies. Each semester is divided up into on-the-job training and a theoretical part of the course at the study institution that lasts between 10 and 12 weeks. No provision is made for semester holidays within the study plans, but students receive an annual holiday entitlement of approximately four weeks on account of their training contract.

6.41 It would be wrong to describe Berufsakademien as strictly being outside Higher Education or being completely within initial vocational education. With its dual structure of learning and the cooperation between state institutions and firms, Berufsakademien lie somewhere between initial vocational training and university studies. Hailbronner (1993, p.12) characterises the Berufsakademien as a "higher vocational training institution", while Erhardt (CDU, 1994) paints the picture of a "flagship of the dual vocational training system". Berufsakademien are not vocational schools in the normal sense of the Dual System partnership, despite the integrated practical part of the training taken in cooperating firms and Berufsakademien training does not come under the Vocational Training Act (Deissinger, 1996). This is also because this particular type of training is outside the conditions of Article 28 Vocational Training Act ("principle of exclusiveness").

Governance

Development of the System of University Governance

6.42 The tradition of higher education in Germany is marked by a number of basic principles that date back to the university reform of the early 19th century, particularly to the work of Wilhelm von Humboldt. These principles include the internal autonomy of institutions of higher education despite their being maintained by the state, freedom of teaching and research, and the unity of teaching and research. These principles were abrogated during the Nazi era, but reinstated during the reconstruction of higher education in the Federal Republic of Germany founded in 1949.

6.43 Since the beginning of the 1990s, the Federation and the Länder have intensified their efforts to introduce higher education reforms throughout Germany in view of inadequate financial resources and staffing levels and the need to strengthen the management of higher

education. The aim of reforming the German system of higher education is to create scope for competition and differentiation, as well as to enhance the international competitiveness of German institutions of higher education by means of deregulation, a performance-oriented approach and the creation of performance incentives.

Funding of Post-compulsory Education

Higher Education

6.44 The funding system of higher education in Germany is undergoing a period of radical change: detailed state control through the Länder is increasingly being replaced by financial autonomy of higher education institutions. For the moment, the attempted reform affects mainly the allocation of funding, without touching on the fundamental decision on the scope and direction of investment in research and teaching.

6.45 Irrespective of the reform on the allocation of funding, higher education institutions receive the majority of their financial backing from the Land concerned, which essentially also decides on the allocation of resources. Public higher education institutions are maintained by the Länder. It is they that supply these institutions with the funds they need to carry out their work from the budget of the Ministry of Education and Cultural Affairs or the Ministry of Science and Research - a total of Euro 15.3 billion in 2000.

Vocational Training

6.46 Industry provides a considerable proportion of funding for schemes under which people can obtain and improve vocational skills and qualifications. The Dual System with its 350 recognised occupations absorbs the majority of all 16-19 year olds. The number of training places offered by employers in recent decades has consistently ranged between some 600,000 and 700,000 per year. Once a training contract has been signed this means the principal financial responsibility of companies for the training process includes, besides training allowances, all direct and indirect costs such as training personnel, machinery, training administration and social insurance contributions. The fact that the "system is financed principally by employers" (NCVER, 2001, p. 38) reflects the principle of self-government re-affirmed a law dating back to the late 19th century. Therefore, companies provide training opportunities on a totally voluntary basis. In terms of the financial burden, companies shoulder the lion's share of training cost: in 2000, companies invested nearly € 28 billion into the Dual System. The average training outlay per apprentice is currently rated at € 16,435 p.a. (Beicht & Walden, 2002). For this reason cost can be found among the most important reasons which companies report for not entering training. A recent panel survey published by the German Labour Office Research Unit reports that the financial aspect of training is an issue for 38% of companies, 28.6% of companies say that training is too burdensome and complicated for them, while 12.5% complain about applicants' educational background or social skills.

6.47 In the past decade, the German Dual System has become increasingly exposed to criticism as to its obsolescence in the face of a rapidly changing economic and social environment. Moreover, both in the political and scientific community, the serious situation on the training market, above all in the east of Germany, has emerged as a permanent issue of public concern. In 2002, the task of providing all applicants with a training place was once again associated with major challenges. At 572,227, the number of new training contracts

was down 42,000 on the previous year and, decreasing by 6.8%, reached an unexpectedly low level. For the training year that began in autumn 2003, the Federal Labour Office reported a 8.1% decrease of available training places in the western states against the preceding year which means that by early October 2003 there were still some 35,000 young people seeking an apprenticeship place. Most obviously, both the industrial and the craft sector, being the two strongholds of training provision, suffered major declines.

6.48 Companies also spend substantial funds on continuing education for their staff. This spending came to an estimated € 9.5 billion in 1999.

6.49 Further training schemes designed to meet the needs of the labour market, which are targeted especially at the unemployed and those facing the threat of unemployment, are funded under the Social Security Code III (Sozialgesetzbuch III) from the unemployment insurance fund. A total of € 5.2 billion was spent from this fund on further training, retraining and integration into the labour force in 1999.

6.50 The Federation and the Länder provided some €134 million in 1999 for the promotion of further vocational training as laid down in the Career Advancement Training Promotion Act (Aufstiegsfortbildungs-förderungsgesetz), which serves, among other things, to further training to become a master of industry or handicrafts, as well as to promote future business founders.

6.51 Social groups (churches, trade unions, and so on) also bear a proportion of the cost of running their continuing education institutions. They guarantee the widest possible access to continuing education by setting their fees at an appropriate level.

Funding of students

6.52 The amendment of the Framework Act for Higher Education (Hochschulrahmengesetz) of 2002 provides for all institutions of higher education in the Federal Republic of Germany that no fees are charged for higher education up to the first academic degree qualifying for an entry into a profession, and for a consecutive course of study leading to a second academic degree qualifying for an entry into a profession. This does not exclude the possibility of administration fees for registration and tuition fees for a second course of study or for long-term students.

6.53 Those attending continuing education courses also make a contribution towards their cost. This contribution can be subsidised by tax relief and by assistance for low income groups and for special courses. For example, between 30 and 50 % of the cost of Volkshochschulen courses (especially general continuing education) are covered by course fees. In particular, those on career development courses within continuing vocational training bear a large proportion of continuing education costs themselves. Additionally, costs are partly covered by enterprises within the framework of personnel development measures.

Establishing Alternatives on the Training Market through State Intervention

6.54 The reasons for the serious situation on the training market may be seen in the following factors:

- the weak economy

- insecurities about the future demand for skilled employees
- lack of training maturity among school leavers
- regional and occupational imbalances on the training market.

6.55 The Federal Government has made it clear that it considers the Dual System as being in a critical state and has announced a number of compensating measures to cure the unstable situation on the training market. These measures will encompass, for instance, an awareness-raising campaign and marketing initiative regarding VET, addressed to non-training companies in particular. It will also include the reorientation or extension of existing training and economic programmes to develop customised in-company training courses and training schemes organised by external providers in close co-operation with local enterprises in problem regions.

6.56 According to the 2003 Vocational Training Report, initiatives to tackle the critical situation on the German training market read as follows:

- Vocational training campaign by the Federal Government - together with workers, employers, *Länder* governments and others responsible for VET - focusing on the creation of training places;
- identification of other tools and organisation of PR campaigns which in regions with a considerable shortage of training places could help to introduce non-training companies to VET under the dual system;
- stronger support of sectoral, regional and in-company training place initiatives and collaborative vocational training ventures as well as training schemes organised by external providers in close co-operation with local enterprises with a view to developing sustainable VET structures, also in problem regions in the western part of the country;
- pooling and strategic repositioning under a single umbrella of ongoing programmes launched by the Federal Ministry of Education and Research and designed to create training places and improve regional vocational training and co-operation structures;
- more company-oriented design of the training place programme for eastern Germany launched by the Federal and *Länder* governments and of the supplementary schemes of the new *Länder*;
- connecting all training place programmes with regional innovation promotion measures and with structural and economic development schemes;
- continuation of the JUMP (*Jugend mit Perspektive* (Youth with Perspectives)) programme with more flexible implementation rules, thus targeting a greater number of young people.

6.57 Despite its support of privately funded apprenticeships the government has been forced, due to the fragile economic framework in eastern Germany, to subsidise training schemes created for the purpose of establishing alternative ways of vocational preparation and integration. In 1998, against the background of rising youth unemployment, the JUMP programme was initiated in order to bring young people into training beyond the regular training market. In 2002, special training place programmes for eastern Germany led to 14,000 additional training opportunities, mostly provided by external providers (*Bildungsträger*) in co-operation with local employers. Some 138,000 young people joined the Immediate Action Programme for Young People which is supposed to lead to regular training places. The Federal Training Report puts the number of schemes launched in 2002 to 196 and the number of newly created apprenticeships to some 10,000. Since 1999 a total of 60,259 training places have been created under the various schemes using public money. This illustrates that the Dual System in its traditional form featuring employers as training providers and funders of apprenticeships can no longer be seen as the direct and one and only non-academic route into employment.

6.58 To address the training market problem more clearly the federal government has recently introduced the concept of training place developers (*Ausbildungsplatzentwickler*) in order to secure the long-term provision of training places and detach it from the contingencies on the labour market. This includes helping companies to cope with administrative work linked to an apprenticeship, to establish co-operation with vocational schools and to set up company-specific training plans. With another programme called 'STARegio' regional joint training provision is to be promoted which means that companies pool together resources in order to enable young people to achieve all the competences within a given occupational training scheme.

Introduction of a Training Levy System

6.59 The introduction of a training levy seems to become more and more likely as the two ruling parties in the Federal Government (Social Democrats and Greens) have in principal agreed on introducing such a scheme. This could mean that companies not engaged in training would have contribute 1% of their payroll to be put into a fund out of which additional training places could be created. The so-called Act to Secure Provision of Training Places (*Berufsausbildungssicherungsgesetz*) would become effective once the training supply fails to exceed the demand by 15% at the beginning of a training year. In this case all companies with more than 10 employees and with a training quota of less than 7% (apprentices among all employees) would have to pay a levy, which would be redistributed to companies engaged in training.

6.60 This political move has to be seen against the background of the fact that at the end of September 2003 only 6,500 school leavers out of 35,000 still searching 35,000 for a place could be provided with a training opportunity. German employers, however, have always refused a training levy (and continue to do so) fearing that this could eventually lead to even fewer training places. At the moment the leadership of the Social Democratic Party (SPD) are trying to get the SPD prime ministers of three crucial federal states (Nordrhein-Westfalen, Schleswig-Holstein and Rheinland-Pfalz) on their side to support the training levy legislation. If these efforts fail the states could bring the law down in the Federal States Council (*Bundesrat*) with a two-third majority which would mean that the Federal Parliament (*Bundestag*) would not be able to reverse it with a second vote. As early as in 1976, training levy legislation (*Ausbildungsplatzförderungsgesetz*) had failed as it was declared to be contravening the constitution by the Federal Constitutional Court. The present government

has been the first one since then to try to steer the training supply in the Dual System in this problematic way.

Reform of the Vocational Training Act

6.61 The core of any preparation for VET pursuant to the Vocational Training Act could in future consist of a number of qualification modules for coherent qualifications pertaining to recognised training occupations. The central objectives of the Federal Government are nationwide transparency and quality standards as well as reliable recognition and credit transferability to subsequent vocational training pursuant to section 29 of the Vocational Training Act (reduction, on application, of the training period if it is likely that the purpose of training will be achieved in the shortened period). The purpose of qualification modules geared to vocational training is to improve substantially the opportunities of transition from vocational preparation and school-based VET to vocational training courses. The orientation of this training is to create a better basis for entry into employment for those young people who cannot make it to vocational training at the first attempt or do not go at all in spite of all the support they receive. A regulation to be adopted shortly will regulate the uniform certification of qualification modules throughout Germany. Moreover, the Federal Government wants to ensure that - irrespective of the necessary and desirable flexible gearing of qualification modules to the regional demand for qualifications by employers and local players - the objectives of transparency, quality and marketability of qualifications will be attained.

6.62 In the 2003 Vocational Training Report (*Berufsbildungsbericht*) the Federal Government underlined its intention to make transition routes from vocational training preparation to vocational training and from initial training to continuing or upgrading training more flexible and linked more closely with each other. The Second Modern Services on the Labour Market Act (*Zweites Gesetz für Moderne Dienstleistungen am Arbeitsmarkt*) integrated the preparation for VET of socially disadvantaged adolescents and young adults and those with learning impairments into the Vocational Training Act as an independent part of vocational education in addition to vocational training, continuing vocational training and retraining. The Federal Government thus made it clear that the preparation for VET was an integral part of vocational education and as such could in future also be provided by training companies.

6.63 In consequence, the Federal Government plans to amend the Vocational Training Act. Its reform will include:

- the inclusion of the vocational training preparation schemes and the development of an appropriate system of qualification modules;
- a more intense internationalisation of VET by providing opportunities for trainees to undergo part of their vocational training abroad;
- an ongoing modernisation of examinations by including the "extended" final examination in the list of recognised types of final examinations;
- the transferability of vocational school credits, based on agreements between the federal states and the federal government.

Future Skills

6.64 In the European Centre for the Development of Vocational Training (CEDEFOP) publication 'Info about Vocational Training in the EU' no. 2/2001, an account of the current position in relation to skills gaps in Germany is given and replicated below in paragraphs 6.56 to 6.59. In these sections the Central Board of the Federal Institute for Vocational Training (*Bundesinstitut für Berufsbildung* - BIBB) comments on the draft 2001 Vocational Training Report presented by the Federal Ministry for Education and Training, it notes an overall improvement in the training market. More detailed analysis is provided thereafter.

6.65 The Central Board reports that for the first time in years the number of apprenticeship vacancies now exceeds the number of unplaced applicants and notes a 'positive trend', with a gratifying 2.6% increase in the number of new industrial training contracts to a total of 564 400. It points out that the 4% fall in the number of applicants registered with the job centres has also helped balance supply and demand, whereby the emergency youth programme which has removed a number of the previous applicants from the market is evidently one of the reasons for this decline. On the other hand, many young people have found a training place through the electronic information services of the Federal Employment Agency (*Bundesanstalt für Arbeit* - BA) and are no longer represented in the job centre applicant statistics. The Central Board expressly welcomes the extension of the special training place programme for eastern Germany up to 2004 as the only way of reducing the 'evident gap' in the training place market in eastern Germany.

6.66 The Central Board, noting that the reform process is well under way, with a total of 36 new and 106 restructured training occupations already created, calls upon all the stakeholders to accompany the introduction of new occupations by targeted and coordinated action and appeals to all the participating players not to miss the opportunity to reach a broad consensus on the further structural development of the dual system of vocational training.

6.67 In view of the successful establishment of new occupations, not least in the IT field, the Central Board expects that industry will be able to fulfil its pledge to create some 60 000 IT training places by 2003, underlining however that the new occupations require a considerably higher input in terms of continuing training effort. Early recognition of made-to-measure and sector-specific skilling requirements is becoming increasingly important. A greater willingness to engage in continuing training, linked with a higher level of financial commitment, is essential. In this context the Central Board calls for, among other things, better continuing training counselling, a user-oriented quality assurance system and equal status for general and vocational education.

6.68 The Central Board moreover attaches considerable importance to the development and dissemination of learning and cooperation networks, calling upon the social partners and politicians to tap all talent reserves and focus greater attention on disadvantaged youngsters. New occupations should be created with low levels of requirements in those cases in which there is an evident demand in this respect.

CHAPTER SEVEN

THE SYSTEM OF POST-COMPULSORY EDUCATION IN NETHERLANDS

Introduction

7.1 The ultimate responsibility for education in the Netherlands rests with parliament and government. The legal framework of responsibility is provided in a number of Acts, which include the Higher Education and Research Act 1993¹⁰ and the Adult and Vocational Education Act 1996.

Government

7.2 The Ministry of Education, Culture and Science, controls and regulates education. Its prime responsibilities are the structuring and funding of the system, the management of public-authority institutions, inspection, examinations and student support. The Ministry also promotes innovation in education and is responsible for the coordination of science policy and cultural and media policy.

7.3 Control may be exercised by imposing qualitative or quantitative standards relating to the educational process or results, by means of arrangements for the allocation of financial and other resources, and by imposing conditions to be met.

7.4 Autonomous administrative authorities play a role in the administration of post-school education and are not part of the Ministry of Education, Culture and Sciences. The Information Management Group is an autonomous administrative authority with which the Ministry has a formal statutory relationship. This Group is responsible for implementing the Student Finance Act (WSF) and the Study Costs Allowances Act. Other duties include the collection of school and course fees, the provision of administrative support for examinations, the placement and registration of prospective students, the evaluation of diplomas and the implementation of benefit schemes for education personnel. The Information Management Group is governed by public law and funded directly from the budget of the Ministry of Education, Culture and Science.

7.5 The other autonomous administrative authorities in the education, culture and science sector include the Staff Replacement Fund and the Collective Redundancy Payments Fund. These 2 funds are governed by private law and funded by the educational establishments from the payment included in the central government grant for this purpose.

7.6 The Dutch education system of primary secondary and higher education begins with primary education at age four. Secondary education is compulsory between the ages of 12-16. For the structure of the education system in the Netherlands, see Appendix 2.6.

¹⁰ Amendment to this Act, in The Quality and Practicability Act of 1996

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Parliament and Government

7.7 As with education in general, Government and Parliament share the overriding responsibility for higher education and research. The Minister of Cultural Affairs, Science and Education is responsible for higher education, which consists of universities of professional education (HBO) and research-intensive universities (WO). The Minister of Agriculture is responsible for agriculture related higher education.

7.8 The 1993 Act contains the general provisions applicable to the entire higher education sector and provisions that apply specifically to higher professional education, the universities or the Open University. The Act also sets parameters relating to the organisation of teaching, e.g. entry requirements.

7.9 Regulations were set in the Act in relation to examinations, students, participation in decision-making, staff, planning and funding and provisions for the cooperation between institutions.

Main implementing regulations

7.10 The Funding Decree provides regulation for the central government grant to public and private higher education institutions.

7.11 The Implementation Decree provides detailed regulation for the functioning of higher education. The extent of specific regulation is moderated by the autonomy of the individual institutions.

The Ministry of Education, Culture and Science

7.12 The Ministry is headed by the Minister of Education, Culture and Science and his two State Secretaries, each of whom has specific areas of responsibility within the general policy lines laid down by the Minister. The chief civil servants together form the Executive Board, which has overall executive responsibility for the running of the Ministry and the preparation and implementation of policy, for which the minister and state secretaries are politically accountable.

7.13 In addition to the Executive Board, the ministry comprises 21 core departments plus ten semi-independent executive agencies. These include the Central Funding of Institutions Agency, the Education Inspectorate, the Education Council and the Science and Technology Advisory Council. There are six departments responsible for developing policy on science and on the various sectors of education. These are the Primary Education Department, the Secondary Education Department, the Adult and Vocational Education Department, the Higher Professional Education Department, the University Education Department and the Research and Science Policy Department. Each is responsible for a particular field of education and maintains contact with the institutions in that field. Other departments like the Information and Communication Technology Department, the Legislation and Legal Affairs Department and the Labour Market and Personnel Policy Department are responsible for matters affecting all areas of education.

The Central Funding of Institutions Agency (CFI)

7.14 This is an executive agency responsible for funding educational establishments, research institutes and education support organisations on the basis of legislation and regulations and in accordance with the established financial frameworks. Its duties include gathering, managing and supplying information on these institutions for policymaking and funding purposes. The CFI is also responsible for the ministry's own accounts. Since 1996 when the CFI acquired agency status, it has formed an autonomous part of the Ministry of Education, Culture and Science.

The Higher Education System

7.15 The Dutch higher educational system is a binary system with universities of professional education (*HBO*), providing professional education, and research-intensive universities (*WO*), concentrating on academic teaching and scientific research. The universities of professional education are all incorporated by law, but are otherwise private bodies. Most of the research-intensive universities are public bodies. Since 1991 university research schools have provided a focus for the centralisation of research activities. Universities have relative autonomy within the limits of various internal and external control mechanisms. They are dependent upon state funding and compete on programmes offered rather than price. There are 47 Universities of professional education and 14 Research-intensive universities including one Open University (See Table 7.1).

7.16 Each university has a Supervisory Board and an Executive Board responsible for the internal management of the institution concerned. Higher education institutions have autonomy in areas such as ownership of buildings, borrowing funds, spending of the budget to achieve objectives, the setting of the academic structure, in terms of course content (partially), staff salaries, the number of students and some control over tuition fees.

7.17 Until 2002, the first major degree in the Netherlands before the doctorate was an integrated degree known as the Doctoraal. Academic programs leading to the doctoraal were not divided into undergraduate and graduate cycles. In some countries this qualification would be considered comparable to a master's degree. The doctoraal programs require four years of study in most fields, and five years of study in engineering, mathematics, natural sciences and agriculture.

7.18 In September 2002, the Law on Higher Education and Research was amended to include the two-tiered, bachelor/master's structure. Institutions of higher education are currently introducing new programs leading to bachelor and master's degrees. However, some institutions pre-empted the new law and had already begun offering the new two-tiered structure long before legislation was passed.

7.19 Universities have restructured most of their traditional integrated (doctoraal) programs to conform to the new two-tiered system. However, for the time being, the old long, first degree programs still exist in parallel with the new programs in the fields of medicine and dentistry.

7.20 The hogescholen (colleges of higher education) have likewise restructured their professional and technical programs to fit the bachelor-master format. Since the summer of 2003, HBOs have been eligible to seek accreditation and recognition for their master's

programs. New master's programs are to be promoted in the fields of education, architecture, health and fine arts. In contrast to the universities, HBO master's degree programs will not be financed by the government, but rather through tuition fees.

7.21 The nature of the program, rather than the type of institution offering it, will now determine whether the program is accredited as "higher professional" or "academic". The differentiation between the two types of degrees is made by adding "of arts" or "of science" to the academic master's degrees.

7.22 Implementing the master's degree has been more gradual than the bachelor's. It is hoped that the new master's degree structure will be in place by 2005. Until that time, the traditional four-year integrated doctoraal is being maintained for those students who are currently enrolled in a university program.

Open University

7.23 The Open University of the Netherlands offers modular open higher distance education at both UPE and university level. Established in 1984, it has developed into an institution that serves the continuing education needs of well-qualified people.

7.24 Universities and UPE's also offer courses in the form of post academic education in the post initial stage e.g. HE for Older Adults, etc. Most of these are, in practice, organised by para-university organisations e.g. foundations, etc.

7.25 The Dutch Open University is not a research-intensive university. As the other universities are also active in reaching new groups of students, the OU has lost its unique position. It has now a special role in the development of ICT programmes and its future is not clear. It may be merged with another university.

7.26 A separate category exists for approved institutions which do not receive government funding.

7.27 The Central Register of Higher Education Study Programmes (CROHO), provides a central database on courses run by HEI's. After accreditation by Nederlands en Vlaams Accreditatie Orgaan (NVAO), courses will be registered in the CROHO.

7.28 Registration provides:

- Entitlement to funding of the particular HEI,
- Eligibility for funding for students on registered courses,
- Legitimacy for HEI's to award certificate and official academic titles.

Accreditation Procedure 2002- 2006 ¹¹

7.29 The NVAO has an official accreditation function. It can use different recognised reviewing agencies or external quality assessment committees.

¹¹ By December 2006 all current higher education programmes must have been accredited

Table 7.1 Universities of Professional Education and Research-Intensive Universities in The Netherlands

Universities of Professional Education			Research-intensive Universities
1. Amsterdamse Hogeschool voor de Kunsten, Amsterdam	16. Hogeschool Diedenoort, Wageningen	32. Hogeschool Zeeland, Vlissingen	1. Universiteit Leiden, Leiden
2. Christelijke Agrarische Hogeschool Dronten, Dronten	17. Hogeschool Domstad, katholieke lerarenopleiding basisonderwijs, Utrecht	33. Hogeschool Zuyd, Heerlen	2. Universiteit Utrecht, Utrecht
3. Christelijke Hogeschool De Driestar, Gouda	18. Hogeschool Drenthe, Emmen	34. Hotelschool Den Haag, 's Gravenhage	3. Rijksuniversiteit Groningen, Groningen
4. Christelijke Hogeschool Ede	19. Hogeschool Edith Stein/ Onderwijscentrum Twente, Hengelo	35. Internationale Agrarische Hogeschool Lerarenopleiding Basisonderwijs, Utrecht	4. Erasmus Universiteit Rotterdam, Rotterdam
5. Christelijke Hogeschool Noord Nederland, Leeuwarden	20. Hogeschool Helicon, Zeist	36. Iselinge Educatieve Faculteit, Doetinchem	5. Universiteit Maastricht, Maastricht
6. Christelijke Hogeschool Windesheim, Zwolle	21. Hogeschool InHolland, Diemen	37. Katholieke Pabo Zwolle	6. Universiteit van Amsterdam, Amsterdam
7. Dr. Gerrit Rietveld Academie, Amsterdam	22. Hogeschool IPABO Amsterdam	38. Marnix Academie P.c. hogeschool	7. Vrije Universiteit Amsterdam, Amsterdam
8. Fontys Hogescholen, Eindhoven	23. Hogeschool Leiden	39. Nationale Hogeschool voor Toerisme en Verkeer, Breda	8. Katholieke Universiteit Nijmegen, Nijmegen
9. Gereformeerde Hogeschool, Zwolle	24. Hogeschool Rotterdam	40. Noordelijke Hogeschool Leeuwarden	9. Universiteit van Tilburg
10. Haagse Hogeschool, 's Gravenhage	25. Hogeschool van Amsterdam	41. Pedagogische Hogeschool De Kempel, Helmond	10. Technische Universiteit Delft, Delft
11. Hanzehogeschool Groningen,	26. Hogeschool van Arnhem en Nijmegen, Arnhem	42. RK Technische Hogeschool Rijswijk,	11. Universiteit Eindhoven, Eindhoven
12. HAS Den Bosch, 's Hertogenbosch	27. Hogeschool van Beeldende Kunsten, Muziek en Dans, 's Gravenhage	43. Saxion Hogeschool, Enschede	12. Universiteit Twente, Enschede
13. Hogeschool Brabant, Breda	28. Hogeschool van Utrecht	44. Stichting ArtEz, Arnhem	13. Wageningen Universiteit, Wageningen
14. Hogeschool De Horst, Driebergen	29. Hogeschool voor de kunsten Utrecht,	45. Stoas, Wageningen	14. Open Universiteit, Heerlen
15. Hogeschool, Delft	30. Hogeschool voor Economische Studies, Amsterdam	46. The Design Academy, Eindhoven	
	31. Hogeschool voor Muziek en Dans Rotterdam	47. Van Hall Instituut, Leeuwarden	
	Larenstein, Velp		

Source: OECD IMHE-HEFCE, (2004) International Comparative Higher Education Financial Management and Governance Project.

