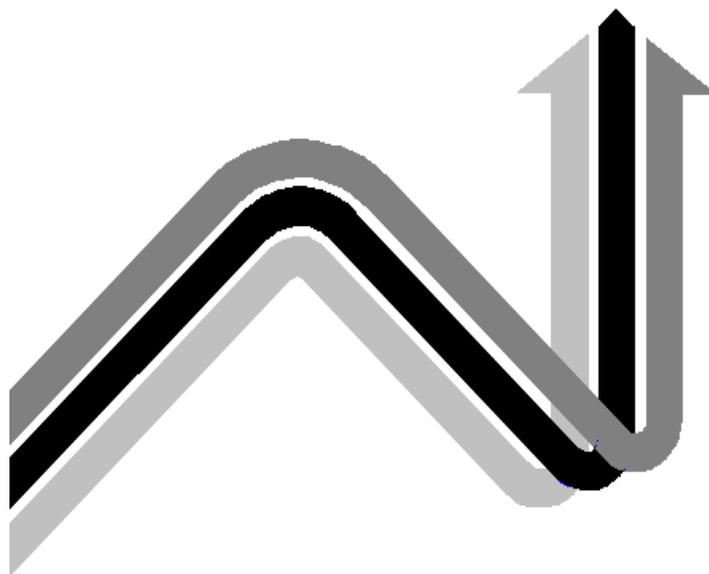


# **THEMATIC REVIEW OF THE TRANSITION FROM INITIAL EDUCATION TO WORKING LIFE**



## **NORWAY**

### **COUNTRY NOTE**

MARCH 1998

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## 1. INTRODUCTION

### *Purposes of the Thematic Review*

This paper forms part of the OECD's *Thematic Review of the Transition from Initial Education to Working Life*, a project launched by the Education Committee in November 1996. The review is a cross-national study designed to identify major aspects of change in the transition from initial education to working life occurring in OECD countries and, on this basis, to evaluate the contribution of different policy approaches to facilitating transition. Young people's expectations are changing, as are the labour markets in which they are seeking work, and all societies face major challenges in improving transition structures and processes. A detailed description of the review's objectives, analytical framework and methodology is provided in OECD (1996a).

The thematic review places young people's transition to work within a lifelong learning framework (see OECD, 1996b). The transition from initial education to work is only one of many transitions that young people will need to make throughout their adult lives. It is of critical importance, though, since the process by which young people move from initial education to work can influence the extent to which the benefits of education are retained, and opportunities for new learning are opened up. From this perspective, improving the transition to work means more than getting young people into work -- it also requires helping them to become effective learners throughout their adult lives so that remain productive and active citizens. Norway is ahead of most OECD countries in making the connection between young people's transition to work and lifelong learning a central feature of policy making.

The thematic review process is a relatively new form of OECD activity in the field of education, having commenced in 1995 with the *Thematic Review of the First Years of Tertiary Education*. In contrast with OECD reviews that are concerned with education and training in a single country, a thematic review is intended to draw out key findings and conclusions of comparative interest.

From the perspective of participating countries, a thematic review is a less extensive process than a full country review; it involves less time and fewer resources, and does not entail a comprehensive consideration of policy issues in the ministerial portfolio(s) concerned. It also differs from a single country review in terms of output. After each country visit the OECD produces a short Country Note that draws together background materials and the review team's observations. With respect to the transition thematic review, after all participating countries have been visited during 1997, a report will be prepared that draws on their experiences to provide options and alternative perspectives. This paper is the Country Note for Norway. It will be one input to the comparative report that will pull together analyses and policy developments for all countries participating in the thematic review.

### *Norway's Participation in the Review*

Norway is one of six countries participating in Round 1 of the review. The others are Australia, Austria, Canada, the Czech Republic, and Portugal. These countries provide a diverse range of social and economic contexts and policy approaches towards young people's transition to work. As a society that is built on a strong tradition of consensus in decision making, and which has initiated major educational reforms in recent years, Norway's experience is of considerable interest to OECD countries as a whole.

Norway's participation is being co-ordinated by the Royal Ministry of Education, Research and Church Affairs. The OECD is very appreciative of the assistance provided by the Ministry, including the organisation of a comprehensive and stimulating visit by a review team in October 1997.

Norway was the fourth country to be visited in the thematic review. The review team comprised one member of the OECD Secretariat and three invited experts from other Member countries (see Appendix 1). During the 10 day visit, discussions were held with a wide range of policy makers from education and labour, educational and training institutions, research organisations, employers, trade unions, non-government organisations, and groups of young people.

The discussions centred on four main issues:

- the ways in which young people's transition to work in Norway is changing;
- where the main problems and priorities for action lie, including the identification of which young people are most at risk;
- how the transition process and its outcomes can be improved, including the particular roles that education and training institutions, employers and other key agents should play; and
- policies and programmes that are particularly effective, the reasons for their success, and constraints that may limit their wider implementation.