Adult education

7.30 The binary system in Dutch education has influenced the development of post initial HE. The statutory framework for adult education in Holland is provided in the Adult Education Framework Act 1996. This Act was designed to harmonise adult education provision.

Adult Education Providers

7.31 In 2001/2002, the total number of institutions offering adult education numbered 61. There were 43 regional training centres (ROCs) operating in the 2001/2002 school year, offering a complete range of adult and vocational education courses, both full-time and part-time. In January 1998, institutions which were not part of a ROC ceased to be eligible for government funding (with the exception of 13 specialist colleges providing training for a specific branch of industry). Two other institutions have been granted exemption on religious grounds, two are attached to institutions of higher professional education and two are attached to institutes for the deaf.

7.32 Agricultural courses are now provided at agricultural training centres (AOCs). Vocational education courses in the agriculture and natural environment sector are the responsibility of the Ministry of Agriculture, Nature Management and Fisheries.

7.33 The purpose of adult education unlike vocational education is not to train students for a particular occupation, but to provide a solid foundation for vocational and secondary education courses and enable adults to participate in society promoting basic skills and self-reliance.

7.34 Since the introduction of the Adult and Vocational Education Act (1996), adult education courses have been provided by the regional training centres (ROCs). These include; Adult Vocational Training Centres, Centres for Vocational Orientation and Training and Women's Training Centres, which provide training under the Manpower Services Act and have the option of either becoming part of a ROC or working closely with them as independent institutions.

7.35 The 1996 Act reflected a shift towards greater emphasis on the requirements of the labour market. It included a number of measures designed to improve the alignment of education and employment, including a separate qualification structure for adult education with improved scope for transferring to vocational education.

7.36 Adult education is geared to furthering the personal development of adults and their participation in society by developing their knowledge, understanding, skills and attitudes in a way that fits in with their needs, potential and experience and the needs of society.

Vocational Education

7.37 The Occupational Education Act 1919 was the initial legislation governing vocational education. This legislation was a consequence of the growth in vocational schools and throughout the twentieth/twenty-first century expansion has continued. The 1963 Secondary Education Act brought secondary and vocational education together under one Act. Between 1966 and 1993 the apprenticeship system was regulated separately in the Apprenticeship Act and from 1993 to 1996 the Part time Vocational Education Act regulated apprenticeships.

7.38 Between 1986 and 1993, Higher Professional Education was regulated separately; however, from 1993 this was regulated by the Higher Education and Research Act. With the introduction of the Adult and Vocational Education Act in 1996, greater unity was brought to the system of adult and secondary vocational education.

7.39 Nevertheless, the 1996 Act covers only a part of adult education in the Netherlands. Other forms of provision include Teleac (the television academy), in-company training, and a huge commercial sector. In addition there are folk-universities and informal adult education providers.

Life Long Learning

7.40 The 1996 Act also regulates life long learning. The provisions of the Act and the formation of regional training centres have created the conditions necessary to perform this broad social function. The Act includes a number of measures designed to improve the alignment of education and employment, including a clear qualification structure for vocational education with an integrated system of courses and considerable emphasis on practical training. Employers' organisations and trade unions in the relevant sector of employment are represented in the national vocational education bodies, which formulate the exit qualifications. Industry therefore influences the structure of exit qualifications.

7.41 During 1997 a new qualification structure for Adult education, KSE (Kwalificatiesysteem Educatie) was introduced, with four types of courses and six levels of qualification ranging from basic skills to secondary education. The purpose of adult education, unlike vocational education, is not to train students for a particular occupation but to provide a solid foundation for vocational and secondary education courses.

Technocentres

7.42 Cooperation between education and industry was strengthened in 1999 with the creation of a number of technocentres. These intermediary organisations were set up at a regional level by educational institutions (including the regional training centres and higher professional education institutions), local businesses, local authorities, manpower services and other relevant partners. The role of these centres is threefold: to improve the alignment of education and employment, to further the diffusion and application of knowledge, and to allow the joint use of advanced equipment.

Training in industry

7.43 Post secondary courses offered by privately owned institutions in business and industry are numerous and varied in their admissions policy.

Governance

Government Responsibility

7.44 Since 1993, the constitutional position of Dutch higher education has been regulated by the Higher Education and Research Act. The Act provides the universities with a statutory framework within which they have to work. The Minister of Education and Cultural Affairs is responsible for the higher educational system (funding, quality, acts, etc.) as a whole, except for agricultural disciplines. They are the responsibility of the Minister of Agriculture.

¹² By December 2006 all current higher education programmes must have been accredited

7.45 The Ministers are not responsible for the individual universities and their specific managerial problems. However, the ministers have to approve the programs that the universities offer. The attention of the government is mainly directed towards control of procedures and processes of the system as a whole. Key elements are the efficient use of state funds, accessibility and coordination between the education offered and the demands of the labour market.

7.46 The Ministry of Education defines a framework based on a general policy paper, which is written once every four years. This general policy paper is a medium-term planning called the Higher Education Policy Paper (HOOP). HOOP is written with regard to all parties directly and indirectly involved in the educational arena. The board of the universities of professional education set their own institutional policies within this framework.

7.47 Following the 2000 Education and Research plan, the Minister for Education, Culture and Science published two policy memoranda, which had implications for legislation. Two new amendments were passed covering (a) accreditation and quality and (b) the implementation in the Netherlands of a completely new Bachelor/Master system. The latter has radical implications for the universities because the previous four or five years course is being split into a separate BA and MA, and new research masters degrees are being developed.

Institutional Control Mechanisms

7.48 Institutional control is undertaken by supervisory boards and a representative advisory body. Overall control is the responsibility of government Ministers, via accreditation panels and trusts such as Stichting Vangnet HBO – the latter is an independent trust which functions as an early warning system. It was set up in 1997 by the universities of professional education.

7.49 The Stichting Vangnet and the Ministry of Education signed an agreement in which the mutual responsibilities with reference to Vangnet are described. The importance of fine-tuning the activities of the Ministry of Education, Stichting Waarborgfonds HBO and Vangnet in order to prevent unnecessary interference became clear. Vangnet can be seen as an external supervisor comparable to a rating agency. The Early Warning System (EWS) is an information system, a complex of preventive measures or instruments, designed to monitor the financial development of universities of professional education. The objective of the system is to identify risks and opportunities as early as possible, on the basis of yearly information given by the universities.

7.50 Vangnet deals with the universities of professional education, not with the research-intensive universities. These universities have their own internal methods to forecast problems related to future financial positions. It will inform Boards of Directors if the financial situation in the long term gives cause for concern. If they persist, the Minister of Education may also be informed. In all other cases the exchange of information between Vangnet and the universities is confidential.

7.51 Each year universities are obliged to deliver financial information, which is registered in the early warning system. Based on defined financial indicators (referring to solvency, profitability and liquidity) and strategic information derived from the annual report, Vangnet describes universities of professional education as being “going concerns”, “on alert” or “on

high alert". If necessary, Vangnet assists universities to improve their financial position. By acting as an external support mechanism, Stichting Vangnet HBO has created distance between the universities of professional education and the Minister of Education. In the past, universities with a financial problem asked the Minister for financial support. This may have been in the direct interest of the university but undermined the sector as a whole (one university might be assisted at the expense of the budget available for the whole sector).

7.52 Stichting Waarborgfonds HBO monitors the quality of loans obtained by the universities of professional education in order to finance real estate. Stichting Waarborgfonds HBO was founded in 1993 in reaction to the government's decision to transfer ownership of real estate to the universities. Every year, Stichting Waarborgfonds evaluates the running budget and the annual report of the universities of professional education they guarantee. If necessary, Stichting Waarborgfonds will contact the Board, or in the worst case, the Minister.

7.53 The universities appoint an auditor whose role is to audit the financial statements at the end of the year and in some cases, the annual rolling forecast for four years. The auditors are aware of the specific demands of the universities set by the government.

7.54 Special guidelines according to Dutch commercial law are applied for the financial control. The Ministry of Education, Cultural Affairs and Science also have their own auditors who audit the annual accounts.

Education Inspectorate

7.55 Under various education acts, the Minister of Education, Culture and Science is charged with the inspection of education, which is carried out under the Minister's authority by the Education Inspectorate. The Education Inspectorate is a semi-independent agency. Its self-governing status is regulated in a ministerial order dating from 1998: the Education Inspectorate (Status) Order. A discussion document published in 1999 set out options for reinforcing the independent status of the Inspectorate and drawing up the new regulations that would be required. Further details were laid out in a follow-up document which was published in 2000.

Education Inspection Act

7.56 The Education Inspection Act (WOT) enables the Inspectorate to operate professionally and independently and give institutions guidance as to how they can improve standards on the basis of their own quality assurance systems. The Minister remains fully responsible for the Inspectorate's work, and is entitled to issue instructions, though not on the assessments contained in inspection reports.

7.57 Inspections are always based on self-evaluations, and target institutions that require them most (proportional inspections). Annual inspections are carried out at every institution but they are less intensive where teaching is of a high standard and quality assurance systems are well developed.

7.58 Under the Act, institutions may receive financial support to improve standards, which may be used, for instance, to pay for an external expert to advise management. Penalties (withholding of funding and withdrawal of rights) continue to apply, albeit that funding can

only be withheld if an institution fails to comply with statutory regulations. The Inspectorate is responsible for proper supervision. In developing its quality assurance system it is assisted by an advisory board.

7.59 The Law on Higher Education and Research came into force on 1 September 2002, and initially applied to the primary, secondary and adult and vocational sectors only. With the introduction of the Higher Education Accreditation Act, its main principles will also apply to the higher education sector. In these sectors, the Inspectorate will monitor the accreditation organisation responsible for assessing the quality of courses.

7.60 Some of the tasks of the Inspectorate have been shifted to the Nederlands en Vlaams Accreditatie Orgaan (NVAO), the Netherlands and Flemish Accreditation Organisation, originally NAO. Accreditation is the task of the NVAO. This organisation uses the reports of visitation committees or external quality assessment reviews.

Institutional Responsibility

7.61 The universities are responsible for admissions, organisation, quality and content of programs offered, though in some disciplines, such as medicine, the government can limit student numbers. Universities of professional education and the research-intensive universities have become increasingly autonomous. This has resulted in more responsibility being placed on the institutions and also in more operational risks. These side effects have resulted in the implementation of more instruments of internal and external control to monitor quality, efficiency and access. These monitoring systems have improved the implementation of the planning and control system at universities of professional education. Research-intensive universities have implemented their own planning and control systems.

Institutional governance

7.62 Before 1997, the president of the board was appointed by the Minister. However the outcome of the University Modernisation Act (1997) was to split leadership between the Rector with executive responsibility, and the President of the Supervisory Board who is drawn from outside the university. The new governance structure is shown in Table 7.2.

Table 7.2 The New Model of Governance (1997)

Pre 1997	Post 1997	
Joint decision making by Administrative Board and Academic Council	Supervisory Board	5 external members appointed by Minister. Supervises and appoints members of executive Board.
	Executive Board	3 Internal members including the Rector. Accountable for governance and administration to Supervisory Board
University and Faculty Councils	University Councils	Academic administrative staff plus students mainly advisory function
Disciplinary Research Groups	Abolished	Previously powerful

Quality Assurance

7.63 If the NAO withholds accreditation of a course, the Minister may withdraw state funding, but state funding can also be withdrawn for other reasons. The external quality audit relies to a considerable extent on the internal quality assurance mechanisms. Panels review

the aims set by the university for a particular program and evaluate the effectiveness and the outcomes of the internal quality system.

7.64 The universities have two kinds of quality assessment committees: for teaching, (usually consisting of a committee of (ex-) professors), and for research, a panel with international experts in the research areas. The professional universities have external quality assessment panels composed of representatives of the profession and some experts in the field of the curriculum.

Access

7.65 Dutch national policy is that higher education should be accessible to all those who have the necessary secondary school qualifications. There should be sufficient capacity to meet demands from minority groups including immigrants and refugees.

7.66 Studies where student numbers are controlled nationally have a complicated system of access based on a combination of marks achieved at secondary school level and a lottery. Higher Art academies and conservatories have their own selection procedures. Masters courses have to accept those with a Bachelor's degree from the same institution and in the same subject, but students can be selected when they come from other disciplines or other universities. The main allocation mechanism for teaching is diplomas, and for research is Ph.D's.

Advisory Bodies

7.67 There are advisory bodies both for universities of professional education and for research-intensive universities. The advisory bodies support the universities in their policies with codes of conduct and schemes, for example for outsourcing and franchising.

7.68 Universities of professional education also have Advisory Councils (consisting of students and employees, comparable to the 'works council' in the Anglo-Saxon context).

7.69 The Central Financial Institution (Cfi) provides comparative information on universities mostly based on the annual accounts. Costing comparisons of activities are still problematic because of differences in costing and allocation systems.

7.70 The HBO-Raad is an association for all professional universities which covers three-quarters of the higher education system in the Netherlands in terms of students. The association is the main interlocutor of professional universities. The HBO-Raad negotiates the collective terms of employment on behalf of the professional universities. However, the HBO-Raad does not bear any responsibility for the allocation of funds. In the absence of funding councils, the Dutch government allocates the funds directly to the universities on the basis of general funding mechanisms. The VSNU is the advisory body for research-intensive universities, which promotes the interests of Dutch research-intensive universities towards politics, government and societal organisations. The association is also the employers' organisation and develops supporting activities for universities. Moreover, the VSNU organises the quality systems of universities.

7.71 The Netherlands universities of professional education have an internal and an external quality control system. Educational quality is evaluated on a regular basis by

external, independent *visitation panels*. These evaluations are based on a framework formulated by the professional universities. In addition to the National Accreditation Organization (NAO) and the internal quality assurance systems of the universities, the Higher Education Inspection supervises this process in the higher education sector. It is an independent body within the Ministry of Education. Such Inspection generally assesses the ways in which universities and NAO ensure quality assurance and quality control.

7.72 The research-intensive universities have their own quality system, besides the visitation panels. The quality system entails a systematic assessment of the academic quality of university research program. Part of the quality system involves self-study. This self-study is a reflection of an internal evaluation of the university programme, which takes place before the visitation.

The Glasz Committee 2000

7.73 Comparable to the Nolan Committee in the UK, this committee investigated corporate governance in education.

7.74 The main recommendations made by the Glasz Committee were:

- The Minister of Education should have more clearly defined responsibilities.
- The criteria set by external supervisors should be reported in the annual report.
- Information should be given about the extent to which objectives/goals are met and what actions will be taken to influence the outcome positively.
- Universities of professional education should clarify the difference between the responsibilities of the Board of Directors and the Supervisory Board.

Funding of Post Compulsory Education

Funding Higher Education

7.75 Since 2000, funding has been based on the so-called “Performance Funding Model”. This means that state funding is now dependent on university results. The budget is composed as follows: 50% is based on achievement; and on the basis of first-year enrolments, 13% of the teaching budget is allocated. The third component is a constant allocation per university, representing 37% of the total teaching budget (in 2000). This element is designed to provide stability in funding for the universities.

7.76 With regard to state funding for scientific research, some funding is project based. The second flow of funds for research intensive universities comes from NWO, the Dutch Organisation for Scientific Research.. This institution pays the salaries of researchers and support staff working either in NWO-universities (40%) or in research-intensive universities (60%). It also contributes to other costs or investments but the larger part of material and overhead costs are to be paid by the receiving university. The universities pay these costs out of the funds they have received for commercial contracts. NWO acts as an intermediary in granting funds for separate research proposals submitted by individual researchers seeking funds for their projects.

Funding of Advanced Vocational Education

7.77 The 1996 Act regulates the funding of adult education. Vocational Education courses are funded directly by the Ministry of Education, Culture and Science. This is based partly on the number of students per course and partly on the number of certificates awarded per institution. The national vocational education bodies, LOBS, are funded by the Ministry on the basis of the number of qualifications devised, the number of training companies recognised and the number of practical training places filled.

7.78 The central government budget for adult education is allocated to the municipalities based on the number of inhabitants over 18 years of age, people from black and minority ethnic backgrounds and the number of adults with educational disadvantages.

7.79 For integrated courses for ethnic minorities, the municipalities receive a separate budget for which the Ministry of Justice is responsible. Students also pay course fees to institutions and students on vocational training courses, BOL, pay fees to the Minister and are eligible for student finance. Finally institutions also receive income from contract activities, companies and private individuals.

FUTURE SKILLS

7.80 The developments in the labour market are an important opportunity for higher education. Increasing internationalisation of the Dutch economy requires international comparison and recognition of educational programs. The introduction of the Bachelor-Masters structure makes an agreement on international standards possible. A shortage of people educated to a higher level and a knowledge-driven economy requires a more active attitude within higher education, in order to attract more students. Instruments available to realise this goal are dual or sandwich programs, and the Bachelor-Master structure.

7.81 During the latter years of the 1990's interest in the need to develop education to reflect the needs of the labour market, was recognised with employability recognised as a dominant goal. The subsequent national action programme in 1998 proposed new funding during the next government's period of office. This action plan placed great importance on life long learning in relation to the labour market:

- Emphasis was placed on reducing barriers to the unemployed re-entering the labour market.
- Responsibility for learning was placed with the individual.
- Government initiated an *Investors in People* quality label for organisations that invest permanently in their human resources.
- Government appointed employability advisers to inform and advise employers and employees.

7.82 Life long learning expenditure appeared to be directed at the young rather than adults. This involved lowering the age of compulsory education to four. 'Learning to learn' – meaning that initial education has to offer the meta-cognitive skills and attitudes to learning in later life is to be promoted. Potential dropouts from secondary and vocational education are to be given intensive and individual guidance.

7.83 The 1999 budget statement recognised life long learning as a necessary component in a rapidly changing society if the goal of a knowledge intensive economy was to be achieved. The need to offer citizens an opportunity to continue to develop skills had to be established. The structure of courses and student finance systems had to change in line with the principles of recurrent education. This course of action was intended to meet the demand for greater flexibility in learning pathways through higher education, involving new full-time and part-time dual models of participation. In 2000-2001 some progress was made, dual higher education i.e. job integrated curricula in higher education, was introduced. This type of education was originally developed in UPE where periods of work alternate with periods of study. Knowledge skills and experience learned in the work place are part of the curriculum. The dual trajectories were strongly advocated, but at the moment they do not seem to be very successful, with problems being identified within the demand side of the labour market.

7.84 A recent survey by Hoger Beroeps Onderwijs (HBO) – the Board of Professional Universities and Vereniging van Samenwerkende Nederlandse Universiteiten (VSNU) – the Association of Dutch Cooperating Universities - concluded that one in five employers were experiencing serious problems due to a lack of higher educated employees. Within the labour force there exists a lack of knowledge on business and management and a loss of innovative capacity. The biggest shortages are visible in health care, government, business services and the building industry. To address these shortages the Minister of Education is trying to make higher education more attractive by offering sandwich courses.

CHAPTER EIGHT

THE SYSTEM OF POST-COMPULSORY EDUCATION IN NEW ZEALAND

Introduction

8.1 New Zealand (*Aotearoa*) with a total land area of 269,000km² has a population of 4 million, with four-fifths of European (Pākehā) ethnicity, one in seven Māori (the *tangata whenua*), one in 15 Asian and one in 16 of Pacific Island (Pasifika) origin.

Government

8.2 New Zealand education has moved from a quite centralised structure to one in which individual schools and tertiary institutions have considerable responsibility for their own governance and management, working within the framework of guidelines, requirements and funding arrangements set by central government and administered through its agencies. More recently, there has been a move towards greater involvement of the Ministry of Education in school management, especially when in crisis.

8.3 The 1989 Education Act established a completely new "Ministry of Education", along with two or three other agencies (e.g. the New Zealand Qualifications Authority (NZQA) and Skill NZ), thus both breaking up and abolishing by statute the former "Department of Education" which had been in (legal) existence since an Act of 1877 Act.

Ministry of Education

8.4 Government does have the power to "reorganise" the Ministry, for example, the abolition of the Special Education Service which is now "reabsorbed" into the Ministry of Education was done by regulation, not statute. The Ministry of Education carries out the following functions:

- provides education policy advice to the Minister of Education and the Government;
- purchases services on behalf of the Crown;
- allocates funding and resources to education institutions;
- oversees the implementation of approved education policies;
- manages special education services;
- collects and processes education statistics and information; and
- monitors the effectiveness of the education system as a whole.

Education Agencies

8.5 The NZQA and an Academic Audit Office have national responsibilities for qualifications and quality assurance. Administrative authority for most education service provision is devolved away from central government to the educational institutions which are governed (in the public sector) by individual Boards or Councils, members of which are elected or appointed.

8.6 Since the beginning of 2003, a new body, the *Tertiary Education Commission (TEC)* (Te Amorangi Mātauranga) has had a mandate to encourage more cooperation and collaboration between tertiary education providers and improve the capacity of the tertiary education system to contribute to national economic and social goals. TEC has played a pivotal role in implementation of a new Tertiary Education Strategy, launched by Government in 2002 and is responsible for the allocation of all post compulsory education funding.

Structure

8.7 See Appendix 2.7 for the education structure in New Zealand.

Tertiary education

8.8 *Tertiary education* in New Zealand refers to all aspects of post-school education and training, offered in a range of different institutions. There are 35 public tertiary education institutions, comprising eight universities, 20 Institutes of Technology and polytechnics, four Colleges of Education and three *wānanga* (Māori tertiary education institutions). There are also 46 Industry Training Organisations (ITOs), and approximately 840 Private Training Establishments (PTEs), registered by the New Zealand Qualifications Authority (NZQA).

8.9 The PTEs have a particularly strong role in New Zealand, unrivalled in comparable countries within this study, as will become evident in the ensuing text. As Anderson (2004) has recently reported, under-marketisation during the 1990s (see also Fiske & Ladd, 2000) PTEs grew rapidly so much so that they accounted for 18.6% of all tertiary students in 2002). PTEs competed for public funding of tertiary study at the pre degree level under a government driven intent to create an education industry and to expand participation while employment became increasingly tied to qualifications.

8.10 Equally important are the wananga, especially Te Whare Wānanga o Aotearoa, which have been responsible for most of the growth in tertiary enrolments over the past two years. Their significance also lies in helping raise Maori participation rates to the point that they now exceed those of Pākehā and Pasifika people.

8.11 According to Scott (2003) the proportions of the tertiary education student population in the other providers in 2002 was as follows: universities (37.1%); polytechnics (35.2%), Wānanga (11.8%); Colleges of Education (3.7%)¹³.

8.12 Unlike in most countries there is huge fluidity between the types of programmes offered by the various types of providers. The key factor underpinning provision is the

¹³ Up to date and detailed education statistics are found at the Ministry of Education website (listed in appendix)

ability of institutions to offer programmes to required quality standards, rather than organisational type. Whilst there are differences in the proportions of types of programmes offered in different types of institutions, as Duke (2002) has reported 'there is not an explicit *binary system*, and the polytechnics do not correspond well with either British FE or Australian TAFE'.

8.13 The following are the broad categorisations of provision and providers:

- *Technical and Vocational Education* is mainly offered at institutes of technology, polytechnics, private training establishments and in the workplace. However, some programmes are also available in secondary schools, wānanga, government training establishments, one college of education and several universities. This provision comes in a variety of forms and programs, principally Adult and Continuing Education, Adult Literacy Innovations Pool, English for Migrants, Gateway, Industry Training, Modern Apprenticeship, Rangatahi Maia, Targeted Training Grants, Training Opportunities, Tupalaga Le Lumana'I, Workplace Literacy and Youth Training. The details of these programmes can be found at the Tertiary Education Commission website, and most are linked to the National Qualifications Framework (described below).
- *Higher, or Degree-Level Education* is mainly offered at universities, but some degree programmes are also available at most institutes of technology, polytechnics, Wānanga and colleges of education, and at some private training establishments.
- *Teacher Education* is not only offered at specialist colleges of education, but also at some universities, institutes of technology, polytechnics, wānanga and private training establishments.
- In addition there are Industry Training Organisations (ITOs), bodies that represent particular industry sectors. ITOs develop and maintain national unit (skill) standards and qualifications for their sector. They also facilitate on- the job training and contract training providers to offer off-job training and courses.

National Qualifications Framework

8.14 The NZQA oversees the National Qualifications Framework (NQF) providing quality assurance and national recognition. Providers of NQF credits must be registered and accredited by the NZQA. Each registered learner is provided with a Record of Learning (ROL).

8.15 The Framework has eight levels, each with descriptors. Levels 1-3 are of approximately the same standard as senior secondary education and basic trades training. Levels 4-6 approximate to advanced trades, technical and business qualifications. Levels 7 and above equate with advanced qualifications of graduate and postgraduate standard.

8.16 Framework qualifications consist of:

- National Certificates - at all levels but normally found at levels 1-4
- National Diplomas - at levels 5 and upwards.

8.17 Standards at each level are determined by experts in their fields. As indicated above it is ITOs who develop standards and national qualifications for specific industries and professions and they are responsible for about half the standards on the Framework.

Role of Ministry

8.18 Every one to three years, a Statement of Tertiary Education Priorities (STEP) is promulgated by the Associate Minister of Education (Tertiary Education), specifying the particular priorities for that period.

8.19 The Tertiary Education Strategy as first outlined in 2001 in Excellence, Relevance and Access, and introduction to the new Tertiary Education system has the following priorities:

- set new directions for the tertiary sector
- establish key priorities and set out the steps needed to achieve them
- call for a new level of collaboration and partnership between providers, Government, and communities, based on a shared vision and understanding of key national goals.

8.20 The 2001 document contained six strategies ‘to enhance the performance of the sector and to help New Zealand meet future economic and social challenges in the years ahead’:

- Strengthen system capability and quality
- Contribute to the achievement of Māori development aspirations
- Raise foundation skills so that all people can participate in our Knowledge Society
- Develop the skills New Zealanders need for our Knowledge Society
- Educate for Pacific peoples’ development and success
- Strengthen research, knowledge creation and uptake.

8.21 For each strategy there are specific objectives to strengthen links and partnerships, to encourage greater innovation and to ensure best practice is widely established throughout the tertiary sector. These are reiterated and expanded upon in the 2003 document, *Statement of Tertiary Education Priorities* (Ministry of Education 2003).

Governance

The Tertiary Education Commission

8.22 The Tertiary Education Commission (TEC) was established in 2003 by the Tertiary Education Reform Bill to oversee the implementation of the new Tertiary Education Strategy (Ministry of Education 2002).

8.23 It is responsible for allocating funding to public and private providers of tertiary education and training and building the capability and capacity of tertiary education and training to contribute to national economic and social goals. In 2002 the amount allocated was approximately \$NZ 1.6 billion.

8.24 The TEC advises government on the Tertiary Education Strategy and education priorities.

8.25 The Commission was given a new set of instruments, in the form of charters and profiles, that would enable it to encourage connections with external stakeholders, and encourage cooperation and collaboration between providers that the Government felt required 'a more focused and strategically-relevant sector'.

Charters and Profiles

8.26 A system of Charters and Profiles for all publicly-funded tertiary providers and industry training organisations (ITOs) has been introduced to steer the system. They provide the basis for funding negotiations between providers and the new Tertiary Education Commission.

8.27 Charters and profiles are used to demonstrate the alignment of providers' and ITOs' activities and education provision with the Tertiary Education Strategy and Statement of Tertiary Education Priorities.

8.28 A Charter is a high-level governance document that provides a broad description of an education provider or ITO's mission and role in the tertiary system.

8.29 A Profile describes in much greater detail how the high-level goals in an organisation's Charter will be implemented. It contains information about specific education and training activities, policies and performance targets of providers and ITOs.

8.30 Profiles are negotiated annually with the TEC and provide the basis for monitoring organisational performance, ensuring accountability for use of public funds and meeting other statutory accountability requirements.

Quality assurance of Tertiary Education

8.31 The NZQA maintains an overview of qualifications in school and tertiary education and training. NZQA has developed the *New Zealand Register of Quality Assured Qualifications* to provide a means to clearly identify all quality assured qualifications in New Zealand and benchmarking of New Zealand qualifications internationally. The Register has ten levels and is composed of qualifications that are registered in accordance with an agreed

set of title definitions. All registered education providers, and approved courses and qualifications outside the universities are listed on NZQA's website.

8.32 Quality assurance of tertiary education in New Zealand focuses on the quality of learning outcomes recognised through qualifications as a whole, and also on the systems and processes that support quality delivery by providers.

8.33 Only those tertiary qualifications and providers that are quality assured by a quality approval body are eligible for Government financial assistance. Quality assurance bodies decide whether providers and qualification developers meet appropriate standards.

8.34 NZQA registers private education providers and recommends the approval of government training establishments to the Minister of Education. It accredits and audits educational institutions and other registered learning establishments that offer approved courses and award credit for registered qualifications. It also accredits Industry Training Organisations to register workplace assessors.

8.35 NZQA has delegated authority for the approval and accreditation of polytechnics and institute of technology courses below degree level to the Association of Polytechnics in New Zealand (APNZ) and its Polytechnic Programmes Committee. In an analogous way NZQA has delegated authority for the approval and accreditation of colleges of education courses below degree level to the Association of Colleges of Education in New Zealand (ACENZ) and its Colleges of Education Accreditation Committee (CEAC).

The New Zealand Vice-Chancellors' Committee (NZVCC)

8.36 Provides quality assurance for university qualifications through the Committee on University Academic Programmes (CUAP). This Committee oversees inter-university course approval and moderation procedures, provides advice and comment on academic developments, encourages the coherent and balanced development of curricula, and facilitates cross-crediting between qualifications. The New Zealand Universities Academic Audit Unit (NZUAAU) established by NZVCC, carries out university academic quality audits, drawing on both New Zealand and international experts.

8.37 Together NZVCC and NZQA use common criteria for the approval and accreditation of degrees.

Funding

8.38 Funding is provided for Tertiary Education in the categories shown below. In summary, for teaching there are a wide range of mechanisms available within training funds and tertiary tuition funds. For research, funding takes the form of both capacity building and reward for performance. A range of other strategic development funds aligned to areas for strategic development exist, and other funds related to specialist groups and issues of access and equity. These are summarised below.

8.39 Funding takes the form of a block grant to providers and ITOs, but is contingent on the approval of the Profile as described previously. Consequently funding is aligned to the goals of the Tertiary Education Strategy. There is an intention that high performing area will in due course receive more funding.

- **Research:**
BRCSS (Building Research Capability in the Social Sciences, CoRE (Centres of Research Excellence), PBRF (Performance Based Research Funds)
- **Training Funds:**
Adult and Continuing Education, Adult Literacy Training Pool, English for Migrants, Gateway, Industry Training, Modern Apprenticeships, Rangatahi Maia, Targeted Training Grants, Training Opportunities, Tupalaga Le Lumana'I, Workplace Literacy, Youth Training
- **Tertiary Tuition Funds:**
About, Key Policy Developments, PTE Student Component, Reporting, Strategic Priorities Fund, Tertiary Funding Guide, Updates
- **Strategic Development:**
e-Learning Collaborative Development Fund, Growth and Innovation Pilot Initiatives, Innovation and Development Fund, Partnerships for Excellence, Polytechnic Regional Development Fund
- **Special Supplementary Grants:**
Maori & Pacific Peoples, Medical Intern, Practicums, Special Education, Tertiary Students with Disabilities

Performance-based Research Funding

8.40 The Tertiary Education Commission (TEC) released its Performance-Based Research Fund (PBRF) report on 12 April 2004 (TEC 2004). This is of particular significance to the UK given the model being proposed bears close to that being proposed for 2008. The New Zealand report, 'Evaluating Research Excellence: the 2003 Assessment assessed research academics on a scale of quality scores, "A", "B", "C" and "R". Of the 8,013 staff eligible to have their research assessed in the PBRF process, 5.7% (Full-Time Equivalent staff) were assigned an "A" Quality Category, the highest score, which signifies their research work is world-class. The report also explains the three components of the PBRF: a periodic Quality Evaluation by expert panels to assess the quality of academics' research performance and outputs on the basis of the Evidence Portfolios each supplies; the number of degree completions each TEO achieves and each TEO's external research income. The three components are weighted 60/25/15 respectively and determine how much funding each TEO is allocated by the PBRF.

Future Skills

8.41 The funding of providers and ITOs as we have noted, depends on the strategic relevance of their offers, and complements quality assurance and the performance monitoring and accountability requirements established through profiles.

8.42 The assessment of strategic relevance consists of a set of broad assessment criteria coupled with a set of guidelines that detail the key factors, indicators, or considerations, that the TEC and tertiary organisations will take into account in assessing whether activities and structures align, or advance, the TES and STEP.

8.43 The assessment of strategic relevance includes:

- the criteria that determine whether a provider may receive government tuition subsidies
- the criteria required to assess whether 2 providers should merge, and
- assessment of whether a provider should receive strategic development support.

8.44 The priorities articulated in the Statement of Tertiary Education Priorities (STEP) will be directly incorporated into the assessment of strategic relevance and will form decision-making criteria for the TEC.

8.45 Use of the assessment will tend to focus on areas where additional funding would support the development of high-level specialist skills critical to economic development, or where some rationalisation of courses among providers would reduce inefficient duplication and foster collaboration.

8.46 The assessment will vary in degree. If a tertiary organisation:

- is assessed as being well, or sufficiently, aligned with the Strategy within the context of the portfolio of provision offered by all providers, its charter, profile and funding would be approved on the basis of this first round assessment, or
- is assessed as being well, or sufficiently, aligned with the Strategy but ranks poorly on a key criterion, it would gain provisional approval subject to more assessment and negotiation with the TEC around that area of poor alignment, or
- appears poorly aligned with the Strategy, it would be subject to more thorough assessment and negotiation with the TEC.

8.47 Greater disclosure of information about a provider's intentions may be required in the case of a proposed merger, as the basis for rigorous assessment.

8.48 The key point is that this instrument increases the ability to steer the system, ensuring that capabilities are developed that are critical to national goals.

8.49 A range of options is available to the TEC when a provider's profile is poorly aligned. These options include not funding, approval and funding of part of a profile, and engaging in dialogue to achieve closer alignment with the TES and STEP.

8.50 The Government has broadly accepted a recommendation that where there is undesirable duplication between a PTE and a TEI no funding be extended to the PTE unless they are able to demonstrate that the programme or activity offered is clearly more desirable.

8.51 Where the Tertiary Education Commission identifies an area of unnecessary duplication at a programme level, a PTE will be eligible for funding only where its:

- strategic relevance assessment is ranked higher than that of tertiary education institutions operating in the same area, or
- strategic relevance assessment is ranked equal to that of tertiary education institutions operating in the same area, and its performance (in terms of learning and outcomes) or the quality of the education it provides is demonstrably higher.

8.52 The changes in New Zealand system are largely a response to a lengthy period from 1984-1999 of what Duke (2002) describes as a 'test-to-destruction drive for free trade and open competition' (so called 'Rogernomics'). For instance, until the change of government in 1999, there was a completely free market fees situation in which each institution sets its own fees. However, over the past five years the current Labour government is endeavouring to alter what it sees as the excesses of this period. In particular, the principle of competition has been replaced by one of collaboration (largely mediated through the funding control of the TEC's Charters and Profiles processes), although these changes are still untested as yet.

8.53 As Anderson (2004) comments there have been a number of policy initiatives implemented recently or are under development which come from the Minister of Education's determination to "steer" the system in a way that is more positively linked with the economic needs of the country while protecting diversity, flexibility and responsiveness. The requirement of providers to develop charters and profiles linked to national strategic goals is most prominent amongst them.

CHAPTER NINE

THE SYSTEM OF POST-COMPULSORY EDUCATION IN NORWAY

Background

9.1 Norway is a constitutional monarchy. Formal power is vested in the Crown but this power, under normal circumstances, is executed through the Cabinet (King in council). The King appoints the Prime Minister in accordance with the general election result. The Prime Minister chooses his or her cabinet from the party in majority or a coalition. Norway is divided into 19 counties and 435 municipalities.

9.2 The Norwegian legislative and executive system is based on the principle of division of power. Legislative authority lies with the national assembly, while the main executive power lies with the central government and the ministries. The third power, the judiciary, has the high court as the supreme judiciary authority.

9.3 Executive power is exercised through a three-tier administrative system; the central/national level, the regional/county level, and the local/municipal level.

The Post-compulsory education system

9.4 Structural reforms of HE in Norway in the mid 1960s and the considerable expansion in this sector in the following decade were aimed at creating equal access to HE for all, irrespective of economic status, social or geographical background.

9.5 An important principle in the preparations of the 1995 Universities and Colleges Act was the introduction of a common legal basis for the university and non-university sectors. This has resulted in a common framework for the regulation of conditions relating to the students, as well as for the management and organisation of all the institutions to which it applies

The System of Higher Education in Norway

9.6 See Appendix 2.8 for the education structure of Norway.

9.7 The State dominates throughout the educational system with private education regarded as supplementary and not expected to compete with public instruction. Private HE institutions may only receive state funding for recognised study programmes but they are not universally entitled to such support. Within HE there exist both universities and university colleges (UCs). Unlike the universities, the UCs are regionally based, having one administrative unit for a number of different sites offering different curricula. UCs offer two to four year vocationally-oriented programmes as well as programmes corresponding to the first degrees offered by universities. They do not offer extensive provision at Masters or Doctoral level although do provide 18 autonomous higher degree programmes and another 21 such programmes in collaboration with universities.

9.8 The Quality Reform of Higher Education White Paper of 2001 (Ministry of Education, Research and Church Affairs 2001) has led to the recent introduction of a degree system taking into account the developments in the Bologna process. The new two-tier

degree structure is a three + two-year bachelor and Master degree structure with few exemptions. Furthermore, the old doctorate degree will be replaced by a three-year Ph.D. degree. Medicine, psychology, theology and veterinary medicine are exempt from the new structure and will retain the old degree-names. The degree system is the same for all categories of public higher education.

9.9 *Network Norway* (now superseded by National Agency of Educational Quality (NOKUT)) was established in order to promote co-operation and a more rational division of labour between the universities and university colleges. The network benefits the various academic environments by enabling them to co-operate with regard to fields of specialisation and division of labour. Education, with similar content and similar degree structure, should be viewed as equitable and give students and staff the same possibilities regardless of educational institution. The network will give students a larger range of options and make it easier to combine programmes from different institutions. Transfers between the institutions are encouraged and simplified by the degree system.

Providers of Higher Education

9.10 As can be seen in the table below, there are four types of public institutions of higher education, and some private institutions.

9.11 There is an "umbrella" association for each of the fields one, two, and three, which co-ordinate activities and provide a link to the authorities.

Table 9.1 Institutions of Higher Education

Institutions of Higher Education are (2001):	Number of Institutions
- State:	
Universities	4
Specialised university colleges	6
University colleges	26
Colleges of the art	2
- Private:	
Colleges receiving state funding	19

9.12 Of particular interest in Norway are the University Colleges. As a result of educational reforms in 1994, 98 colleges were merged into 26 new ones. This was the most comprehensive of reorganisations ever within the Norwegian HE system and involved 15 regional colleges, 25 colleges of education, 15 colleges of engineering, 27 colleges of health education, three colleges of social work and various other small and specialised colleges. Although there still exists some 90 different university colleges, buildings or sites in a specific region (i.e. a county), the multipurpose UC developed from the previous colleges became one administrative unit. In the 19 counties of Norway there are 26 administrative UCs. According to OECD (2002, p.38) the purpose of the re-organisation was to raise the academic standards of non-university HE, to break down barriers between the various course programmes, and to make better use of the capability available in the various regions.

9.13 The growth and development of the former regional and vocational colleges has been closely related to a government policy in which higher education was regarded as an important contributor to local economic, social and political life. The colleges have played

an important role in the decentralisation of higher education in Norway, and they have had a strong commitment to their respective local communities. As indicated in 9.17, the most important categories of non-university higher education institutions prior to the 1994 merger were regional colleges, colleges of education, colleges of engineering, colleges of nursing, colleges of social work and health care education, and conservatories of music. In many cases these institutions form the core of the faculties within the new university colleges and thus the faculties, as a rule, have a longer academic history than the university colleges themselves, in some cases going back to the 1860s.

9.14 In 2001 the total number of students in higher education was 198,496 (118,019 women and 80,477 men). The university sector contained 81,359 students and the non-university sector 117,137.

Provision of non-advanced Tertiary Education

9.15 A large-scale reform of upper secondary education was implemented from August 1994, introducing a statutory right (but no obligation) to three years of upper secondary education for all between the ages of 16 and 19. After 3 years all upper secondary courses (or, in the case of vocational courses, normally four years) lead to higher education (or a recognised vocational qualification). Regional authorities are required by law to offer places substantially in excess of the needs of the 16-19 age group (37.5% of the average 16-19 cohort) in order to provide mature students with the opportunity to undertake an upper secondary education.

9.16 The Competence Reform of 1998 (Ministry of Education, Research and Church Affairs 1997) committed the Government to pursuing lifelong learning policies. This recognised the right to primary, lower and upper secondary education for adults (legislated for in 2002), the assessment and recognition of non-formal learning, removal of tax disincentives to learning and the re-structuring of public education to meet workplace needs. The reform also engaged employers' and employees' representatives to a significant extent.

9.17 There are seven main types of adult education based partly on the type of education offered, and partly on the organisation involved:

- 20 non-governmental study associations receive public support for running a comprehensive series of courses and study groups for adults. The courses cover a large number of activities, from purely leisure activities to academic subjects and work training. There are courses at different levels, and they are offered in most municipalities. There were nearly 615,000 participants in 2001.
- The folk high schools provide general education courses of different lengths for approximately 7,000 young people and adults, but the courses do not result in formal qualifications. The 77 (2002-2003) folk high schools are (boarding) residential schools owned and run by religious organisations, independent foundations or county authorities, in various parts of the country.
- Twelve distance education institutions currently receive limited financial support. Earlier, distance education consisted only of correspondence courses, but it today includes multimedia programmes. Correspondence courses

however are still dominant. Courses cover fields ranging from leisure activities to university and college level subjects up to degree level. The majority of courses are at the levels of those delivered in universities and colleges.

- Education of adults in Norwegian as a second language was extended in 1998 so that immigrants are given lessons sufficient to reach a minimum level of competence. The courses are limited to a 3,000 hours course for persons with little or no schooling from their home country, and 850 hours for persons with better educational background. The courses are offered to immigrants, refugees, and asylum seekers with exception of those who have Swedish, Danish or Saami as their first language. Education of adults in Norwegian as a second language is covered by national funding. Responsibility lies with the municipalities.
- Labour market courses provide occupational qualifications. They are part of the Government's labour market strategy and are fully financed by the State. The Ministry of Labour and Government Administration is responsible with the Norwegian Public Employment Service, *Aetat*, being responsible for implementing labour market policy. The courses take place in upper secondary schools, in separate centres attached to the schools or as part of apprenticeship training in businesses and industry. Quite a large part of the courses correspond to modules from the curriculum for upper secondary education.
- From August 2002 adults have had a legal right to the core curriculum of primary and lower secondary education. Adult education at these levels is organised by the municipalities. The municipality receives financial support as a part of national funding, and decisions about priorities for adult education at this level lie with the municipality. The National Education Office in every county gives advice to each municipality as regards determining the needs of primary and secondary education, and making plans for the education in the individual municipality. The minimum age for participation in these programmes is 16. Primary and lower secondary education can be taken at local primary and lower secondary schools as well as at municipal adult education centres. Distance education institutions, or study associations co-operating with the municipalities, can also arrange primary and lower secondary education courses.
- The county education authorities are responsible for adult education at upper secondary level. The county receives financial support as a part of national funding. Adult education at upper secondary level is given at upper secondary schools and county-based adult education centres. In addition, some study associations, distance education institutions and labour market authorities offer courses that qualify as parts of a full secondary education programme. From August 2000, adults born before 1978 and without completed secondary education have had legal right to upper secondary education.

Governance

Legal Framework

9.18 In February 1992, the Government set up a commission to propose a new law for all state higher education institutions. Based on the proposals put forward by the commission in June 1993, the Government presented a bill to the national assembly in June 1994. This resulted in Act No 22 of 12 May 1995 on Universities and Colleges, which was applicable as of 1 January 1996. It provided for colleges to be regulated under the same legislation as the universities. The recognition of professional and educational programmes and of degrees is also regulated by this Act (Ministry of Education, Research and Church Affairs 1995). Specific provisions of the Act include:

- “The institutions to which the present Act applies shall offer Higher Education based on the most advanced scientific research, artistic development and empirical knowledge. Within a national research and higher educational network (the Norway Network), the institutions shall co-operate and complement each other's academic activities. Educational courses shall be planned and viewed in relation to other national and international educational facilities.”
- “The institutions cannot be instructed as to the content of their teaching, research or artistic or scientific development work.”
- “The institutions are responsible for disseminating knowledge of their activities and understanding of scientific methods and results.”
- “The institutions are responsible for offering or arranging refresher courses in their disciplines.”

9.19 As a result, it is now the case that in Norway:

- The colleges have been given the right (in principle) to award doctor's degrees
- Near all the colleges offer academic programmes similar to the universities and confer the same degrees
- It is becoming easier for students to progress or move from institution to institution, i.e., between different colleges or between colleges and universities
- Entry to colleges has become an attractive alternative to university entry
- The colleges have in principle the opportunity to apply for university status
- The colleges are increasingly internationalist in outlook. Moreover, through a variety of central controls, i.e. national curricula in teacher education, nursing and engineering, both the colleges and universities are part of the same national system.
- Another significant feature contributing to the blurring of boundaries is that universities abroad do not seem any longer to concentrate on co-operation with Norwegian universities at the expense of the colleges. On the contrary,

there are examples of European Higher Education institutions appreciating the flexibility of colleges.

9.20 The universities have a particular national responsibility for basic research and research training and for building up, running and maintaining research libraries and museums with scientific collections and public exhibitions. Similar responsibilities can be imposed on other institutions in their respective special fields.

9.21 Taking up many of recommendations of the Mjøls Commission on Higher Education (Ministry of Education, Research and Church Affairs 2000), a White Paper on Quality Reform of Higher Education was published in 2001. This led to legislation in 2002, introduced from 2003-04, which *inter alia* has introduced structural reforms in accordance with Bologna guidelines (see Nyborg 2002).

9.22 The degree and titles that each institution can award and their professional and educational programmes, as well as duration, are laid down in a Royal Decree of 21st of October 2002.

9.23 In addition, the Act on Adult Education (1976) and the Education Act (1998) regulates adult education, including special needs education for adults. The acts place responsibility for adult education courses with the public education authorities responsible for the various levels of education. In 1993, the Act on Correspondence Schools was abolished and matters related to distance education were included in the Adult Education Act.

9.24 Finally there is an Act on Folk High Schools (1984). The folk high schools are considered an important part of the adult education programme.

Distribution of responsibilities for the organisation and administration of the education and training system

Parliament and Government

9.25 It is the Parliament (*Storting*) that defines the overall aims of compulsory, secondary and higher education as it lays down the structure and organisation.

9.26 The Ministry principally responsible for education is the Royal Norwegian Ministry of Education and Research. An exception is pre-school education for which the Royal Norwegian Ministry of Children and Family Affairs is responsible. The Ministry of Education and Research decides the regulations and the curricula on which educational administration and activity are based. The national assembly defines the overall aims of public compulsory primary and secondary education, of the public institutions of higher education and of pre-school education. It lays down their structure and organisation, determines where responsibility for running the education system lies, and specifies their sources of funding.

9.27 The administration of public primary and secondary education in Norway is decentralized with the counties and municipalities having considerable authority and financial freedom of action. As well as providing child care services, the municipalities are responsible for the administration of public primary and lower secondary education (compulsory education), for the building and maintenance of school buildings and for the

appointment of teachers. The counties are responsible for public upper secondary education, for the administration of the schools, the intake of pupils and the appointment of teachers. The Ministry of Education and Research administers private institutions as well as the institutions of higher education and research directly.

9.28 The Ministry of Education and Research is responsible for policy issues and all matters of relevance to the educational system as a whole. Employing some 280 people (in 2003), the ministry's budget amounts to some NOK 44 billion (in 2002).

Central roles

9.29 The National Board of Education, established with effect from September 2000, is a state institution, with its own board of directors. The Board is a national centre for the education sector, replacing the former National Centre for Educational Resources and the National Examination Board. The new Board has been assigned to such tasks as the operative responsibility for curriculum development, educational research and development work, certain topics related to information and communication technology in education, examinations in lower and upper secondary schools, and certain tasks related to information.

9.30 In Higher Education, institutions are funded directly by the Ministry of Education and Research, generally in the form of framework allocations. The Ministry also approves study programmes following application from the institutions concerned, and in accordance with the provisions of the 1995 Universities and Colleges Act. Some of the Ministry's work is done at the regional level, by regional representatives or by other institutions competent in specific areas. All the state HEIs are administered by the Ministry of Education and Research in accordance with the provisions laid down in the Act of 12 May 1995 No 22 on Universities and Colleges. The Act explicitly provides for discretionary decisions in strategic policy, general management, daily administration and the management of teaching and research - provided that the relevant laws, regulations and national policies are adhered to.

9.31 In each county, there is an Education Office representing central government. As of the 1st January 2003 the National Education Office was integrated into the Office of the County Governors. The Education Office links the Ministry of Education and Research with the education sector in municipalities and counties. The main responsibilities of the Education Offices are reporting, inspection and supervision of existing legislation; administration; quality development; information and guidance. An evaluation of the national educational administration is under way, in which the extent and the contents of the regional education administration are being reviewed.

County roles

9.32 Each County has a special Vocational Training Committee (*Yrkesopplæringsnemnd*), which is responsible for the administration of the apprenticeship contracts, approves the enterprises and organisations which provides the training, organises the examinations and issues the certificates.

9.33 The roles of the counties in most other areas of education are weak, though they have the responsibility for upper secondary education, both for adults as well as children.

Institutional level

Funding of Higher Education

9.34 Total public expenditure on all education in Norway in 2000 was 6.7 % of GDP against a mean for 30 OECD countries of 5.4%. As a percentage of total public expenditure this is 16.2%, third only to Korea and Mexico (OECD 2003). The cost of tertiary education accounts for 1.2% of GDP and 4.1 % of public expenditure, one of largest shares within the OECD.

9.35 HEIs are awarded a framework budget, within which they have a considerable amount of freedom concerning detailed internal allocations and expenditure, so long as set goals are achieved.

9.36 Higher Education in Norway is mostly state funded and offered by the state universities and colleges. Of the 176,698 registered students in 2001, calculated in full time equivalents, only 21,393 attended private institutions, and several of these in fact receive most of their funding from the state. The national assembly determines as part of the annual budget the total amount of funding to be granted directly by the State. The State spent 16,473 m NOK on higher education for the year 2001.

9.37 According to the new funding model, state allocations to the institutions will consist of a basic allocation (60%), a teaching allocation (25%) and a research allocation (15%). The sizeable basic allocation reflects a wish to maintain the provision of adequate scope of the system and to protect the academic environments from short-term fluctuations. However, in order to obtain a closer link between performance and funding, the teaching and research allocations are based on various performance measures, e.g. course credit production, international student exchanges, number of graduates, and funding obtained from other sources.

9.38 This state funding of higher education is meant to cover most of the costs necessary for the running of institutions. Costs can be divided into three main categories:

- salaries and other day to day costs
- investment, in new equipment and other related costs, including for joint activities with other institutions, and
- major investments, which are funded following special evaluation.

9.39 The education budget for primary and secondary education for adults is the responsibility of the municipal and county educational authorities, who are given a grant for these purposes. The remaining adult education programmes are financed by earmarked grants or subsidised by the Government. Grants are given to county authorities, municipalities, organisations and institutions, companies and national associations of companies in accordance with the requirements of the Adult Education Act. The study associations may also receive contributions from public funds according to rules set out in the same act. These contributions are given on the basis of the actual hours of adult education activity, and for special projects such for work in pedagogical development. The main source of finance for the study associations is the participants' fees.

Sources of Finance - Education

9.40 Tuition at state higher education institutions in Norway is free. The institutions may, however, ask a small term fee (between NOK 230 and 400) for the running of student welfare activities. Private higher education institutions ask tuition fees from their students depending on the amount of state funding.

9.41 In 1947, the State Educational Loan Fund was set up to provide students with financial support in the form of grants and loans. All registered students at recognised study programmes (in practice all study programmes at the state higher education institutions, and the recognised study programmes at private higher education institutions) may receive loans and/or grants from the State Educational Loan Fund for subsistence costs. These loans are interest free during the studies and they do not have to be repaid while the student is still studying. They are repaid over a maximum period of 20 years after graduation. The loans and grants are intended to meet such expenses as housing, food and study materials. Norwegians studying at recognised study programmes abroad may also receive support from the State Educational Loan Fund.

9.42 From August 2000 adults have had a legal right to upper secondary education. When adults participate in secondary and higher education, they have the same possibilities for financial support from the State Educational Loan Fund as other pupils or students.

9.43 Adult apprentices, who can begin an apprenticeship without having to satisfy formal upper secondary schooling requirements, receive an apprenticeship wage during the whole period of three to four years.

9.44 Financial support from the State Educational Loan Fund is also available for distance studies on certain conditions.

Sources of Finance – Research

9.45 15% of the state allocation is earmarked for research activities. In addition to what is provided by the state, the higher education institutions can earn additional funds for research and development activities done in co-operation with, or on request by national or local research institutes, from private or public funding of special projects or activities, from the sales of publications. All of these activities are contingent upon the relevant national regulations for the sector being adhered to.

Funding distribution

9.46 The Ministry of Education and Research proposed a budget for 2002 of NOK 44 billion. The allocation to the individual sectors in 2001 was as follows:

Table 9.2

Sector	Funding
Primary and lower secondary education	2,322,287
Upper secondary education	1,078,806
Adult education	1,633,192
Higher education	16,473,000

9.47 The State Educational Loan Fund (see 9.46) allocates grants and loans to pupils and students according to an official cost of living estimate, stipulated annually. Over the past few years, this cost of living estimate has been regulated approximately in accordance with the inflation rate. An effort has been made to give a higher share of the total financial support awarded as grants. For a single student taking up the maximum grant and loan according to the cost of living estimate, the share of the grant was 13% of the maximum in 1992/93, increased to 26% in 1995/96, 28% in 1997/98, and to 30% in 2000/01.

NDPB

9.48 Until the 1970s there was little or no tradition for universities and colleges to make systematic evaluations of their educational programmes. Since then, the question of quality assurance and quality development has gradually received increased attention, particularly after the Commission on Quality in Higher Education (*Studiekvalitetsutvalget*) published its report in 1990. Most institutions now operate routine procedures of quality assurance which all include an element of programme assessment by students. With no official or national guidelines, however, local quality assurance programs tend to vary in scope and methodology and in the extent to which they are organically linked with formal leadership and strategic decision-making in the institutions.

9.49 For a number of years the Norwegian Council of Universities (since 2000 the Norwegian Council for Higher Education) has operated a sub-committee, the Contact and Information Committee on University Pedagogics (KIUP), for the purpose of stimulating and co-ordinating work on educational quality in the universities and university colleges. In 1998 the Ministry established Network Norway Council (NNR) with the assigned national task of supervising the quality of higher education. The Council is a semi-independent advisory body relating to the Ministry in matters relating to higher education. The NNR had several missions; amongst these was to give advice on higher education policy.

9.50 NNR was replaced by NOKUT (National Organisation for Quality Assessment in Education) in 2002. At that time the Parliament (*Stortinget*) revised the Universities and Colleges Act in 2001, deciding among other things that a system of official accreditation should now apply to all recognised state and private higher education in Norway, and that a new independent agency, the NOKUT would undertake the accreditation procedures. The new agency was operative as from 1 January 2003. The revised law states that accredited institutions of higher education will be divided into three categories, with different rights to offer new programmes at different degree levels without a formal process of accreditation, whereas unaccredited institutions (all private) must seek accreditation for all new programmes. However, unaccredited institutions may achieve status as accredited, just like accredited institutions may change category, after a formal process of institutional accreditation.

9.51 A 'second stage' in the control mechanism is the possibility of a more detailed scrutiny of individual programmes by the NOKUT, where this is judged to be appropriate (see <http://www.nokut.no/sw459.asp> for details of the process).

Research Funding

9.52 A parliamentary white paper published in 1998 stressed the need for quality in research. The Norwegian government subsequently asked the Norwegian research council to formulate a means of creating centres of excellence. Some of these have already been put in place. It set about identifying key characteristics that would help the newly proposed centres of excellence succeed. These included:

- ensuring that they would receive a generous funding over at least 10 years,
- that they would involve research with an international dimension,
- that the research groups involved would be of a reasonable size,
- that there should be intense competition for centre of excellence status, and
- that they would also train researchers.

9.53 The research council aimed to see between 10 and 20 centres given centre of excellence status with an annual budget of between 10 and 20 million Norwegian krona (roughly £850,000 to £2m). The centres can be hosted by universities, research institutes or even private sector research centres. The 129 applications for the status have largely come from universities (78 per cent) and research institutes (21 per cent) so far. The research council has not discounted the possibility of having virtual centres of excellence, which would help accommodate expertise spread out across the very large country.

Future Skills

9.54 In many areas, universities and university colleges have close relations to business and to society at large. Some study programmes at universities and university colleges include in-service training such as supervised practice in an institution, a hospital, a school. In addition, the universities have set up special offices responsible for establishing contact between the university and industry. The contact between higher education institutions and industry is also assured through externally financed research projects at the institutions.

9.55 At the vocational level, even prior to the Competence Reform of 1998, in the mid-1990s, employers and trades unions as part of a central five-year industrial relations agreement had agreed a strategy to identify long-term trends in competence needs in the workforce and to develop strategies to meet these needs. In 1997, the employers' federation and the trades unions agreed to allocate 191m NOK to finance a job-oriented further education system with different trades allocating additional resources.

9.56 The Committee charged with Competence Reform put the onus on funds being set aside for continuing education and training through collective agreements. In its report it stated that:

“In order to ensure that as many people as possible are given the opportunity of continuing education and training, the employers' and employees' organisations should give increasing priority in wage settlements and collective agreements to competence-promoting measures and compensation

schemes. The agreement system has the advantage that it is flexible and can be adapted to the needs of the different areas covered by the agreements. It will also be possible to favour special groups” Ministry of Education, Research and Church Affairs (1997).

9.57 As indicated in 9.22, it is the *Aetat* that is charged with implementing labour market policies. This includes a number of possible interventions including a range of skills training measures, including the publicly funded labour market courses. In recent times unemployment in Norway has been low and *Aetat* has been involved in not only trying to meet labour market needs from the local Norwegian population but also in recruiting overseas personnel (OECD 2002, p. 180).

9.58 A OECD review team has reported that employers do not believe that the education and training system has sufficient flexibility to provide suitable qualified workers 'in a timely, flexible and efficient manner' (OECD 2002, p. 183). They are also concerned about employees withdrawing from the labour market to engage in training and suggested that ICT-based solutions incorporating work and training should be emphasised.

CHAPTER TEN

THE SYSTEM OF POST-COMPULSORY EDUCATION IN SWEDEN

Background

10.1 The ultimate responsibility for education in Sweden rests with parliament and government. The system is based on management by objectives and driven by goals and results. Some responsibilities of the system, especially monitoring and evaluation, have been delegated to government agencies.

Parliament

10.2 The Swedish Riksdag sets the annual budget and legislation. The Standing Committee on Education prepares Bills on all issues in higher education and research to be put before Parliament.

Government

10.3 In April each year the Government presents guidelines for 27 areas of expenditure in a Bill to Parliament, one of which is on Education. Following this procedure, Government presents its proposal in a Budget Bill late in the year.

Ministry of Education and Science

10.4 The Ministry is responsible for everything that affects education and research. This includes, child-care, preschool education, compulsory and upper secondary schools, research, higher education research, study assistance and youth affairs. The Minister of Education and Science heads this and is assisted by the Minister for pre school Education, Youth Affairs and Adult Learning.

10.5 A Number of agencies exist to assist the Ministry of Education, including:

- The National Agency for Higher Education.
- The National Agency for Education¹⁴
- The National Agency for School Improvement.
- The National Agency for Flexible Learning.

10.6 The Swedish Research Council is responsible for research. The council has three main tasks: research funding, science communication and research policy. It is an authority led by a Director-General and the Minister of Education and Research has an overall responsibility for its actions.

¹⁴ In spring 2003 the National Agency for Education split into 2 agencies, one for the development of the education system with the other focusing on monitoring and evaluation.

10.7 The Higher Education Suspensions Board and The Board of Appeals for Higher Education are both independent authorities with offices in the legal department.

SYSTEM OF HIGHER EDUCATION IN SWEDEN¹⁵

10.8 See Appendix 2.9 for the education structure of Sweden.

Parliament and Government

10.9 As with education in general, Government and Parliament share the overriding responsibility for higher education and research. Civil servants undertake analyses and draft proposals for the 22 Ministers/Ministries of Government. Via this system, Ministries decide what level of regulation should apply to higher education and determine the objectives, guidelines and how resources will be allocated. The national framework consists of Law and Ordinances.

10.10 The system of higher education was reshaped by two reforms in 1977 and 1993. In 1977 all post upper secondary education was brought together under the overall concept of higher education. Decentralisation of responsibility and management by objectives were central to the changes, which occurred in 1993.

10.11 The reforms of 1993 reduced the influence of central government and decentralization of decision-making was implemented. Government laid down goals and guidelines of a financial nature and transferred the decisions about programmes of education to the institutions themselves now in the form of three-year assignments.

Table 10.1

1977	1993
Governing by legal framework	Goals and objectives
Detailed decisions by government	Decisions at institutions
Resources to 5 educational sectors & different faculties	Resources to Universities and University Colleges
Resources depend on input	Resources depend on output
One system with state institutions; very few private (no rules)	Competition between institutions; new foundation institutions as well as transparent and distinct rules for private institutions

Source: The Current Swedish Model of University Governance, NAHE, 1998.

The National Agency for Higher Education

10.12 Established July 1995, The National Agency for Higher Education, (NAHE), is the agency in Sweden which oversees higher education. Specific responsibilities especially assigned to this agency are the monitoring and evaluation of (primarily) the quality of higher education. It uses agreed criteria for these activities and plays an important role in the Swedish governing system by supervising, promoting and assessing the quality of HEI's.

10.13 The Agency employs approximately 130 staff and frequently engages university experts for various projects.

¹⁵ For details of higher education institutions see Appendix 2

Agency and Supervision

10.14 The agency's functions involve aspects of both control and support. It is responsible for monitoring and analysing the development of higher education and research, as well as certain societal changes, such as changes in the needs of higher education and research based on for example, the global situation (international expectancies), women's right and environmental questions. It exercises supervision over universities and university colleges to ensure rules are obeyed and the needs of individuals are met. The rules stating the universities obligations and students' right are formulated in "The university law" and "The university ordinance". The agency promotes and assesses the quality of institutions in various ways including the standard of education and research. It also runs and is responsible for a management-training program for HE managers.

*Main Functions*¹⁶

10.15 Legal Supervision/safeguards:

- Legal supervision: at the request of government and the agency's own initiatives.
- Statute book of the National agency HSVFS
- Secretariat for the two independent legal authorities, the Higher Education Board of Appeals and the Higher Education Board of Suspensions

Coordination:

- Recruitment in Higher Education (part of this area)
- Design of some admission rules
- Administration of admissions tests
- Provide information on academic studies
- The Swedish University Network (SUNET)
- Database on research information (SAFARI).

Follow up:

- Research into and analysis of higher education and the community
- Statistics

Quality Assurance and Enhancement:

- Quality evaluation of education and research

¹⁶ The Current Swedish Model Of University Governance, NAHE, Sweden, 1998

- Evaluations
- Audits

Stimuli:

- Support and development activities for HEI's
- Grants
- Recruitment to Higher Education - e.g. project to stimulate interest in natural sciences and technology
- Other recruitment promotions
- International mobility - e.g. the co-ordination of exchange programmes.

The Higher Education System

10.16 All higher education is pursued as a series of credit-based course programmes.¹⁷ The courses can also be combined through programmes leading to a professional degree. There are 57 professional degrees, of which 14 may be taken at the Swedish University of Agricultural Sciences¹⁸. A number of the professional diplomas are intended for those professions requiring official authorisation or registration, e.g. doctors and teachers. The different diplomas cover studies ranging from two to five and a half years.

10.17 Adult education consists of municipal adult education, municipal adult education for adults with learning disabilities, Swedish tuition for immigrants, for those aged 16 and over and the Swedish Agency for Flexible Learning as well as post-secondary vocational education. The liberal adult education sector, through folk high schools and adult education associations as well as some of the supplementary schools, also provide adult education. In addition, the Labour Market Board is responsible for labour market training intended in the first instance for unemployed adults in need of retraining or further training and education.

10.18 Post secondary advanced vocational training for adults is also available in the scheme for advanced vocational education and in municipal adult education in terms of further adult education, as well as in labour market training programmes. In addition, some of the courses in folk high schools and some of the education programmes within the supplementary schools are comparable to post secondary vocational training.

10.19 A large part of higher education is also directed to competence development and further training of adults. As an example of this, a new kind of Master (magister) started 2003. This master demands a Bachelor (or the "equivalent") and aims at "broadening" the knowledge within a specific area, e.g. public health or leadership without being a preparation

¹⁷ Undergraduate course programmes measured in credits = 1 week full time study. Academic year = 40credits in 2 terms.

¹⁸ A description of degrees can be found in the Higher Education Ordinance and in the ordinance for The Swedish University of Agricultural Sciences.

for research as the traditional Master (magister). The applied aspects of this master programme are more focused than in the traditional master. Another example is the multitude of specialist exams for nurses (e.g. pediatric care, elderly care etc). Those specialist exams aim at giving a preparation for research and at creating professional excellence.

10.20 The requirements and aims for degrees are set out in Degree Ordinances therefore specified by Government. Source: Eurydice.

PROVIDERS OF HIGHER EDUCATION

Institutions

10.21 Swedish institutions of higher education (HEIs) can be described as independent bodies that are required to follow directives from Government and are supervised by Agencies. HEIs must report to government regarding their activities, quality and management.

10.22 Responsibility for the way institutions structure their activities has by and large been delegated to the institution concerned. The legislation governing institutions, the Higher Education Act and Higher Education Ordinances, permits institutions to have a great deal of autonomy within specific guidelines.

10.23 Types of Institutions:

- Universities
- University Colleges

10.24 Universities and University Colleges are responsible for providing and operating tertiary education. Every institution of higher education functions as an admissions agency and makes decisions on the admission of students on the basis of certain general guidelines. Access depends upon a school-leaving certificate from upper secondary or work experience.

10.25 Each university has a Board of Governors. The Government appoints the chair from outside of the institution and also appoints some of the members. The vice chancellor is also appointed by the government, is head of the organisation, responsible for running the university and sits on the board.

Table 10.2 University and University Colleges in Sweden

<u>Universities and Institutions of Higher Education with the right to award postgraduate degrees</u> <u>STATE</u> Uppsala University Lund University Göteborg University Stockholm University Umeå University Linköping University	<u>University Colleges</u> <u>STATE</u> Borås University College Dalarna University College Gotland University College Gävle University College Halmstad University College Kristianstad University College Skövde University College Stockholm University College of	<u>University Colleges of Arts</u> <u>STATE</u> University College of Dance University College of Film, Radio, Television and Theatre University College of Arts, Craft and Design Royal University College of Fine Arts Royal University College of Music
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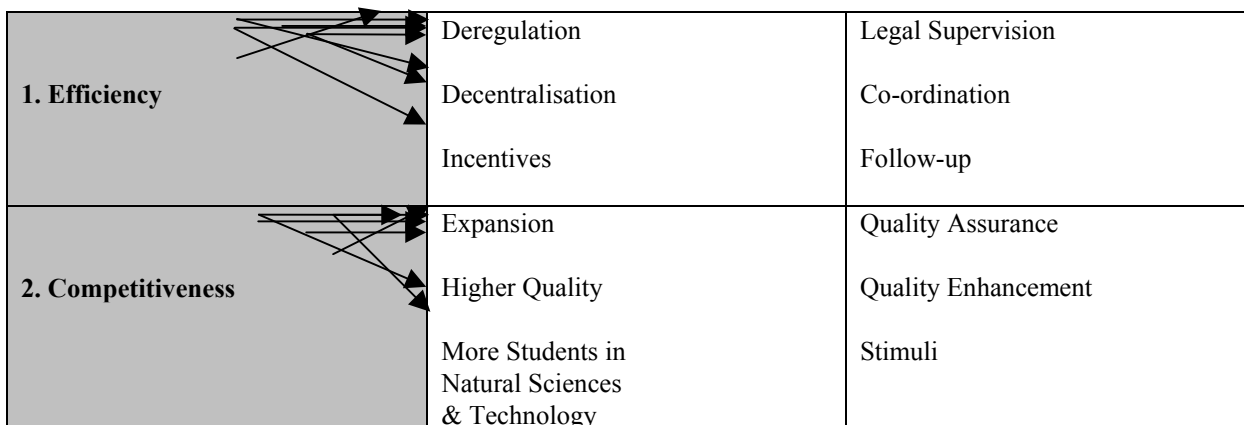
Karolinska Institute Royal Institute of Technology, KTH Luleå University of Technology The Swedish University of Agricultural Sciences Karlstad University Växjö University Örebro University Blekinge Institute of Technology Kalmar University College Malmö University College Mid-Sweden University College Mälardalen University College PRIVATE SECTOR Chalmers University of Technology Stockholm School of Economics Jönköping University College	Physical Education and Sports Stockholm Institute of Education Södertörn University College Trollhättan/Uddevalla University College PRIVATE SECTOR Erica Foundation Ersta Sköndal University College Gammelkroppa School of Forestry Johannelund Theological Institute Stockholm School of Theology Örebro Theological Seminary A number of institutions with psychotherapy programmes	in Stockholm Stockholm University College of Opera Stockholm University College of Acting REGIONAL AUTHORITY Ingesund College of Music PRIVATE SECTOR University College of Music Education in Stockholm
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Source: The Changing Face of Higher Education in Sweden, NAHE, Sweden, 2003

GOVERNANCE

10.26 The governing system in Swedish public institutions is based on objectives and results. Parliament and Government decide on the goals and objectives, legal and economic framework of higher education and research. The 1993 Governance reforms in higher education reflected the realisation that efficiency had to be improved in the use of resources in education and research. The demand for efficiency led to deregulation, decentralisation and more incentives.

Figure 10.1 The Development of the System of University Governance



Source: The Current Swedish Model of University Governance, NAHE, 1998.

10.27 Decentralising of decisions from Government to the institutions where local situations required consideration was expected to bring about a better use of resources. Incentives were given to make institutions use their resources more efficiently. Such change required legal amendment as decision-making was being decentralised from Government to institutions, e.g. provision of programs and courses, establishing of chairs and appointment of professors.

Table 10.3 Responsibilities

Parliament	Government	University and University Colleges
Higher Education Act and other laws	Higher Education Ordinances	Internal organisation
Principles for allocating resources to education and research	Annual budget document to HEI's	Principles for the internal allocation of resources, the annual budgets and budget follow-ups
Amount and use of annual grants to U, UC and Research Councils	Right of private HEI'S to award degrees	Quality of teaching
Economic framework for next 2 fiscal years	Appointments of chairpersons and the majority of members of the Boards	Organisation of undergraduate education, design of study programmes and the contents of courses
Establishment of new state institutions for HE	Appointment of vice chancellors and their salaries	Provision and dimensioning of study programmes and courses
	Some resources for unforeseen expenditures	Principles of admission procedures
	The granting of university status to university colleges	Postgraduate education
		Establishing chairs and appointments of professors
		Method and focus of research
		Volume and focus of contract teaching & research
		Premises & investment in furniture & equipment
		Salaries for everyone except vice chancellor

Source: The Current Swedish Model of University Governance, NAHE, 1998.

FUNDING OF HIGHER EDUCATION

Sources of Finance – Education

10.28 Both research and teaching are funded by external and internal sources. Institutions of higher education receive an assignment from the government for each new three-year period (see 10.34 below). An educational task contract is given to every university and university college. The contract states the objectives for the three-year period and for the next fiscal year. The assignment also sets out the financial planning framework for the remaining two years of the three-year period. The allocation of funds depends on results, measured in terms of student numbers and academic performance. There is a ceiling sum, which constitutes the highest compensation for students and academic performance allowed in a fiscal year. Amounts of compensation are set out in the Government's annual budget. This system was designed to encourage institutions to tailor the courses offered to student demand by linking the allocation of funds to results.

Sources of Finance – Research

10.29 Funding for research and postgraduate studies is allocated separately from other higher education expenditure. Freedom of research stipulated in law limits the control Government and Parliament has in this area. The performance related criteria do not apply to research funding. Research and postgraduate funding is by way of grants to the HEI in question. Resources are distributed to the four areas of research being medicine, humanities and social sciences, scientific and technical, and educational sciences.

10.30 Government has recently decided on an initiative to establish 16 schools of research. Special funds have been allocated to this project and the target for all schools of research is to examine 25 doctors in each school of research by research degree programmes.

10.31 External funding of research is provided by external grants and contract research. In recent years these sources have become increasingly important and estimates suggest that around 55% of research is now funded externally.

10.32 Sources of external funding for research include:

- Swedish Research Council
- Sectoral Research Bodies
- Research Foundations
- EU
- County administration boards via regional development grants from Government
- County Councils
- Private Enterprise.

10.33 Funds allocated directly to state universities and higher education institutions for undergraduate education, research and postgraduate studies represent about 65% of the resources of these institutions. The remainder consists of external funding for research (including all the funding identified above) and commissioned assignments.

EDUCATION TASK CONTRACT

10.34 Each state run institution is given a contract annually and the general outline is presented to Parliament in the Budget Bill. As an example, the 1998 contract contained the following objectives:

- The minimum number of degrees to be awarded during three-year periods.
- The minimum number of students for the current year, in particular in science and technology.

10.35 Each institution is given one block grant for the fiscal year. This grant is preliminary, as the final grant cannot be computed until end of the fiscal year and depends on the number of students and their results.

10.36 This information must be included in each institution's annual report to government. These reports are compiled with information on activities and financial information. For consistency across institutions, the NAHE provides guidelines on how this information should be compiled. The National Audit Bureau, which is responsible for economic and

administrative audits of HEI's, examines annual reports submitted by HEI's and produces an audit report.

PRIVATE INSTITUTIONS

10.37 Two former state institutions, now foundations, are also given educational task contracts and have annual grants decided by Parliament. Other private providers of higher education might have separate agreements and Parliament decides the annual contribution for those entitled to economic support.

FUTURE SKILLS

10.38 During the 1990's, undergraduate tertiary education began to expand significantly in Sweden and the number of study places doubled. There are two main reasons for this; firstly increased demand and secondly recognition of the needs of industry (particularly in the areas of science and technology) and society.

10.39 An OECD report¹⁹ in 1997 highlighted Swedish concern that an insufficient number of students were entering degrees in the science and technology area. The education task contract was used to try to rectify this shortfall. Recruitment promotions for specific areas of study became a function of the NAHE.

10.40 Since 1997 in particular the Government has recognised the need for higher education institutions to bring the educational supply more into line with the areas of need for well-qualified labour is expected to grow. The Open University Bill 2001, states "education should be planned on the basis of labour market needs and student demand". The NAHE has an important role as regards monitoring the relationship between education and the labour market, disseminating information on this and submitting proposals for government.

10.41 The above Bill also discusses the role of universities in LLL. It states that "Life long learning focuses on the educational desires and interests of the individual while also emphasising the skills development needs felt by the labour market and business sector. In combination with the trend towards growing internationalism, this implies that higher education must switch from being supply driven as has predominately been the case, to need driven. This will make the overhauling of content, working methods and forms of distribution a matter of vital importance". It is also noted that more short-term professional programmes are needed in HI's. One fundamental principle is a closer connection required between HI's and the labour market.

10.42 In 2002, to increase flexibility in higher education, universities and university colleges have collaborated to provide ICT supported distance learning under the Swedish Net University. Also in this year, advanced vocational education (AVE) was introduced as a regular form of post secondary education to meet labour market needs. AVE courses in which workplace training takes up one third of the study period are designed in close collaboration between employers and education providers. More than 80% of students obtain jobs after their training. In 2003 Sweden hosted a peer review for the purpose of imparting its AVE experience to other members of the EU.

¹⁹ OECD 1997

10.43 AVE is provided by town or rural districts (local authorities), educational enterprises (business), universities and university colleges in cooperation with the labour market. AVE is a separate kind of education managed by The Agency for Advanced Vocational Education. AVE has no formal relation to the Labour Market Board.

CHAPTER ELEVEN

THE SYSTEM OF POST-COMPULSORY EDUCATION IN USA

Background

11.1 The Higher Education system in the U.S. can be viewed as a sub-set of the broader field known as adult education or lifelong learning. The distinctions between higher education, vocational and adult education blur as the mission and purposes of colleges and universities continue to change to meet their very diverse clientele (Bonham, 2003).

11.2 Currently the different states of the US are facing the most serious fiscal crisis in more than a decade. This crisis has been fuelled by the faltering national economy, contractions in manufacturing and high technology sectors, and escalating health care costs; against a background of tax reductions in the boom years of the 1990s. As of January 2003, two-thirds of the states were reporting budget gaps totalling \$25.7 billion, or 5.2% of the original appropriation, and this was projected to worsen in 2004 (National Conference of State Legislatures (2003) Stage Budget Update, Denver CO). Higher education is experiencing significant cutbacks as a result of this situation.

11.3 See Appendix 2.10 for the education structure of the US.

The System of Post-compulsory Education in the USA

11.4 Due to the many different providers of educational opportunities for adults, it is sometimes helpful to view post-secondary education in the US from an organizational structure or taxonomy. Apps (1989) developed such a framework from which to view adult education. In it he categorizes the many different agencies, institutions, and organizations that provide adult learning opportunities in the US. His framework identifies four major categories of providers of adult education. These include:

- fully or partially tax-supported agencies and institutions
- non-profit, self-supporting agencies and institutions
- for-profit providers; and
- non-organised learning opportunities (Apps, 1989, p. 279).

11.5 Apps includes the following as examples of those agencies or institutions which provide programs for adult learners under the category of fully or partially tax-supported agencies and institutions:

- public schools for adult educators
- four-year colleges and universities
- community and technical colleges
- cooperative extension programs
- armed forces

- correctional institutions
- libraries and museums, and
- state and federal public adult education agencies.

11.6 Religious institutions are an example of providers in the second category which Apps describes as non-profit, self-supporting agencies. In the US the for-profit agencies and institutions have seen a significant increase as information became a commodity which can be bought and sold. Apps included proprietary schools and the educational programs of business and industry in this third category. The last category reflects the non-organized learning opportunities in the US such as those found in travelling, in recreational and leisure time activities, and in the family setting. Most of the data available on post-secondary education in the US relates to the first category primarily higher education, i.e. two-year and four-year colleges and universities.

11.7 A total of 4,182 institutions enrol 14.8 million students in the U.S. Approximately 59% of the institutions are private (either non-profit or for-profit), and 41% are public (responsible to and funded primarily by state and local governments). Most (76%) students are enrolled in public institutions and almost half of these are enrolled in public two-year community and technical institutions (National Center for Education Statistics, 2001).

11.8 The US HE system is a *stratified* system with the four-year institutions (Community Colleges) providing in many cases, a route to four-year degree level studies at universities or colleges. Two year programmes are not simply routes to further study. In addition to this *collegiate* route, the Associate degrees at Community Colleges also take the form of directly vocationally relevant awards, the so called *career* route.

11.9 Whilst these mechanisms exist in most cases for students who want to continue their studies after a two-year programme, to articulate into a four-year programme, the arrangements do not always work smoothly. Bonham (2003) explores these problems.

11.10 'Prather and Carlson (1993) identify five general types of cooperative arrangements between 2 and 4-year institutions. Their discussion of these agreements provides a good overview of the partnerships and how they are implemented. Type 1 is referred to as articulation and coordination agreements. In this type, the academic programs as well as services are coordinated between the colleges and the course contents are similar. However, each college maintains a separate administrative process. In the second type of arrangement the four-year college offers courses at the two-year college campus. This type is referred to as the on-site upper division course. Type 3 is called on-site degree programs. It represents cooperative arrangements in which buildings on the two-year college campus are constructed or designated specifically for four-year degree program offerings. The fourth type of arrangement is called the satellite campus. This satellite campus of the four-year college is established on the two-year campus. Lastly, and perhaps the most comprehensive, is the satellite university/university college. A consortium agreement is developed between the four-year college and one or more two-year colleges. This involves uniform application and financial aid processes.

11.11 A number of studies have investigated the barriers to successful transfer and smooth transition to 4-year institutions (Wechsler, 1989; King, 1992; McDonough, 1997; Cuseo, 1998; Zamani, 2001). Some of the categories included in these studies are: financial, curricular, academic, and inadequate support systems. King (1992), McDonough (1997), and

Cusseo (1998) identify financial barriers to transfer students' success. A few examples in this category are high cost of a four-year college, limited financial aid for students transferring from one institution to another, low number of grants or scholarships specifically for transfer students, and transfer students who receive acceptance letters after financial aid application deadlines. Stewart (1988) and Wechsler (1989) contend that transfer students coming from low socioeconomic backgrounds find it difficult if not impossible to afford the tuition costs at the four-year colleges.'

Government

11.12 It is at the state level that the financial governance relationships between HE institutions and government are most pronounced. The federal government plays important but narrowly defined roles, e.g. in establishing basic Constitutional protections and legal requirements in areas such as civil rights, the environment, employment policy, and in funding student financial assistance and research. Nevertheless the federal government does not generally become directly involved in issues related to institutional viability and financial management and governance.

11.13 State governments generally treat public HE differently from other state agencies. Each state has a unique state structure and relationship between government and HE reflecting differences in governmental structure, political culture, and history. Most states have established an entity (e.g. state board of HE) explicitly charged with state-wide policy for HE. Nevertheless, the approaches taken by states can be understood in terms of the variations in the authority and responsibility of state HE entities for key policy tools and processes, such as budget review and approval, programme review and approval, public accountability, and the extent to which these entities are directly involved in governance. There is a continuum of involvement between co-ordination and governance.

11.14 The federal role differs distinctly from that of the states. Since the historic decision in the federal Education Amendments of 1972 to reject direct general-purpose federal aid to institutions, the federal government has emphasised giving aid directly to students. In this respect, the federal government has been impartial about a particular provider's ownership and control, assuming other conditions are met. The federal government thus tends to emphasise a strict separation between the government's role as 'overseer of the public interest', and the institutional role of providing services.

11.15 In the area of vocational education, the 1990 Carl D. Perkins Vocational and Applied Technology Act at federal level created a requirement that states establish systems of standards and measures to assess vocational education programs. The 1990 Act also authorized federal support for business and education standards projects. In the early 1990s, the Departments of Education and Labour supported 22 projects to create skill standards for a wide variety of occupations and industries. The National Skills Standards Board (NSSB), authorized in 1994 by the Goals 2000: Educate America Act, builds on these projects and the efforts of many other industrial and occupational groups that have established skill standards. Its purpose is to stimulate the development of a voluntary national system of skill standards by creating a framework of career clusters within which skill standards can be developed. To achieve this goal, NSSB supports partnerships of business, trade associations, education, community organizations, and other stakeholders to develop skill standards. It also endorses skill standards systems developed by industry-labour-education partnerships.

11.16 The 1998 Perkins Act builds on the above efforts by expanding the requirements for states to develop performance accountability systems, including state-level measures of student skill attainment. In keeping with the legislation, performance accountability systems are intended to:

- Include four core indicators that measure student performance and post-vocational education experiences in further education, training, and employment;
- Set performance levels for the four vocational outcomes, including student attainment of skill proficiencies; and
- Measure and report the performance of the states on the indicators.

11.17 Increased accountability is also sought at the federal level. The Government Performance and Results Act of 1993 (GPRA) requires that federal departments and agencies prepare annual performance goals, starting with a performance plan for the 1999 fiscal year (Groszyk 1995). To meet its GPRA reporting requirements, OVAE (the Office of Vocational and Adult Education) is required to submit an annual report comparing the status of occupational programs with the goals identified in its annual performance plan. One indicator of occupational program activities listed in OVAE's 1998-1999 Annual Plan is Skill Proficiencies in that 'by fall 2000, there will be an increasing proportion of vocational programs with skill competencies and related assessments, and with industry-recognized skill certificates in secondary and post-secondary institutions'.

Providers of Higher Education

11.18 Of the degree-granting institutions, the Carnegie Foundation for the Advancement of Teaching, which publishes the most recognized post-secondary institutional classification system, classifies all HEIs in the USA as follows:

- 261 as Doctoral/Research Universities (110 of which are classified as Research Intensive, based on the numbers and enrollments in doctoral programs and the dollar volume of externally-sponsored research);
- 610 as Masters Colleges and Universities;
- 607 as Baccalaureate Colleges (with 226, mainly non-profit, and many of them elite, clearly emphasizing the Liberal Arts - for example, history, political science, languages, humanities, or a scientific discipline - rather than any vocational or professional specialization);
- 1,669 as Associate's Colleges, (primarily public community colleges), most of the course work from which is transferable to a four-year college or university baccalaureate degree; and
- 767 as Specialized Institutions.

Providers of non-baccalaureate Tertiary Education

11.19 Post-secondary vocational education is offered at several types of institutions, including public and private, and four-year and less-than-four-year post-secondary institutions. This publication provides comparable information on participation in six different institutional types: public four-year institutions; private, non-profit four-year institutions; public two to three-year institutions (community colleges); public vocational-technical institutes; private, non-profit less-than-four-year institutions; and private proprietary (for-profit) institutions. Of these institutions, the American community college with a rich history beginning in the early years of the twentieth century is probably most well-known internationally. Ideas popular in the country during this period fostered the growth of these new colleges. These included an increased need for workers' training, desire for individual advancement through the acquisition of new skills, belief in upward mobility through education, and great expansion in the number of programs to prepare individuals for a broad variety of occupations (see Bonham, 2003).

11.20 Vocational education at the non-baccalaureate post-secondary level primarily focuses on providing occupationally specific preparation. Post-secondary-level occupational programs generally parallel the program areas identified at the secondary level:

- agriculture,
- business and office,
- marketing and distribution,
- health,
- home economics,
- technical education (including protective services, computers and data processing, engineering and science technologies, and communication technologies), and
- trade and industry.

11.21 Post-secondary occupational education is delivered in the form of courses that are organized into program areas. In a few cases, students are required to enrol formally in an occupational program. In other cases, students may be required to declare a major upon enrolling in an institution. However, students often sample courses from a variety of program areas, whether or not they have declared a major. This tendency to "mill around" in post-secondary vocational education has been well documented (Norton Grubb 1989). Moreover, post-secondary institutions, particularly community colleges, serve a student population with diverse educational goals. Some students enter with the intention of completing a degree or certificate, while others intend only to take one or a few courses and then leave. In most cases, it is only possible to identify with accuracy vocational program participants once students have completed a program and obtained a degree or certificate. However, this captures only a portion of non-baccalaureate post-secondary students.

Governance

Development of the system of University governance

11.22 There is obvious wide diversity in terms of size, population and enrolments between HE institutions in different states of the US. The states also differ significantly in how they finance higher education and in their approach to issues of institutional financial management. McGuinness Jr. (2003) notes the more important differences:

- Differences in overall performance of state higher education systems, as assigned and graded by *Measuring Up*, the state-by-state report card on state performance in HE. This is published every other year by the National Center for Public Policy and HE. Grades are assigned in relation to five measures: Preparation, Participation, Affordability, Completion, and Benefits. (In future report cards, states will be graded on a sixth measure: Learning) It is important to note that the report card does not grade institutions, however, the grades indirectly reflect each state's combined institutional capacity and the alignment of that capacity with state priorities. Differences in state performance are related to differences in state policies; financing, regulation accountability, and structure/governance.
- Differences in financing policy. As a reflection of the differences in the level of state funding, states differ significantly in the shares of funding of public institutions borne by state and local governments, students and other sources. Public institutions in most states depend heavily on non-state resources.

11.23 McGuinness identifies changes in underlying assumptions about the role of the state in HE, with a general shift away from commitment to the regulatory practices of the past. He offers the following summary:

Table 11.1

A shift from:	To:
Rational planning for static institutional models	Strategic planning for dynamic market models
Focus on providers, primarily public institutions	Focus on clients, students/learners, employers and governments
Service areas defined by geographic boundaries and monopolistic markets	Service areas defined by the needs of clients served by multiple providers
Tendency towards centralised control and regulation through tightly defined institutional missions, financial accountability, and retrospective reporting	More decentralised management using policy tools to stimulate desired response (e.g. incentives, performance funding, consumer information)
Policies and regulation to limit competition and unnecessary duplication	Policies to 'enter the market on behalf of the public' and to channel competitive forces toward public purposes
Quality defined primarily in terms of resources (inputs such as faculty credentials or library resources) as established within HE	Quality defined in terms of outcomes and performance as defined by multiple clients (students/learners, employers, government)
Policies and services developed and carried out primarily through public agencies and public institutions	Increased use of non-governmental organisations and mixed public/private providers to meet public/client needs (e.g. developing curricula and learning modules, providing student services, assessing competences, providing quality assurance)

Source: Aims C. McGuinness Jr., *Reflections on Postsecondary Education Governance Changes*. Denver, Colorado: Education Commission of the States, July 2002.

Responsibilities

11.24 Governing boards of institutions have a range of responsibilities but a basic responsibility is to oversee the delicate balance between institutional autonomy and public accountability. Membership of the governing boards is most often composed of a majority of lay citizens representing the public interest. Private college boards usually govern a single institution whereas public institution boards most often govern several public institutions. 65% of the students of the American public post-secondary education attend institutions whose governing boards cover multiple campuses.

11.25 Common responsibilities of governing boards include:

- governing a single corporate entity, with rights and responsibilities as defined by state law
- appointment and remuneration of chief executives
- strategic planning, budgeting and allocating resources
- ensuring public accountability
- maintaining the institution's assets and ensuring alignment of these with institutional missions
- developing and implementing policy
- awarding academic degrees
- advocating for the needs of the institution to the legislature and governor
- establishing systems for human resource management.

11.26 Some states have established *co-ordinating boards*, as opposed to governing boards, with responsibility for key aspects of the state's role in post-secondary education. These coordinating boards do not govern institutions as above, but:

- appoint and set compensation only for agency chief executives
- do not have corporate status independent of state government
- focus more on state and system needs and priorities than on advocating the interests of a particular institution or system of institutions
- plan primarily for the state post-secondary system as a whole
- may or may not review and make recommendations on budgets for the state system as a whole
- may or may not review and approve academic programmes

- are not involved in setting or implement HR policies, except to carry out legislative mandates for studies of issues such as faculty workload and productivity or tenure policy.

Table 11.2 Differences in budgeting and financing relationships between states and institutions (Source: McGuinness Jr. 2003)

High Control	A. Institution as State Agency	HE institutions are treated in a manner similar to other state agencies such as the transportation/highway department
	B. State-controlled Institution	The distinctiveness of HE institutions from other state agencies is recognised, but most of the budget and financing polices applied to other state agencies are also applied to HE
	C. State-aided institution	HE institutions have a legal status according them substantial autonomy from state government. State provides base, categorical, and capital funding but with expectation of substantial non-state funding (tuition, private giving etc.)
Low control	D. Corporate model for institutional governance	As in Model C, institutions have a legal status according them substantial autonomy. The expectation of state funding is less certain and may be allocated not in grants to the institution but in the form of vouchers or grants to students to offset tuition charges

11.27 These four categories represent theoretical types. In practice, however, no state currently treats all of its public institutions as if they were in either of the two extremes (model A or D). There are three common patterns:

- Pattern 1 Different sectors are accorded different levels of independence from state procedural controls,
- Pattern 2 All public universities are established as public corporations ('state-aided') but are subject to detailed state oversight in specific areas such as capital construction or personnel,
- Pattern 3 Most public institutions are established as public corporations ('state aided'), but specific institutions are accorded greater independence from state procedural controls as the result of deliberate state actions to decentralise governance and diversity revenue sources.

11.28 Universities are often accorded 'substantive' autonomy within the bounds of state-defined missions and accountability requirements, however, at the same time they are required to conform to state regulatory/procedural requirements. As state funding is shrinking, some are urging that the institutions be given 'corporate' status as reflected in the 'low control' end of the above continuum.

Funding of Higher Education

11.29 As noted above, current fiscal challenges have resulted in severe cutbacks in the states' HE budgets. Tuition fees are increasing accordingly, e.g. tuition and required fees for state residents attending comprehensive state colleges and universities increased an average of 10% from 2001-2002 to 2002-2003, and an average of 27.5% over five years.

Sources of Finance - Education

11.30 HE in the U.S. is funded from multiple revenue sources. Public institutions receive most of their unrestricted revenue from two sources: state appropriations, and student tuition and fees. Most other funding sources, such as federal contracts and grants or gifts from major donors, are smaller percentages of overall revenues and inevitably come with strings attached. Overall, the largest sources of current fund revenue to US HE institutions include 27.7% from student payment of tuition and fees, 12.1% from the federal government, and 23.1% from states.

11.31 Public institutions understandably receive a higher proportion of their current fund revenue from state and local sources (40%) and a smaller percentage from tuition fees and private sources. Nonetheless, compared to public institutions in many other countries, U.S. public institutions receive a higher proportion of their revenue from student tuition fees and private sources.

11.32 While the federal government mainly finances HE institutions through students' fees (or restricted funding for research and other purposes), the states primarily finance HE through direct subsidy of public institutions. In this respect, states play a dual role of 'overseer of the public interest', and 'provider of HE services'. States also provide aid directly to students.

11.33 State funding for HE rebounded following the recession in the early 1990s but projections for the next decade suggest that many states will face structural deficits for some time to come. Even when the economy recovers, HE is likely to feel a continued squeeze in state funding. These trends are raising fundamental questions about the states' commitment to HE as a public good, and their future role in oversight and funding of public HE.

11.34 In Appendix 6 we show appropriations of state tax funds for operating expenses of Higher Education in the 50 States from 1993-1994 to 2003-2004.

Funding distribution

11.35 Another indicator of state differences is the level of state commitment to needs-based student financial aid targeted at low-income students. Many states that provide relatively low levels of state appropriations to institutions and therefore rely heavily on tuition and fees, also provide state funding for needs-based student financial aid.

Future Skills

11.36 McGuinness' study on behalf of OECD consisted of a comparison of two states of the US, chosen as being very different but broadly representing two main styles. These states were Kentucky and North Dakota. The trends observed there give an indication of attempts to locate HE more centrally within state planning. Despite a number of differences, there are a number of important similarities in their approaches to reform and HE financing policy as follows:

- Shifts to a public agenda linking HE to the future of the state, and established means for public accountability for measurable progress towards goals,

- Implementation of new funding methodologies linking funding to a public agenda,
- Implementation of public accountability/reporting systems to monitor system and institutional performance.

11.37 The general trend in the U.S, as illustrated by Kentucky and North Dakota, is for states to provide institutions with a base level of support and then to rely upon institutional governing boards to assume responsibility for institutional financial management and to ensure institutional viability.

11.38 In the vocational area two 1999 surveys, *Vocational Programs in Secondary Schools* and *Occupational Programs in Postsecondary Education Institution*, are relevant to determining future skills needs. The surveys were conducted to provide the Office of Vocational and Adult Education (OVAE) with national estimates on occupational program activities. These surveys on occupational programs were conducted in response to an increasing national concern over the gap between existing workforce skills and expanding workplace demands. That concern was triggered by the "workforce crisis" described in *Choice: High Skills or Low Wages* (Commission on the Skills of the American Workforce 1990). It was also spurred on by the recognition that with changing technology and work organizations, schools need to do more to equip students with the more sophisticated and higher level skills that today's workplace requires (Grubb 1995). These concerns have set in motion a growing demand for clearer and higher standards in occupational education, and increased industry input in the development of those standards (Lankard 1995).

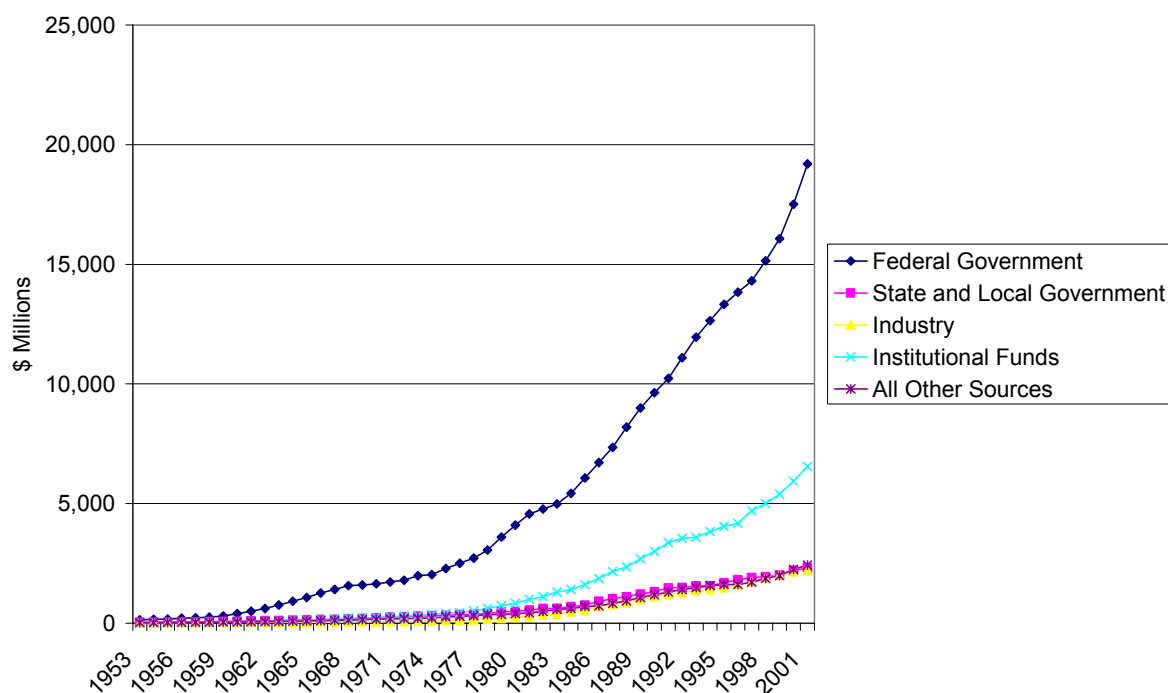
11.39 The push for standards and accountability in occupational education was also intensified by several policy initiatives over the past decade as already outlined.

US Research

11.40 The USA is the world leader in research expenditures and in the production of high-technology products. Much of its civilian research funding is channelled through the National Science Foundation (NSF). The NSF compiles statistics on research funding.

11.41 Figure 11.1 below shows that the Federal Government has been the main impetus behind the growth in research spending in universities. This reflects a federal policy to ensure that the US maintains its lead as the world's major producer of high technology goods. The National Science Foundation (NSF) is the main NDPB that is charged with implementing this policy. It can be thought of as broadly equivalent to the UK Research Councils.

Figure 11.1 Research Spending in US Universities by Source

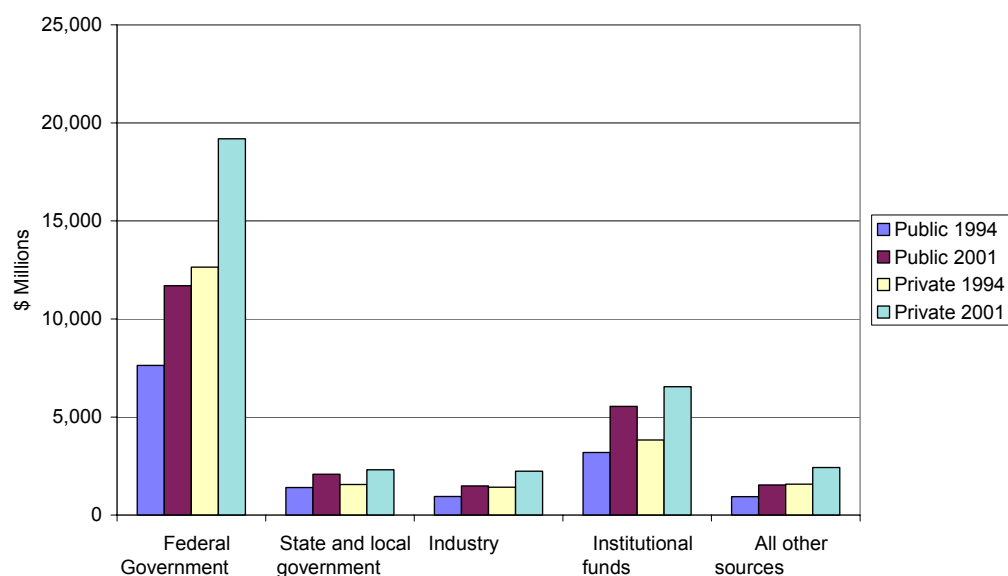


Source: <http://www.nsf.gov/sbe/srs/nsf03316/tables/tab1.xls>

11.42 The main growth in awards by the federal government has been to the private universities. This suggests an increasingly selective approach to research funding in the USA since the research among private institutions is concentrated at a few well-known institutions.

11.43 However, other government departments provide large amounts of support to the universities, both in the form of individual projects and research infrastructure. Interestingly the most rapid growth during the mid 1990s was concentrated on Health and Human Services (HHS) and the National Science Foundation. These have both experienced growth in funding above the growth rate of the economy as a whole.

Figure 11.2



Source: <http://www.nsf.gov/sbe/srs/nsf03316/tables/tab12.xls>

Table 11.3 Research and Development Support and Infrastructure Support

Federal obligations for R&D and R&D plant: fiscal years (FYs) 1990–2003, selected years						
By agency	FY 1990 actual	FY 1995 actual	FY 2000 actual	FY 2001 actual	FY 2003 preliminary	Average annual percent change FYs 1990–2003
	(Millions of constant 1996 dollars)					
Total.....	76,503	71,851	72,363	76,799	90,650	1.3
DoD.....	43,876	34,534	31,071	32,520	39,725	-0.8
HHS.....	9,894	11,945	17,442	19,786	24,859	7.3
NASA.....	8,205	9,832	9,125	8,707	9,411	1.1
DOE.....	7,608	7,028	6,430	6,995	7,505	-0.1
NSF.....	2,009	2,488	2,752	3,043	3,210	3.7
USDA.....	1,407	1,554	1,715	1,898	1,878	2.2
All other.....	3,505	4,471	3,827	3,850	4,061	1.1

KEY: DoD = Department of Defense; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; DOE= Department of Energy; NSF = National Science Foundation; and USDA = Department of Agriculture

SOURCE: National Science Foundation/Division of Science Resources Statistics, *Federal Funds for Research and Development*.

CHAPTER TWELVE

CONCLUSION

12.1. In the light of our description of the tertiary education systems in ten countries, we now return in conclusion to our initial research questions.

The Processes by which Public Funds Are Distributed to Post-16 Education and Public Training Providers

12.2. Our findings relating to the processes of distribution of public funds show that there is substantial diversity across countries in the methods of distribution. The Scottish model is perhaps closest to those of Australia and New Zealand. One key distinction between these models, however, is that it is quality assurance rather than status that determines funding in New Zealand (Paragraph 1.47). Colleges have the right to award a Master's degree providing that they are recognised by the Ministry of Education. Further, the credit transfer system between non-university and university programmes is quite straightforward.

12.3. In contrast, in Australia, attempts to create dual-sector institutions have not been a wholly successful experiment for a number of reasons (Paragraphs 2.30 to 2.35). The most important of these is the difference in cultures and mutual suspicion between the two types of institution. From a regional development perspective, the dual-sector institution may also be perceived as lacking a clear focus.

12.4. It is not the intention of the merger of the two Funding Councils in Scotland to create a dual sector or tertiary institutions but rather to establish a funding body that can fund and develop the two existing sectors, building bridges where this delivers benefit, but leaving individual institutions in place with their existing identity. The Australian experience provides an insight to the potential dangers of merger, notwithstanding the advantages explicated in other research (see Osborne and Gallacher 2002).

12.5. In other jurisdictions, the complex structure of government has a substantial effect on the process of distribution. With multi-level government, there is much overlap in the funding of tertiary education, with higher education more likely to be funded at the federal level, while other forms of tertiary education are more likely to receive support from regional government.

12.6. Vocational education poses yet another set of funding issues. Some countries use training levies. France (Paragraph 4.66) is a good example where a payroll tax of 1.5% is used to finance training expenditure. (See Greenhalgh (2001) for a discussion of the relative merits of training levies in Britain and France.) The "dual-system" in Germany (Paragraph 1.44) has a long history and is not perceived as somehow distinctive from other forms of education. Both the Federal Government in the form of a training levy (Paragraph 6.59) and the Länder in the form of levies and tax sharing (Paragraph 6.22) are able to raise funds for vocational and adult education. It might seem that Scotland's only opportunity to provide such hypothecated funding for education would be through the Parliament's power to vary the basic rate of income tax by up to 3%. However, it might be possible for the Executive to support vocational education by constructing a voluntary levy scheme based on redistributing funds between employers. A compulsory scheme would be interpreted as a tax and would be ruled out under the Scotland Act.

The Processes by Which Research Funds are Distributed to Universities

12.7. The processes whereby research funds are distributed differ also substantially by country. The US is the most successful economy in producing advances in basic research and its support for this research dwarfs the provision in other countries. The main academic agency is the National Science Foundation, but government departments have substantial involvement in public and private universities, helping maintain the infrastructure as well as providing direct grants. Interestingly, Federal research funding to the private universities has grown more rapidly than research support to public institutions in recent years. There is no direct equivalent to the RAE system and therefore no non-contingent support for research.

12.8. The research model in New Zealand (Paragraph 8.40) appears to share characteristics with what is expected of the 2008 RAE in the UK. The Australian model is very close to our RAE system (Paragraph 2.80), but the weights lean more heavily towards research income generation and research students (Paragraph 2.35).

12.9. Smaller countries have difficulty creating “critical mass” in research. Finland’s response has been to create “centres of excellence” (Paragraphs 5.41 to 5.44) and it is argued that public support for these centres acts as a catalyst for private sector funding. Similarly Canada (Paragraph 3.49) and New Zealand (Paragraph 8.40) are seeking to concentrate their most productive researchers.

The Statutory Duties and Powers of Those Public Bodies or Parts of Government That Are Charged With the Distribution of Funds

12.10. In respect of the statutory duties and powers relating to tertiary education, it seems that these are more disparate, the larger the country. In all countries within our study there is certain legislation at national level governing post-compulsory education, with, in particular cases, considerable devolution to state or provincial government. Thus in countries such as the USA and Germany, the state or Länder have arguably a more important role in the regulation of tertiary institutions than do the Federal authorities. In most countries a range of intermediary bodies with a range of duties have been established between government and institutions.

The Non-Statutory Roles of These Bodies and How These Have Evolved

12.11. There are a number of regulatory or resource allocation functions carried out by NDPBs in different countries. These include:

- Funding and policy
- Quality Assurance
- Teaching Quality
- Research

12.12. The relationships between the bodies carrying out these functions are very important. For example, in New Zealand the Tertiary Education Commission (TEC) (Paragraph 1.58)

advises government on strategy and education priorities for the whole of post-compulsory education, including private providers. Its role seems to encompass most of the functions listed above. In Scotland, the functions of the Quality Assurance Agency (QAA), Scottish Qualifications Authority (SQA) and Research Assessment Exercise (RAE) are carried out separately from the Scottish Higher Education Funding Council (SHEFC), though of course SHEFC is free to interpret quality assessments of teaching and research in its planning and funding decisions. Thus, for example, SHEFC places different weights on RAE outcomes compared with England and Wales.

Their Role in Developing Governance and Management of Providers

12.13. The governance structures of tertiary education institutions in the countries under study are mainly laid out in statute (Paragraphs 1.54 to 1.59). Comprehensive systems of accountability exist in many countries. In Australia, for example, the Institution Assessment Framework (IAF) is founded on the responsibilities of the Commonwealth to ensure that the institutions it funds are sustainable and deliver the outputs for which they are funded, that their outcomes are of a high quality and that they comply with their legal obligations. In a number of countries clearly defined contractual relationships are established. In Finland, the Ministry of Education engages in a three-year cycle of 'results negotiations' with HEIs in order to set goals. In Sweden, an Educational Task Contract is given to every university and university college stating the objectives for a given three-year period

12.14. It should be noted that such statutes in the UK should now be consistent with the Bologna Process to which the UK is now committed. The six principles of the Bologna Declaration are:

- Facilitating the readability and comparability of qualifications;
- Implementing a system based essentially on two main cycles;
- Establishing a system of credits, such as the European Credit Transfer System (ECTS);
- Developing arrangements to support the mobility of students, teachers and researchers;
- Promoting European cooperation in quality assurance;
- Promoting the European dimension in higher education (in terms of curricular development and inter-institutional cooperation).

12.15. As far as developments in Scotland relating to the Bologna process are concerned, the key issues relate to the establishment of the Scottish Higher Education Framework and the Scottish Credit and Qualifications Framework. The latter now includes all mainstream qualifications in a single unified framework. All higher education qualifications should be credit-rated and levelled within the framework by 2003/2004. The position of the Bachelor's degree and the number and level of credits to be allocated to it will be developed to reflect the traditional breadth and flexibility of the qualification. The SCQF is intended to encourage lifelong learning by allocating credit for previous study. One of the key issues however will be whether institutions are willing to accept all individuals who have the relevant number of credits.

How They Perform or Commission Analyses of National Skills Needs

12.16. In a number of countries we can identify surveys at a national level which identify skills needs (e.g USA (Paragraph 11.38)) and certain countries have acted on external reviews carried out by external organisations such as the OECD (e.g. Sweden (Paragraph 10.39)).

12.17. As we have indicated (Paragraph 1.30) for countries, such as Scotland, with falling birth rates, immigration and skills policies cannot be treated as independent. A number of examples exist both within Europe (e.g. Norway) and beyond (e.g. Australia and Canada) of countries that are using immigration policies to enhance their skills base.

12.18. Financial levers are used in certain countries to attract students to subjects where there skills shortages. In Australia for example, the Higher Education Contribution Scheme (HECS), a levy upon students, has been frozen in the areas of teaching and nursing since they are shortage areas.

12.19. In New Zealand, the funding of providers depends on the strategic relevance of their offers, which in turn is determined by the Tertiary Education Commission.

Their Role in Stimulating Strategic Change, Including Changes to Provision and the Merger of Providers

12.20. The issue of institutional merger has been addressed in certain countries with Norway and Australia being prime examples. In both countries the change was sudden and dramatic. In Norway, as a result of educational reforms in 1994, 98 colleges were merged into 26 new ones (Paragraph 9.12). One of the key drivers behind this change was a government commitment to balanced regional development. Higher education in Norway is regarded as an important contributor to local economic, social and political life (Paragraph 9.13). This theme of focussing on the regional economic development role of particular forms of HE provision is also evident in other Scandinavian countries (e.g Finland (para 5.22 and 5.26)).

12.21. In Australia, an Amalgamations Task Force was set up to advise Minister Dawkins in the early 1990s (Paragraph 2.12). This threatened penalties on institutions that were unwilling to merge. The 18 universities and 47 CAEs in 1985 became 30 universities in 1991 and 35 by 1994. The number of students increased by nearly over 80 % and research income was allocated competitively rather than by block grant.

12.22. Both in Norway and Australia, restructuring was driven by governmental reforms, rather than being a bottom-up process. There appears to be no example of significant structural change in any of the countries studied occurring without government acting at least as a catalyst if not an active driver of change.

12.23. The research also shows that there is no clear outcome as yet on whether such radical restructuring is beneficial. On the one hand there are countries which maintain a binary divide between academic and vocational education, while others aspire to a common framework for tertiary education.

12.24. Institutions will inevitably respond to changes in the funding structure: moving towards funding based on credits rather than student numbers would fundamentally alter the relationship between FE and HE. It would also have implications for skills and regional development that cannot easily be predicted given the limited international evidence that is available.

Research Funding

12.25. Smaller countries, perhaps intimidated by the success of the USA in many areas of research have sought ways to maximise the return from their investment in research. The approach most frequently taken has been to concentrate resources. Thus, in Canada, the federal government maintains a Networks of Centres of Excellence Program, which links university, industry, and government researchers across the country. Further, the Canadian Foundation for Innovation was established in 1997 by the federal government to provide research infrastructure funds to Canadian institutions on a cost-shared basis with the provinces and other partners.

12.26. Norway is also a good case study of this effect. A parliamentary white paper published in 1998 stressed the need for quality in research. The Norwegian government subsequently asked the Norwegian research council to formulate a means of creating centres of excellence. The research council aimed to see between 10 and 20 centres given centre of excellence status with an annual budget of between 10 and 20 million Norwegian krona (roughly £850,000 to £2m). The centres can be hosted by universities, research institutes or even private sector research centres. In Finland, there have been designated centres of excellence in research in Finland since 1995. A six-year programme launched by the Academy of Finland in 2000 created 26 such centres and another 16 were planned for establishment between 2002 and 2007.

12.27. Other countries have also clearly been motivated to change their funding structures because of the introduction of the RAE in the UK. Australia and New Zealand are the two most obvious examples. Whereas in the USA most research funding is grant based and academic contracts, which typically are for nine months per year, allow researchers to enhance their incomes by winning research grants, support for research in Australia and New Zealand partly reflects past track record in publication. The weights given to other elements of the research activity such as research income and postgraduate students may differ from Scotland, but the fundamental principle is the same. In fact current New Zealand assessment procedures for academic research appear to be close to what the UK is expected to use in 2008.

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The Ministry of Education (www.minedu.govt.nz)

Education Tertiary Reform Act can be found within http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes

The New Zealand Qualifications Authority (NZQA) (www.nzqa.govt.nz)

Association of Polytechnics in New Zealand (APNZ) (www.apnz.ac.nz)

Association of Colleges of Education in New Zealand (ACENZ) (www.acenz.ac.nz)

New Zealand Register of Quality Assured Qualifications (<http://www.kiwiquals.govt.nz/about/index.html>)

The New Zealand Vice-Chancellors' Committee (NZVCC) (www.nzvcc.ac.nz)

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APPENDICES

APPENDIX ONE

1.1 Estimates of Commonwealth Expenses by Function as a percentage of Total Budget Outlays, 2002-03 to 2006-07

	Estimates		Projections		
	2002-03	2003-04	2004-05	2005-06	2006-07
	\$m	\$m	\$m	\$m	\$m
General public services	6.3%	6.1%	6.1%	6.1%	5.7%
Defence	7.7%	7.8%	7.6%	7.5%	7.7%
Public order and safety	1.2%	1.3%	1.2%	1.2%	1.1%
Health	17.3%	17.5%	17.6%	17.7%	17.7%
Education					
Higher education	2.4%	2.4%	2.5%	2.5%	2.6%
Vocational and other education	0.8%	0.8%	0.8%	0.8%	0.8%
Non-government schools	2.3%	2.5%	2.5%	2.6%	2.7%
Government schools	1.3%	1.3%	1.3%	1.3%	1.3%
<i>Schools</i>	<i>3.6%</i>	<i>3.7%</i>	<i>3.8%</i>	<i>3.9%</i>	<i>4.0%</i>
Student assistance	0.3%	0.3%	0.3%	0.3%	0.3%
General administration(a)	0.0%	0.0%	0.0%	0.0%	0.0%
School education - specific funding	0.1%	0.1%	0.1%	0.1%	0.1%
Total education	7.2%	7.4%	7.5%	7.6%	7.7%
Social security and welfare	41.8%	42.1%	42.0%	42.1%	42.0%
Housing and community amenities	1.0%	0.9%	0.9%	0.8%	0.8%
Recreation and culture	1.2%	1.2%	1.2%	1.1%	1.1%
Fuel and energy	2.4%	2.5%	2.5%	2.5%	2.4%
Agriculture, forestry and fishing	1.1%	1.1%	1.0%	0.8%	0.7%
Mining and mineral resources (other than fuels); manufacturing and construction	0.9%	0.9%	0.8%	0.7%	0.6%
Transport and communication	1.3%	1.3%	1.2%	0.9%	0.8%
Other economic affairs	2.3%	2.4%	2.2%	2.2%	2.1%
Other purposes	8.0%	7.4%	8.2%	8.8%	9.4%
Total expenses	170,534	178,031	186,521	194,176	202,351

Sources: 2003 Budget, Department of Finance and Administration

(a) Departmental expenses relating to International Education funding and schools previously allocated to the General Administration - Education sub-function have been reclassified to the Higher Education and School education - specific funding sub-function

1.2 Estimates of Commonwealth Expenses by Function as a percentage of GDP, 2002-03 to 2006-07

	Estimates		Projections		
	2002-03	2003-04	2004-05	2005-06	2006-07
	\$m	\$m	\$m	\$m	\$m
General public services	1.4%	1.4%	1.4%	1.3%	1.3%
Defence	1.7%	1.7%	1.7%	1.7%	1.8%
Public order and safety	0.3%	0.3%	0.3%	0.3%	0.3%
Health	3.9%	3.9%	3.9%	3.9%	4.1%
Education					
Higher education	0.6%	0.5%	0.5%	0.6%	0.6%
Vocational and other education	0.2%	0.2%	0.2%	0.2%	0.2%
Non-government schools	0.5%	0.5%	0.6%	0.6%	0.6%
Government schools	0.3%	0.3%	0.3%	0.3%	0.3%
<i>Schools</i>	0.8%	0.8%	0.8%	0.9%	0.9%
Student assistance	0.1%	0.1%	0.1%	0.1%	0.1%
General administration	0.0%	0.0%	0.0%	0.0%	0.0%
School education - specific funding	0.0%	0.0%	0.0%	0.0%	0.0%
Total education	1.6%	1.6%	1.7%	1.7%	1.8%
Social security and welfare	9.5%	9.3%	9.4%	9.3%	9.6%
Housing and community amenities	0.2%	0.2%	0.2%	0.2%	0.2%
Recreation and culture	0.3%	0.3%	0.3%	0.3%	0.2%
Fuel and energy	0.5%	0.6%	0.6%	0.5%	0.6%
Agriculture, forestry and fishing	0.3%	0.2%	0.2%	0.2%	0.2%
Mining and mineral resources (other than fuels); manufacturing and construction	0.2%	0.2%	0.2%	0.2%	0.1%
Transport and communication	0.3%	0.3%	0.3%	0.2%	0.2%
Other economic affairs	0.5%	0.5%	0.5%	0.5%	0.5%
Other purposes	1.8%	1.6%	1.8%	1.9%	2.2%
Total expenses	22.6%	22.1%	22.3%	22.0%	22.9%
GDP	753,953	806,108	835,697	881,875	885,500

1.3 Cumulative expenditure on educational institutions per student over the average duration of tertiary studies, 2000 – an International Perspective.

	Average duration of tertiary studies (in years)			Cumulative expenditure per student over the average duration of tertiary studies		
	All Tertiary	Vocational Education and Training	Higher Education (including advanced research prog)	All Tertiary	Vocational Education and Training	Higher Education (including advanced research prog)
	(1)	(2)	(3)	(4)	(5)	(6)
Australia	2.5	1.6	2.6	32521	11398	35953
Austria	6.2	2.5	7.3	66948	x(4)	x(4)
Canada	m	m	m	m	m	m
Denmark ²	4.2	2.1	4.4	50199	x(4)	x(4)
Finland	6.0	a	6.0	50469	a	50469
France ²	4.7	2.8	5.3	39200	24629	43666
Germany	4.9	2.4	6.0	52962	13976	70639
Greece ³	5.2	3.0	7.3	17723	8753	26633
Hungary ³	4.1	2.0	4.1	28448	6949	28748
Iceland ³	2.7	2.0	2.8	21424	m	21435
Ireland	3.2	2.2	4.0	35909	x(4)	x(4)
Italy ³	5.5	3.3	5.6	44278	13453	45319
Korea ²	3.4	2.1	4.2	20985	8500	31660
Mexico ²	3.4	x(3)	3.4	16044	x(4)	x(4)
Netherlands ²	3.9	x(1)	x(1)	46543	x(4)	x(4)
Norway	m	m	m	m	m	m
Poland ³	m	m	3.7	m	m	11966
Spain ²	4.6	1.5	4.7	30330	9390	31593
Sweden	4.6	2.6	4.7	69561	x(4)	x(4)
Switzerland ^{2, 3}	3.6	2.2	5.5	66867	22997	106282
UK	3.5	x(1)	x(1)	34202	x(4)	x(4)
Country mean	4.3	2.1	4.8	40371	~	~

Source: OECD Education at a Glance 2003, Table B1.3

Average duration of tertiary studies and expenditure on educational institutions over the average duration of studies in equivalent US dollars converted using PPPs, by type of programme

m or a – data not available; n – magnitude either negligible or zero.

(1), (2), (3), (4) ... - Column Reference

x(1), x(2), x(3), x(4) ... x indicates that data are included in another column. The column reference is shown in brackets after "x".

e.g., x(2) means that data are included in column 2.

Notes:

1. Either the Chain Method (CM) or an Approximation Formula (AF) was used to estimate the duration of tertiary studies.

2. The duration of tertiary studies is obtained by a special survey conducted in 1997 for the academic year 1995.

3. Public institutions only.

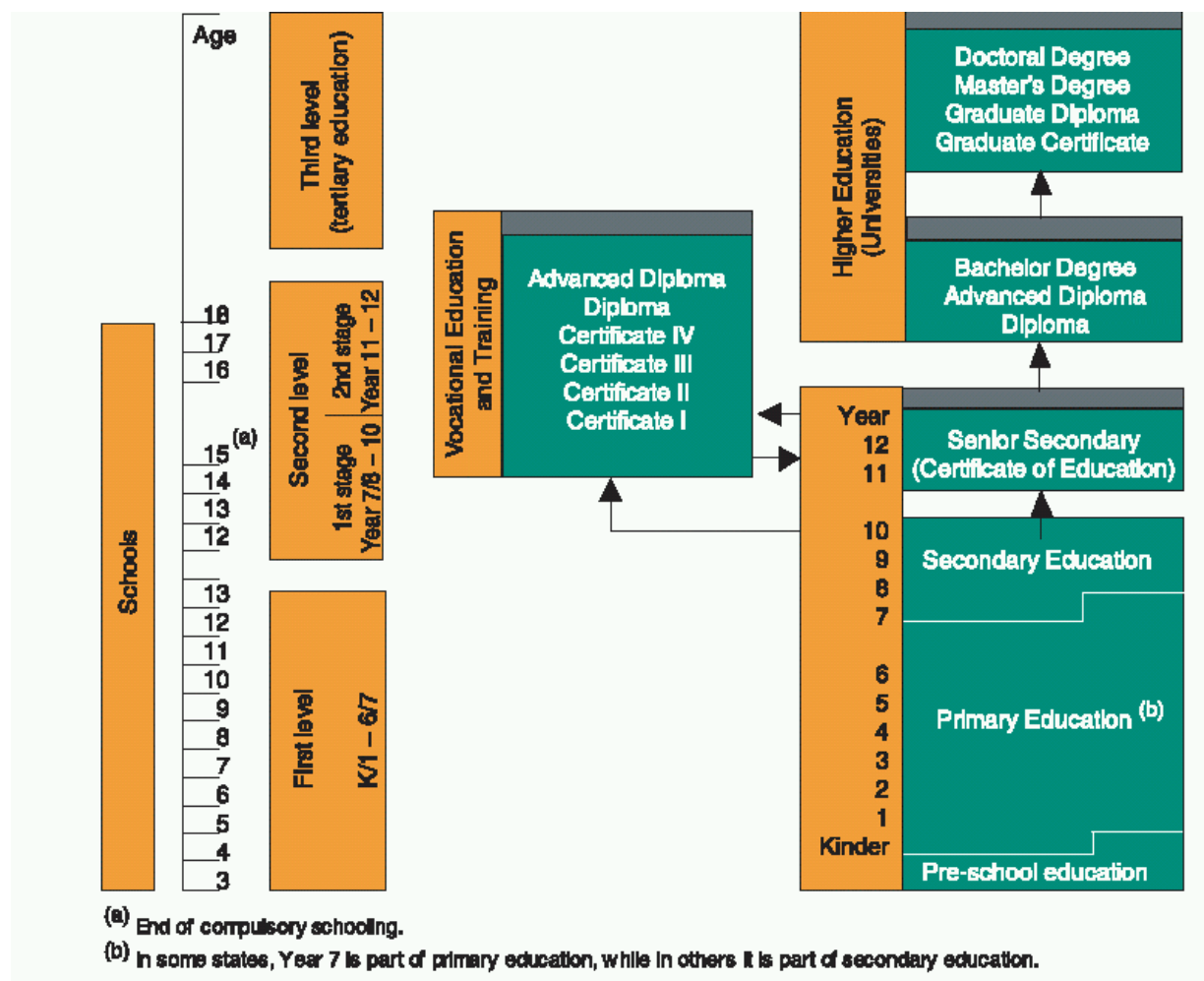
See Annex 3 for notes (www.oecd.org/edu/eag2003).

APPENDIX TWO

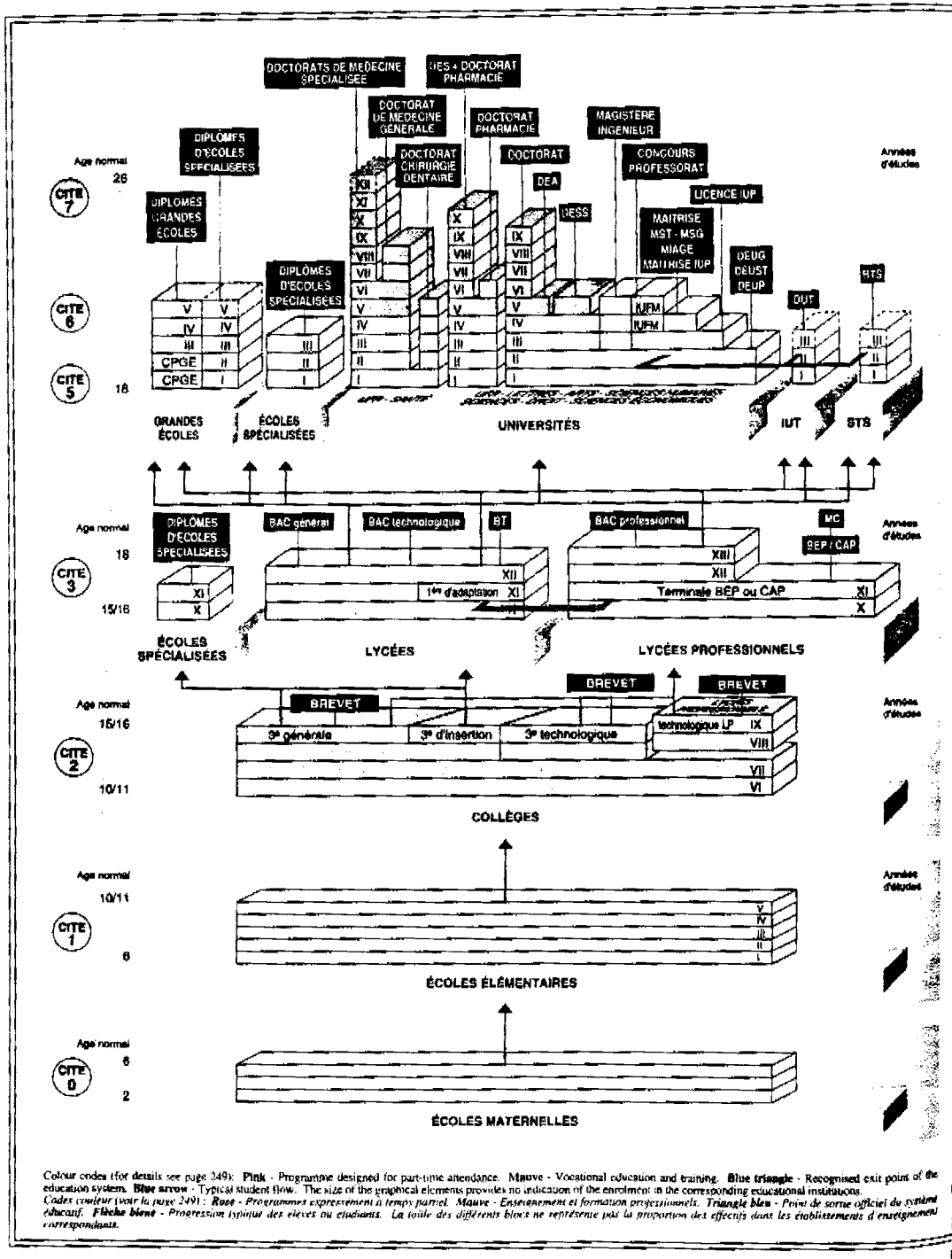
The Structures of the Education Systems

2.1 Australia

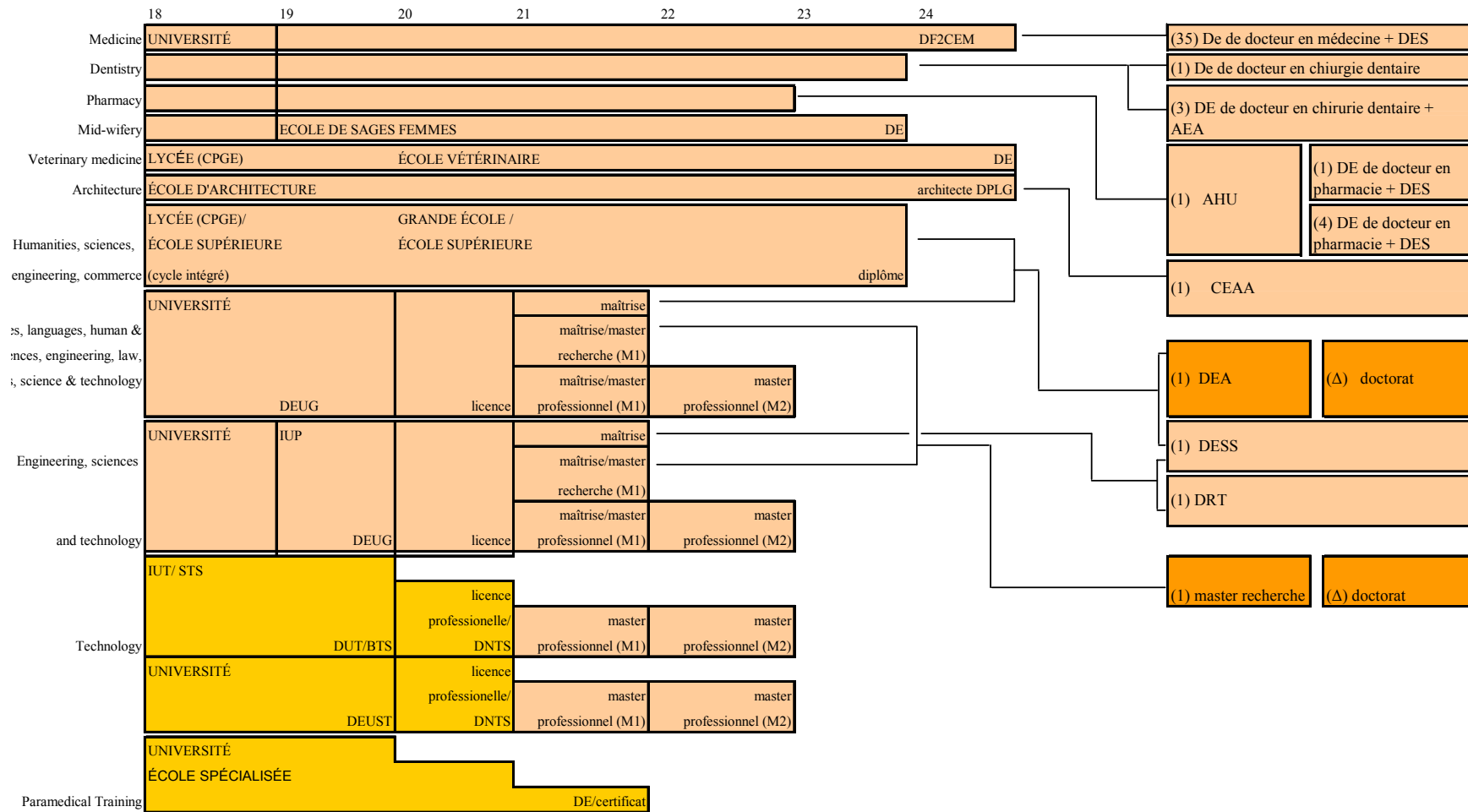
Figure 1 outlines the structure of Australian education by age group: it closely resembles the Scottish structure.



2.2 Canada







2.3 France



(Page 1 of 2)

(France page 2 of 2)

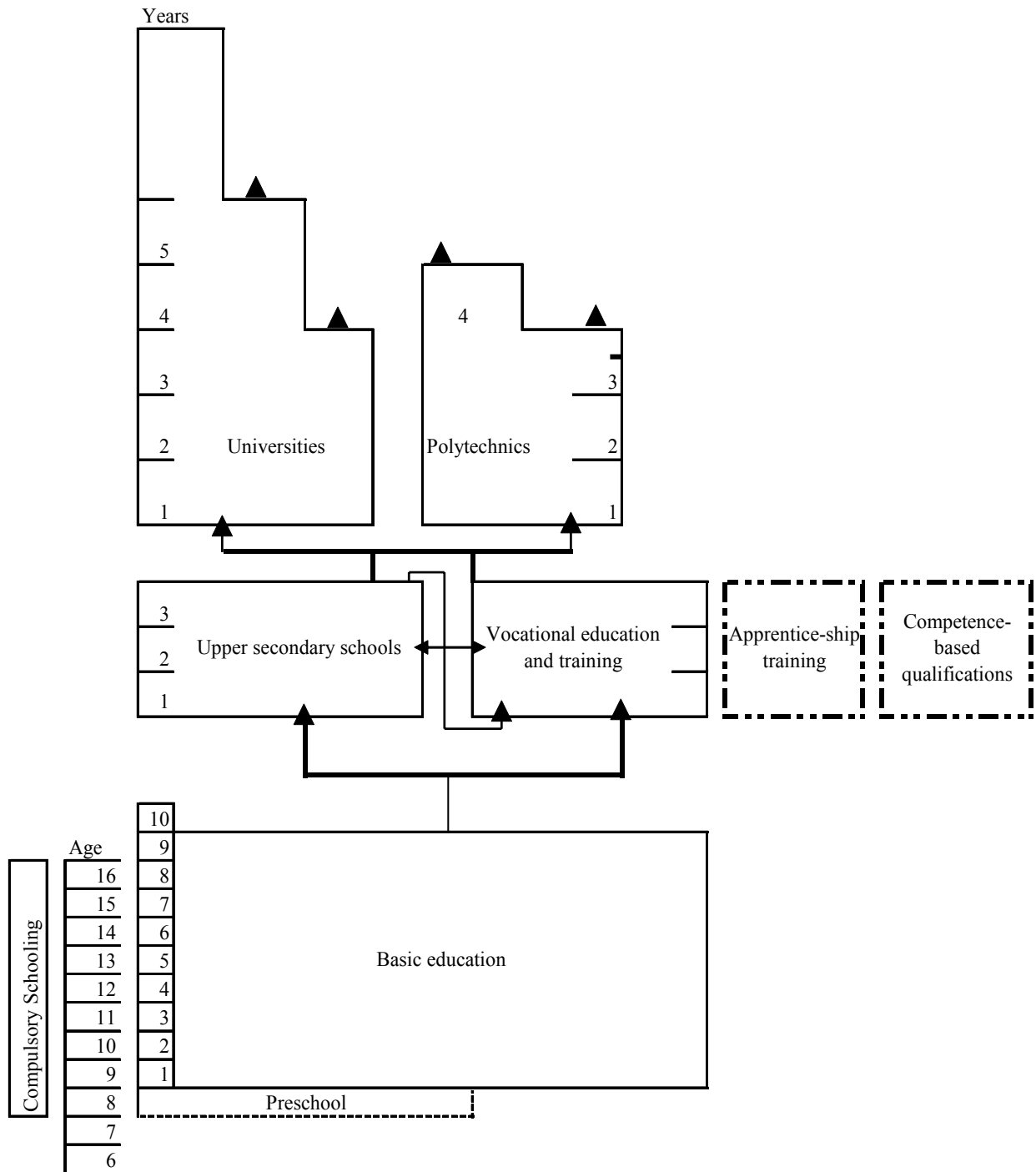
 ISCED 5A (1st or 2nd programme)	 ISCED 6 programme	Selection procedure at point of entry (institutional level)	Intermediate Diploma	_/n/_ Compulsory work experience and its duration	(n) Duration of the programme (for ISCED 6 & further ISCED 5)
 ISCED 5B (1st or 2nd programme)	 Further Qualification	*** Selection procedure at point of entry (institutional level)	Qualifying Degree	* Qualification and field of specialisation	(Δ) Variable duration

AEA	<i>Attestation d'Études Approfondies</i>	DEA	<i>Diplôme d'Études Approfondies</i>	DRT	<i>Diplôme de Recherche Technologique</i>
AHU	<i>Année Hospitalo-Universitaire</i>	DES	<i>Diplôme d'Études Spécialisées</i>	DUT	<i>Diplôme Universitaire de Technologie</i>
architecte DPLG	<i>Architecte Diplômé Par Le Gouvernement</i>	DESS	<i>Diplôme d'Études Supérieures Spécialisées</i>	IUP	<i>Institut Universitaire Professionnalisés</i>
BTS	<i>Brevet de Technicien Supérieur</i>	DEUG	<i>Diplôme d'Études Universitaires Générales</i>	IUT	<i>Institut Universitaire de Technologie</i>
CEAA	<i>Certificate d'Études Approfondies en Architecture</i>	DEUST	<i>Diplôme d'Études Universitaires Scientifiques et Techniques</i>	STS	<i>Section de Techniciens Supérieurs</i>
CPGE	<i>Classes Préparatoires aux Grandes Écoles</i>	DF2CEM	<i>Diplôme de fin de deuxième cycle des études médicales</i>		
DE	<i>Diplôme d'État</i>	DNTS	<i>Diplôme National de Technologie Spécialisée</i>		

The classes préparatoires aux grandes écoles (CPGE) are of a literary, commercial or scientific nature. Highly selective, they prepare students for the competitive entrance examinations for the grandes écoles. In the case of students who are unsuccessful, the classes are generally recognised by the universities, which regard them as equivalent to the DEUF in some subjects. The most prominent of the grandes écoles normales supérieures (ENS), the écoles de commerce et de gestion, the écoles d'ingénieurs and the instituts d'études politiques (which involve just one year of preparation in the fully integrated course). By 'fully integrated course' is meant any form of preparation offered within the institution itself.

The écoles and the instituts providing vocational education after a competitive examination generally open to holders of a higher education qualification obtained after three years of study, or to state-remunerated, public sector trainees, are not included in this diagram. The institutions most particularly concerned are the Écoles Nationale d'Administration (ENA), the Instituts Régionaux d'Administration (IRA), the Écoles Nationale de la Magistrature (ENM), the Écoles Nationale de la Santé Publique (ENSP) and the Instituts Universitaires de Formation des Maîtres (IUFM).

2.4 Finland



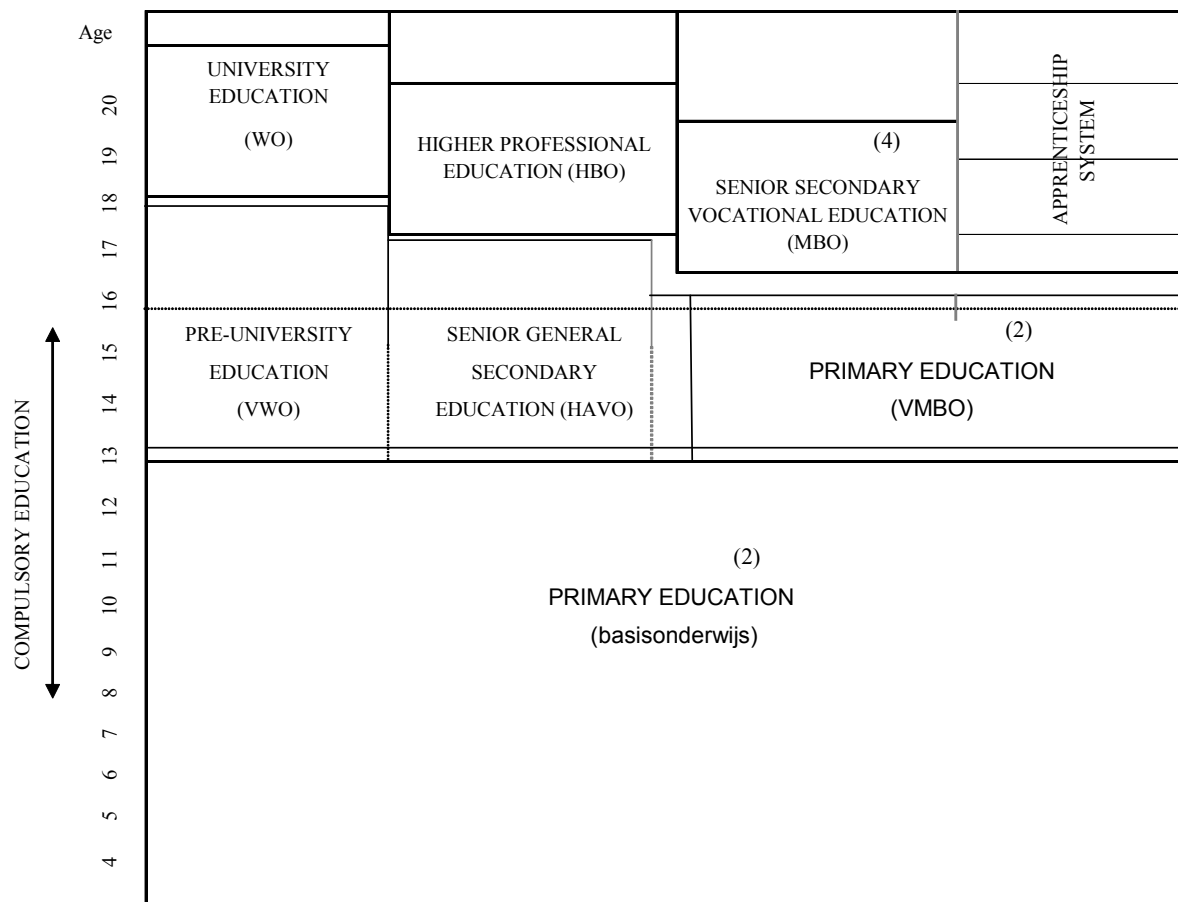
Source: Ministry of Education

2.5 Germany

		FURTHER EDUCATION (various forms of general and vocational further education)				
Further Ed.	Tertiary Education	Qualification or vocational further education		Allgemeine Hochschulreife		
		FACHSCHULE ¹²⁾	ABENDGYMNASIUM/ KOLLEG		Diplom BERUFSAKADEMIE ¹⁴⁾	Promotion Degree or examination after a first course of study (Diplom, Magister, Staatsexamen; Bachelor, Master) UNIVERSITÄT ¹³⁾ TECHNISCHE UNIVERSITÄT/ TECHNISCHE HOCHSCHULE PÄDAGOGISCHE HOCHSCHULE KUNSTHOCHSCHULE MUSIKHOCHSCHULE FACHHOCHSCHULE VERWALTUNGSFACHHOCHSCHULE
Secondary Level II	Secondary Level II	Berufsqualifizierender Abschluss ¹¹⁾		Fachhochschulreife		
		Vocational education in the BERUFSSCHULE and ON-THE-JOB TRAINING (Dual System) ²⁾ ----- BERUFSGRUNDBILDUNGSJAHR ²⁾ at school or in cooperative form		BERUFSSCHULE ⁸⁾	FACH-OBER-SCHULE ⁹⁾	Fachgebundene Hochschulreife BERUFS-OBER-SCHULE ⁸⁾ Allgemeine Hochschulreife GYMNASIALE OBERSTUFE ²⁾⁷⁾ in the different school types: Gymnasium Berufliches Gymnasium/ Fachgymnasium, Gesamtschule
		Mittlerer Schulabschluss (Realschule leaving certificate) after 10 years, First general education qualification (Hauptschule leaving certificate) after 9 years ⁶⁾				
Secondary Level I	Secondary Level I	10th grade				
		SONDERSCHULE ²⁾	HAUPTSCHULE ⁴⁾	REALSCHULE ⁴⁾	GESAMT-SCHULE ⁵⁾	GYMNASIUM ⁵⁾
		Orientation phase irrespective of school type or as a separate school type ³⁾				
Primary Education	Primary Education	GRUNDSCHULE ¹⁾				
						SONDERSCHULE ²⁾
Pre-school Educ.	Pre-school Educ.	KINDERGARTEN (optional)				
grade						age

Published by: Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany, Documentation and Education Information Service, Lennéstr. 6, 53113 Bonn, Germany.

2.6 The Netherlands

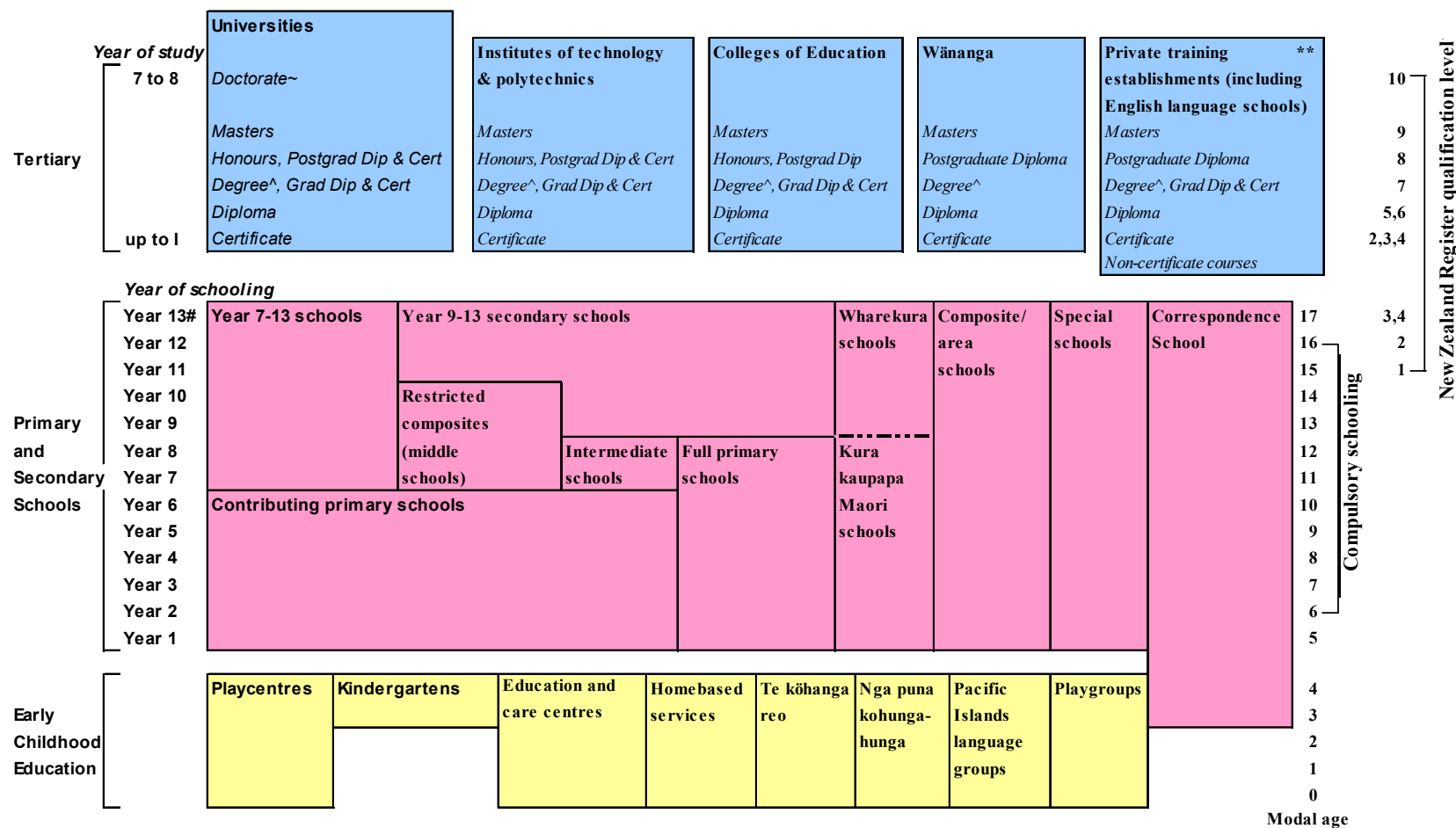


1. Compulsory education lasts either 12 years full-time (5 to 17) or full-time from 5 until the end of the school year in which the pupil has reached the age of 16 followed by part-time compulsory education until the age of 18.
2. Separate pre-school education does not exist formally in the Netherlands. Primary education lasts for eight years - 4 to 12 (compulsory from 5). Provision for children below four is the responsibility of the Ministry of Welfare, Health and Cultural Affairs
3. As from the 1993/94 school year, all types of secondary education begin with a three-year period of basic education (Basisvorming) offering broad-based general teaching in which no strict distinction is made between general and technical subjects.
4. Depending on the course chosen, it may last up to 4 years. MBO is designed for students aged around 16-19.
5. Apprenticeship training last 2 to 3 years and advanced apprenticeship 1 to 3 years.

Source: EURYDICE

Note: "Basisvorming": still exists, but the Minister's view is that this innovation has failed, because the concept is too broad and too "theoretical" for the VMBO.

2.7 New Zealand



The majority of students complete their schooling within 13 years, but a small number continue to study in the school system for another 1 or 2 years.

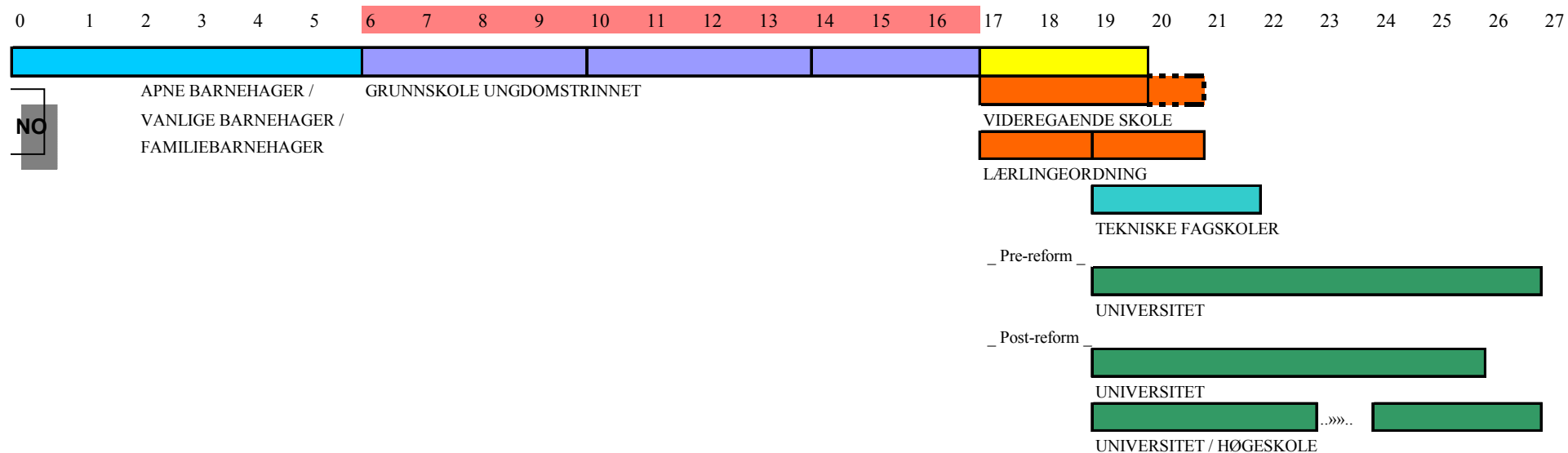
^ A small number of degrees are in excess of 3 years.

* Certificates can be registered at any level, and diplomas can be registered at any level between 5 and 10.

~ One of the institutes of technology also offers a doctorate

** PTEs include a large range of institution types and sizes, many of which are focussed on short certificate or non-certificate level courses

2.8 Norway



Pre-primary education (non-school settings) - ISCED 0

Pre-primary (school settings) - ISCED 0

Primary - ISCED 1

Single structure - ISCED 1 + ISCED 2

Lower secondary general - ISCED 2 (including pre-vocational)

Lower Secondary vocational - ISCED 2

Upper secondary general - ISCED 3

Upper secondary vocational - ISCED 3

Post-secondary non-tertiary - ISCED 4

Tertiary education - ISCED 5A

Tertiary education - ISCED 5B

Part-time or combined school and workplace courses

Compulsory full-time education

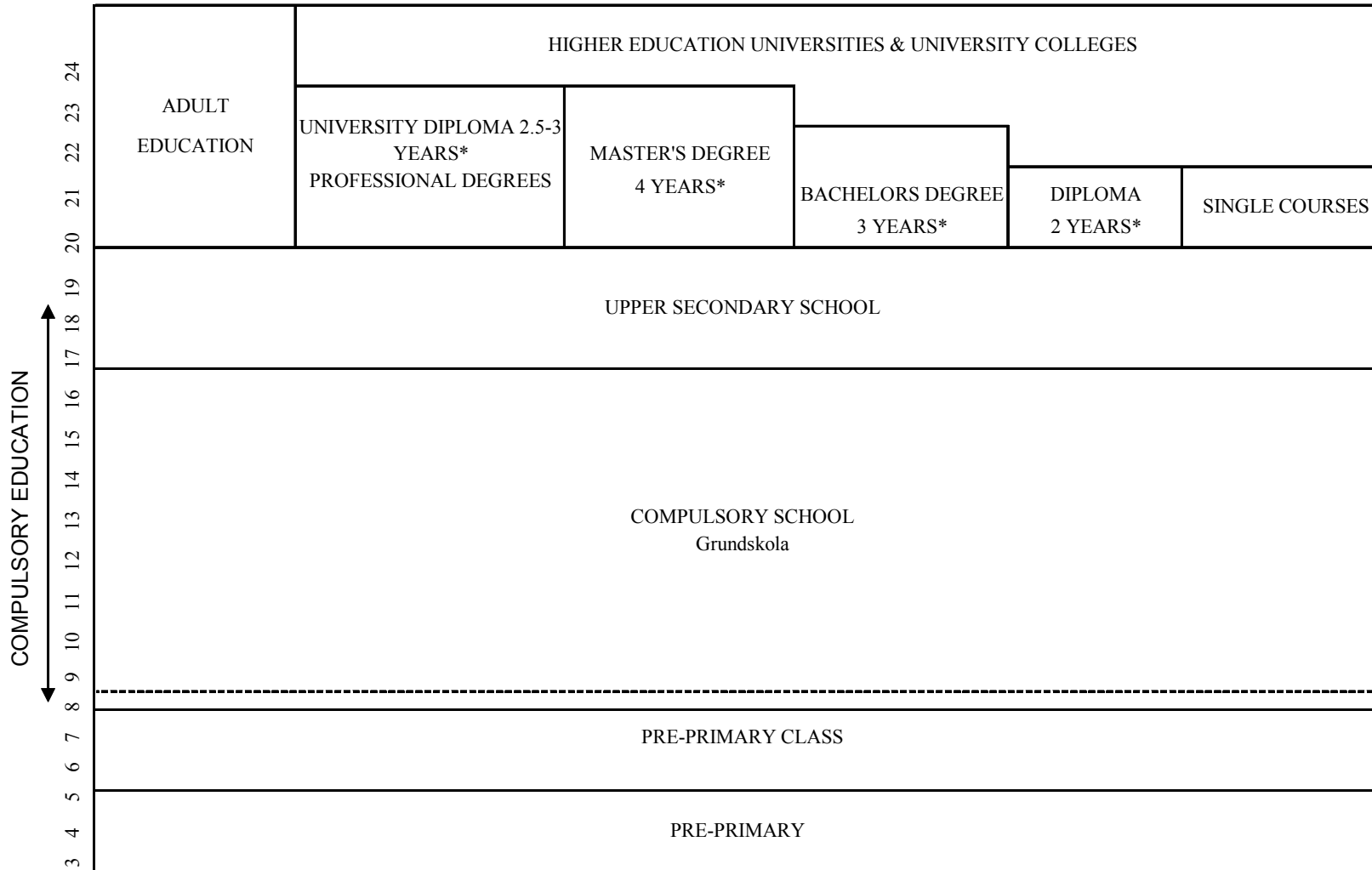
Compulsory part-time education

Additional year

Study abroad

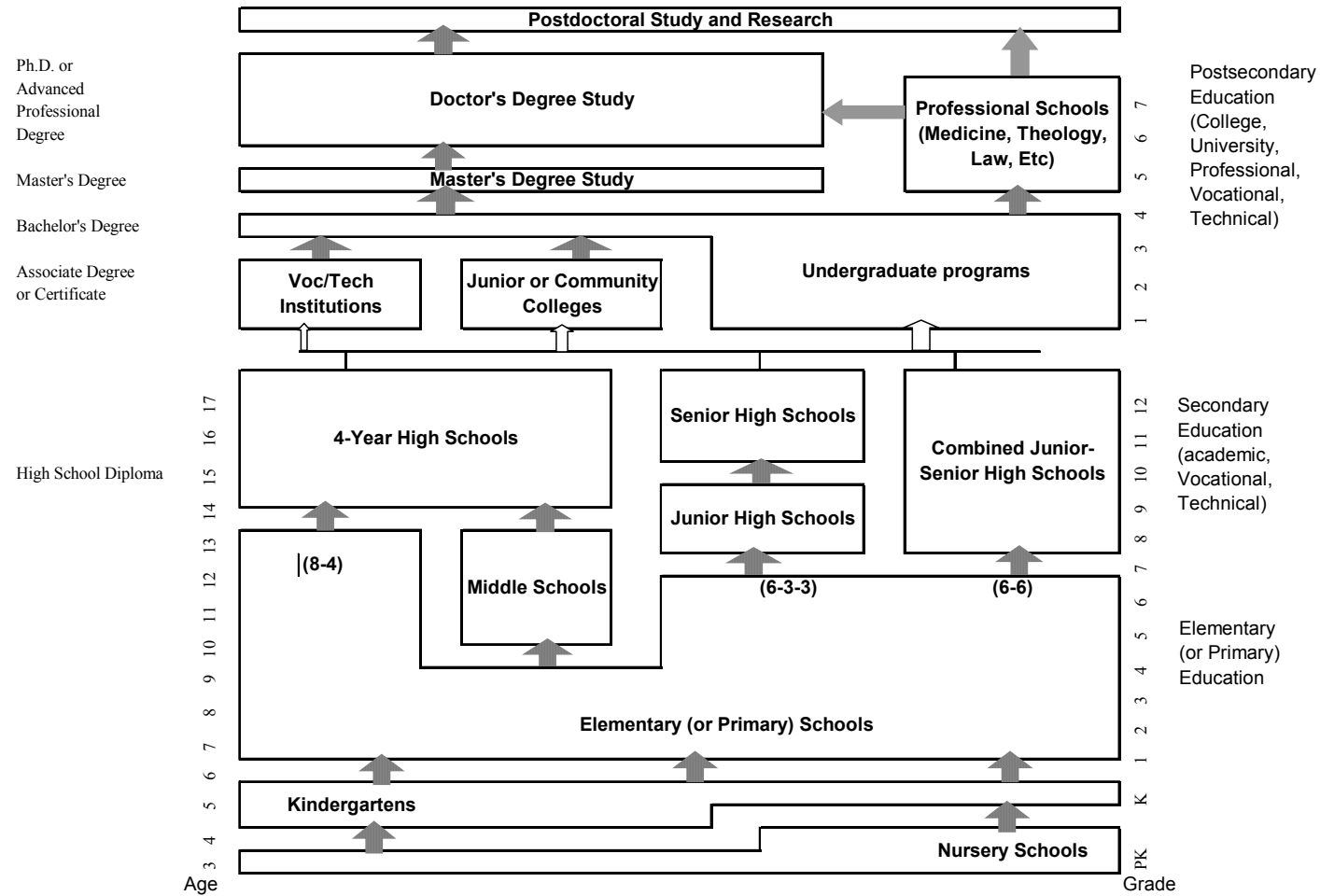
Source: Eurydice
2003/2004

2.9 Sweden



Source: EURYDICE

2.10 United States



Note: - Adult education programs, while not separately delineated above, may provide instruction at the elementary, secondary, or higher education level. Chart reflects typical patterns of progression rather than all possible variations.
 SOURCE: U.S. Department of Education, National Centre for Education Statistics

APPENDIX 3

FINLAND

3.1 OECD Background Statistics: 1. GDP and Education Expenditure 2000

Country	GDP Per Capita US \$'s	Total Public Expenditure as % GDP	Total Public Expenditure on TE as % of Total P.E.	Public Expenditure on TE as % GDP ²⁰	Public Expenditure on TEIs as % GDP	Private Expenditure on TEIs as % GDP
Finland	25357	48.9	4.2	2.0	1.7	n
UK	24964	38.9	2.5	1.0	0.7	0.3

Source: OECD, Education at a Glance 2003

3.2 OECD Background Statistics: 2 Public Expenditure on Tertiary Education 2000

Country	Tertiary Education		
	Direct Public Expenditure on public institutions %	Direct Public Expenditure on private institutions %	Indirect public transfers and payments to the private sector %
Finland	74.8	7.5	17.7
UK	a	87.1	12.9

Source: OECD, Education at a Glance 2003

a – data not applicable

3.3 OECD Background Statistics: Three Initial Sources of Public Educational Funds and Final Purchasers of Educational Resources 2000

Country	Tertiary Education Initial Funds (before transfers between levels of govt.)			Tertiary Education Final Funds (after transfers between levels of govt.)		
	Central	Regional	Local	Central	Regional	Local
Finland	86	a	14	86	a	14
UK	100	a	n	87	a	13

Source: OECD, Education at a Glance 2003

²⁰ Includes public subsidies to households for living costs which are not spent on educational institutions, therefore figures greater than in col.6

3.4 OECD Background Statistics: 4 Population and Tertiary Education Attainment

Country	Total Population mid year estimates (ooo's)	Ending Age of Compulsory Education	Net Entry Rates to Tertiary Education 2001		% population that attained upper secondary education 2001 Age 25-64	% Population that attained Tertiary education Type B 2001 Age 25-64	% Population that attained Tertiary education Type A 2001 Age 25-64	% Completion Rates Tertiary Education Type A
			Type B	Type A				
Finland	5176	16	a	72	74	17	15	75
UK	58655	16	29	45	63	8	18	83

Source: OECD, Education at a Glance, 2003.

3.5 OECD Background Education Statistics: 5 Unemployment and Earnings

Country	Unemployment Rate	Gender	Unemployment Rate By level of Educational Attainment Age 25-64				Relative Earnings with Income from Employment (Upper secondary = 100) Age 25-64
			Below Upper Secondary	Upper Secondary & Post Secondary non tertiary	Tertiary Type B	Tertiary Type A	
Finland	9.8	M	10.5	7.9	4.7	3.0	167
		F	12.7	9.2	5.9	3.6	145
		F	6.4	4.2	2.5	2.2	126
UK	5.5	M	9.4	4.1	2.7	2.0	147
		F	5.7	3.7	1.7	1.9	183

Source: OECD, Education at a Glance, 2003

APPENDIX 4

The Netherlands

4.1: Unemployment and Earnings

Country	Une. Rate	Gender	Unemployment Rate By level of Educational attainment Age 25-64				Relative Earnings with Income from Employment (Upper sec. = 100) Age 25-64
			Below Upper Sec.	Upper Sec. & Post Sec. Non tertiary	Tertiary Type B	Tertiary Type A	
Netherlands	3.3	M	2.5	1.1	0.0	0.7	142
		F	3.5	2.3	1.2	2.1	146
UK	5.5	M	9.4	4.1	2.7	2.0	147
		F	5.7	3.7	1.7	1.9	183

Source: OECD, Education at a Glance, 2003

4.2: GDP and Education Expenditure 2000

Country	GDP Per Capita US \$'s	Total Public Expenditure As % GDP	Total Public Expenditure on Tertiary Education as % of Total P.E.	Public Expenditure on Tertiary Education as % GDP ²¹	Public Expenditure on Tertiary Education Institutions as % GDP	Private Expenditure on Tertiary Education Institutions as % GDP
Netherlands	27316	45.3	2.9	1.3	1.0	0.2
UK	24964	38.9	2.5	1.0	0.7	0.3

Source: OECD, Education at a Glance 2003

4.3: Public Expenditure on Tertiary Education 2000

Country	Tertiary Education		
	Direct Public Expenditure on public institutions %	Direct Public Expenditure on private institutions %	Indirect public transfers and payments to the private sector %
Netherlands	38.0	34.9	27.0
UK	a	87.1	12.9

Source: OECD, Education at a Glance 2003

Note: a = data not applicable

²¹ Includes public subsidies to households for living costs which are not spent on educational institutions, therefore figures greater than in col.6

4.4: Initial Sources of Public Educational Funds and Final Purchasers of Educational Resources 2000

Country	Tertiary Education Initial Funds (before transfers between levels of govt.)			Tertiary Education Final Funds (after transfers between levels of govt.)		
	Central	Regional	Local	Central	Regional	Local
Netherlands	100	n	n	100	n	n
UK	100	a	n	87	a	13

Source: OECD, Education at a Glance 2003

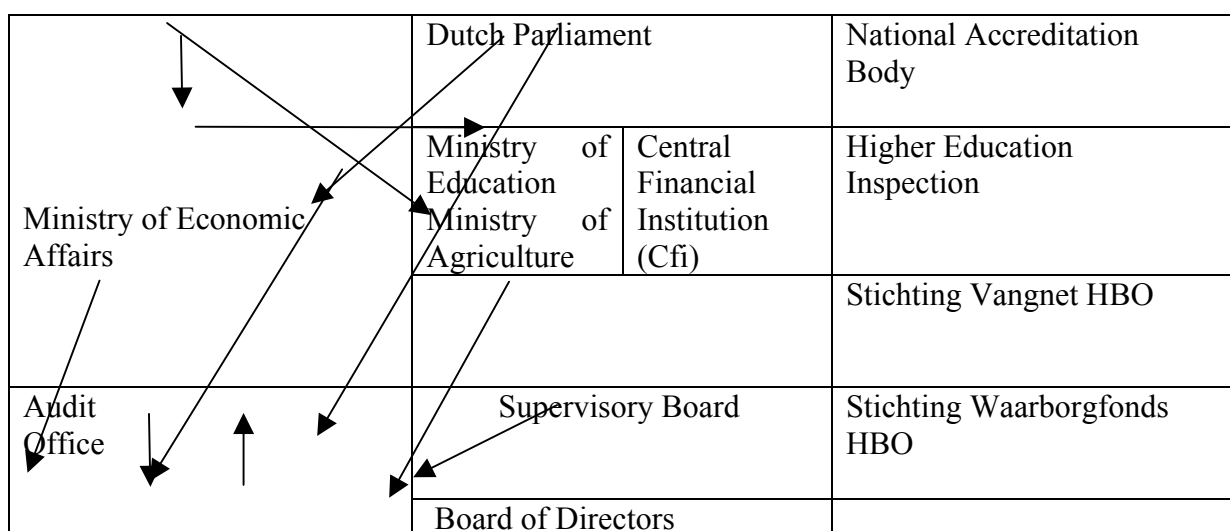
Note: a, as before, n=magnitude negligible or zero.

4.5: Population and Tertiary Education Attainment

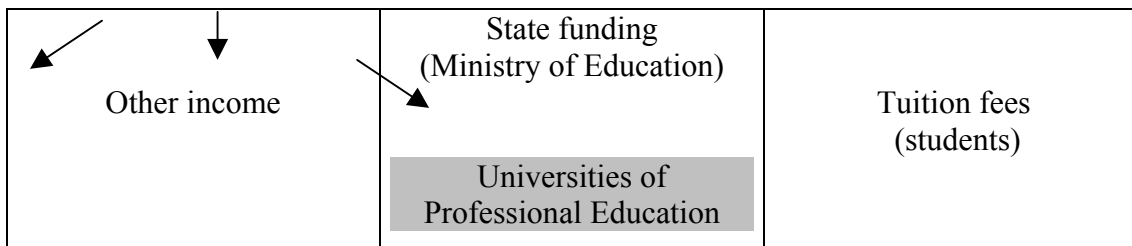
Country	Total Population mid year estimates (ooo's)	Ending Age of Compulsory Education	Net Entry Rates to Tertiary Education 2001		% Population that attained upper secondary education 2001 Age 25-64	% Population that attained Tertiary education Type B 2001 Age 25-64	% Population that attained Tertiary education Type A 2001 Age 25-64	% Completion Rates Tertiary Education Type A
			Type B	Type A				
Netherlands	15922	18	2	54	65	2	21	69
UK	58655	16	29	45	63	8	18	83

Source: OECD, Education at a Glance 2003

4.6 External Control

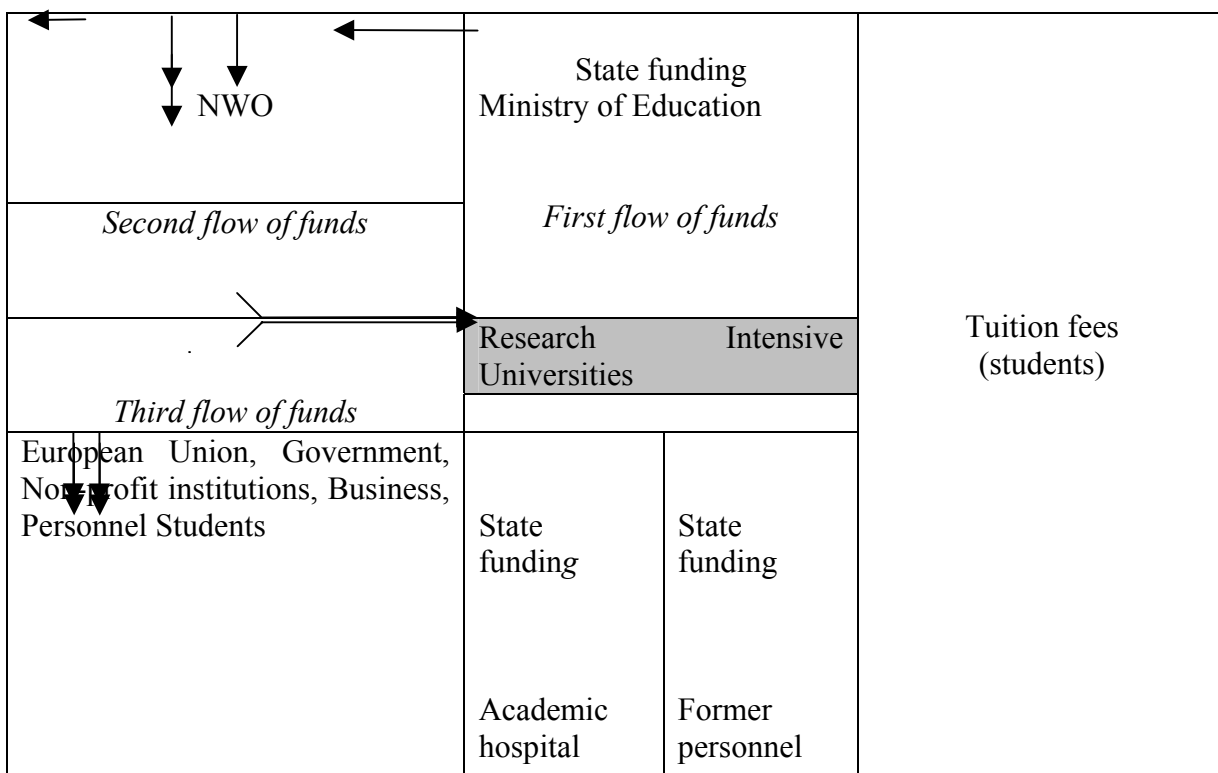


4.7 Funding of Universities of Professional Education



Source: OECD IMHE-HEFCE, (2004) International Comparative Higher Education Financial Management and Governance Project

4.8 Funding of Research-Intensive Universities



Source: OECD IMHE-HEFCE, (2004) International Comparative Higher Education Financial Management and Governance Project

The funding of research-intensive university consists of three flows of funds.

APPENDIX 5

Sweden

Almost half of the population of Sweden is involved in some form of organised education.

All students attend publicly funded schools. 11% of schools are private institutions. There are a few private institutions within tertiary education of which some obtain state subsidies to assist with operational costs.

5.1 Unemployment and Earnings

Country	Une. Rate	Gender	Unemployment Rate By level of Educational attainment Age 25-64				Relative Earnings with Income from Employment (Upper sec. = 100) Age 25-64
			Below Upper Sec.	Upper Sec. & Post Sec. Non tertiary	Tertiary Type B	Tertiary Type A	
Sweden	5.8	M	5.6	5.0	3.4	2.6	138
		F	6.4	4.2	2.5	2.2	126
UK	5.5	M	9.4	4.1	2.7	2.0	147
		F	5.7	3.7	1.7	1.9	183

Source: OECD, Education at a Glance, 2003

GDP and Education Expenditure

Sweden spends a high proportion of GDP on Higher Education. In the Year 2000/01 there were approx. 333,000 students in undergraduate education. More than fifty HEIs run by central Government, regional authorities or private organisers, 36 state run institutions.

5.2 GDP and Education Expenditure 2000

Country	GDP Per Capita US \$'s	Total Public Expenditure As % GDP	Total Public Expenditure on Tertiary Education as % of Total P.E.	Public Expenditure on Tertiary Education as % GDP ²²	Public Expenditure on Tertiary Education Institutions as % GDP	Private Expenditure on Tertiary Education Institutions as % GDP
Sweden	26161	55.1	3.6	2.0	1.5	0.2
UK	24964	38.9	2.5	1.0	0.7	0.3

Source: OECD, Education at a Glance 2003

²² Includes public subsidies to households for living costs which are not spent on educational institutions, therefore figures greater than in col.6

5.3 Public Expenditure on Tertiary Education 2000

Country	Tertiary Education			
	Direct Expenditure on public institutions %	Public on public institutions %	Direct Public Expenditure on private institutions %	Indirect public transfers and payments to the private sector %
Sweden	65.7		4.8	29.5
UK	a		87.1	12.9

Source: OECD, Education at a Glance 2003

Note: a = data not applicable

5.4 Initial Sources of Public Educational Funds and Final Purchasers of Educational Resources 2000

Country	Tertiary Education Initial Funds (before transfers between levels of govt.)			Tertiary Education Final Funds (after transfers between levels of govt.)		
	Central	Regional	Local	Central	Regional	Local
Sweden	96	4	a	95	5	a
UK	100	a	n	87	a	13

Source: OECD, Education at a Glance 2003

Note: a, as before, n=magnitude negligible or zero.

5.5 Population and Tertiary Education Attainment

Country	Total Population mid year estimates (ooo's)	Ending Age of Compulsory Education	Net Entry Rates to Tertiary Education 2001		% Population that attained upper secondary education 2001 Age 25-64	% Population that attained Tertiary education Type B 2001 Age 25-64	% Population that attained Tertiary education Type A 2001 Age 25-64	% Completion Rates Tertiary Education Type A
			Type B	Type A				
Sweden	8871	16	6	69	81	15	17	48
UK	58655	16	29	45	63	8	18	83

Source: OECD, Education at a Glance 2003

APPENDIX 6

US

Appropriations of State Tax Funds for Operating Expenses of Higher Education in the 50 States for Fiscal Years 1993-94, 1998-99, 2001-02, 2002-03, 2003-04 with Percentages of Change Over the Most Recent One, Two, Five, and Ten Years. (In Thousands of Dollars)

States	FY94	FY99	FY02	FY03	FY04	1-yr Change	2-yr Change	5-yr Change	10-yr Change
Alabama	892,127	1,037,680	1,115,999	1,162,181	1,164,219	0.2%	4.3%	12.2%	30.5%
Alaska	180,340	170,403	204,706	212,747	217,245	2.1%	6.1%	27.5%	20.5%
Arizona	616,729	836,389	884,175	859,059	859,799	0.1%	-2.8%	2.8%	39.4%
Arkansas	418,119	556,447	623,806	616,911	659,055	6.8%	5.7%	18.4%	57.6%
California	4,462,968	7,250,661	9,473,522	9,095,900	8,561,100	-5.9%	-9.6%	18.1%	91.8%
Colorado	531,761	676,520	756,809	685,529	591,511	-13.7%	-21.8%	-12.6%	11.2%
Connecticut	498,125	623,692	753,681	754,768	750,975	-0.5%	-0.4%	20.4%	50.8%
Delaware	125,969	164,115	186,398	188,192	191,289	1.6%	2.6%	16.6%	51.9%
Florida	1,585,927	2,501,857	2,664,200	2,890,594	2,808,694	-2.8%	5.4%	12.3%	77.1%
Georgia	1,034,858	1,483,818	1,707,734	1,669,191	1,671,850	0.2%	-2.1%	12.7%	61.6%
Hawaii	371,720	322,258	349,231	369,649	398,836	7.9%	14.2%	23.8%	7.3%
Idaho	201,334	266,522	323,118	308,986	315,145	2.0%	-2.5%	18.2%	56.5%
Illinois	1,796,979	2,411,068	2,904,184	2,763,756	2,703,279	-2.2%	-6.9%	12.1%	50.4%
Indiana	918,132	1,147,819	1,321,191	1,326,682	1,360,318	2.5%	3.0%	18.5%	48.2%
Iowa	625,977	784,987	786,640	769,854	753,915	-2.1%	-4.2%	-4.0%	20.4%
Kansas	484,724	604,704	712,923	679,830	685,832	0.9%	-3.8%	13.4%	41.5%
Kentucky	630,276	888,700	1,039,117	1,068,484	1,115,174	4.4%	7.3%	25.5%	76.9%
Louisiana	567,579	859,036	997,813	1,055,455	1,098,721	4.1%	10.1%	27.9%	93.6%
Maine	172,430	199,149	239,002	236,682	239,110	1.0%	0.0%	20.1%	38.7%
Maryland	748,676	942,748	1,282,883	1,216,837	1,140,032	-6.3%	-11.1%	20.9%	52.3%
Massachusetts	826,995	975,360	1,017,564	970,780	783,207	-19.3%	-23.0%	-19.7%	-5.3%
Michigan	1,559,304	1,882,500	2,257,732	2,151,247	2,080,228	-3.3%	-7.9%	10.5%	33.4%
Minnesota	1,008,028	1,239,394	1,379,832	1,323,393	1,286,715	-2.8%	-6.7%	3.8%	27.6%
Mississippi	458,989	751,195	765,014	765,185	797,246	4.2%	4.2%	6.1%	73.7%
Missouri	609,095	859,905	974,646	875,070	838,597	-4.2%	-14.0%	-2.5%	37.7%
Montana	125,285	129,929	149,838	146,034	150,576	3.1%	0.5%	15.9%	20.2%
Nebraska	358,249	440,095	516,249	520,769	498,809	-4.2%	-3.4%	13.3%	39.2%
Nevada	194,219	290,363	346,845	370,593	482,655	30.2%	39.2%	66.2%	148.5%
New Hampshire	80,415	91,156	107,573	111,042	112,532	1.3%	4.6%	23.4%	39.9%
New Jersey	1,304,140	1,448,860	1,755,016	1,718,684	1,733,511	0.9%	-1.2%	19.6%	32.9%
New Mexico	393,353	517,261	605,193	609,070	644,385	5.8%	6.5%	24.6%	63.8%
New York	3,053,437	3,104,892	3,602,215	3,888,127	3,713,547	-4.5%	3.1%	19.6%	21.6%
North Carolina	1,630,179	2,149,972	2,442,690	2,449,659	2,446,604	-0.1%	0.2%	13.8%	50.1%
North Dakota	144,909	173,107	200,401	203,801	200,430	-1.7%	0.0%	15.8%	38.3%
Ohio	1,471,174	1,934,587	2,084,535	2,063,714	2,080,196	0.8%	-0.2%	7.5%	41.4%
Oklahoma	538,565	725,450	796,312	750,656	731,375	-2.6%	-8.2%	0.8%	35.8%
Oregon	418,497	565,441	664,930	553,499	588,920	6.4%	-11.4%	4.2%	40.7%
Pennsylvania	1,514,498	1,773,094	2,011,695	1,998,020	1,934,475	-3.2%	-3.8%	9.1%	27.7%
Rhode Island	112,741	143,100	174,473	169,615	172,816	1.9%	-0.9%	20.8%	53.3%
South Carolina	624,248	777,801	834,907	738,789	664,994	-10.0%	-20.4%	-14.5%	6.5%
South Dakota	111,022	125,882	143,163	148,976	152,299	2.2%	6.4%	21.0%	37.2%

Tennessee	809,273	967,969	1,071,512	1,106,889	1,046,163	-5.5%	-2.4%	8.1%	29.3%
Texas*	3,188,362	3,527,867	5,139,663	4,783,028	4,850,213	1.4%	-5.6%	37.5%	52.1%
Utah	366,492	489,878	628,032	602,086	603,196	0.2%	-4.0%	23.1%	64.6%
Vermont	52,936	59,173	71,354	75,455	76,841	1.8%	7.7%	29.9%	45.2%
Virginia	949,548	1,299,919	1,631,856	1,421,683	1,340,942	-5.7%	-17.8%	3.2%	41.2%
Washington	962,625	1,146,399	1,370,921	1,375,574	1,323,134	-3.8%	-3.5%	15.4%	37.5%
West Virginia	296,914	362,261	392,051	379,672	357,966	-5.7%	-8.7%	-1.2%	20.6%
Wisconsin	936,156	1,040,341	1,194,852	1,211,419	1,117,395	-7.8%	-6.5%	7.4%	19.4%
Wyoming	124,694	139,711	161,917	191,958	196,935	2.6%	21.6%	41.0%	57.9%
TOTALS	41,089,092	52,861,435	62,820,114	61,605,774	60,293,002	-2.1%	-4.0%	14.1%	46.7%

*The 5-year and 10-year gain percentages for Texas are overstated because FY94 and FY99 appropriations figures do not include up to \$450 million in indirectly appropriated fringe benefits.

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