The reviewers were very appreciative of the hospitable, frank and informative meetings that were held. The visit coincided with a new government taking office, and it could not have been easy for political leaders and senior officials to find the time that they so generously provided.

Prior to the visit the reviewers had the benefit of a comprehensive *Background Report* prepared by a writing team assembled by the Ministry of Education, Research and Church Affairs. The team represented the key organisations involved in Norwegian education and training (see Appendix 2). The background report, which was based on the guidelines and key questions detailed in OECD (1996a), is a further important output from the thematic review process. Unless otherwise indicated, data included in this paper is taken from the background report.

The present project follows closely on two other OECD reviews of Norway: the review of the first years of tertiary education that was conducted in 1995 (OECD, 1997a); and the Economic Survey which included analyses of the labour market, and education and training (OECD, 1997b). In framing this own report we have built on the earlier reviews' analyses and recommendations concerned with improving young people's transition to work, after making due allowance for the changes that have occurred since that time.

Needless to say, however, the paper that follows is the responsibility of the present review team. Although it has benefited greatly from the background materials and briefings that were provided before, during and after the visit, any errors and misinterpretations are our own.

### ***Structure of the Paper***

The remainder of the paper is organised around four main sections following this introduction. Section 2 provides a context for the review by outlining major features of Norwegian society, the education and training system, and the labour market. Section 3 identifies key features of the institutional framework and process by which young Norwegians move from initial education to working life. Sections 4 and 5

document the major concerns and issues concerning the transition process and its outcomes that have become evident, and suggest some further changes that may need to be considered. Section 4 concentrates on how to build better pathways, while Section 5 concentrates on how to make even stronger the connections between education and work. Section 6 contains some brief concluding remarks. Interwoven throughout the paper are descriptions of policies and programmes that struck the review team as being particularly innovative and effective, and which are likely to arouse considerable interest in other Member countries.

The reviewers endorse the broad policy objectives and structural reforms to education and training initiated by Reform 94, and more recently by Reform 97. Our suggestions concentrate on some of the details of implementing these reforms, and not on their overall conceptual basis and design. The suggestions are also offered in recognition of the difficulty facing a group of visitors -- no matter how well briefed -- in fully grasping the current situation in Norway and the range of factors that need to be taken into account.

## **2. THE CONTEXT OF THE REVIEW**

### *The social context*

Norway's population of 4.3 million is widely spread, with about half living in areas with scattered populations. A traditional commitment to decentralised decision making sits alongside and at times uncomfortably with an equally strong Norwegian egalitarian commitment to reducing geographical and social differences. Both traditions support a willingness to accept with few questions the relatively high costs of providing government services to areas with small populations. At 6.8 per cent of GDP, direct public expenditure on educational institutions in Norway is the highest in the OECD (OECD, 1997e.) Norway is a relatively homogeneous nation with few ethnic or linguistic differences and a relatively small population of those born abroad. It is a society in which high rates of participation in voluntary associations such as sporting, cultural and charitable organisations have helped to build and support the habit of co-operative action.

The national government, through the Ministry of Education, Research and Church Affairs, is responsible for administering the education system and for implementing national policy. It is responsible for administering the higher education system and for the tripartite National Council for Vocational Training. Twenty tripartite national training councils provide advice on curriculum and qualifications in particular trades. The Public Employment Service is a national body, under the supervision of the Ministry of Labour and Government Administration<sup>1</sup>, and delivers its services through a network of regional and municipal employment offices. The 19 Counties are responsible for upper secondary education, including the employment of teachers. Tripartite vocational training committees within each County bear major responsibilities for implementing vocational training on behalf of the County authorities. The 435 Municipalities are responsible for primary and lower secondary education, as well as for health and welfare services. Norway has a strong tradition of consensus in decision making and of centralised negotiations between the social partners on matters of education and training as much as on wages and working conditions (Torp, 1995).

The transition from initial education to working life is readily accepted by Norway's young people, as much as by its policy makers, as being extended and interrupted. Military service or its social service equivalent is undertaken by some two thirds of Norwegian males and a small number of young Norwegian females at some stage between the ages of 19 and 29. Flexible progression rules within higher education

have encouraged many to extend their studies over a number of years. Young Norwegians frequently take time out to study abroad, to travel or to work before starting post-school study. They do so to broaden their experience, to improve their foreign languages, to accumulate age points for university entry, or simply to enjoy themselves. Many of the young people that the review team met appeared to feel little pressure to make a commitment to a specific career pathway until their mid to late 20s.

***The educational context***

Educational participation rates in Norway are high by OECD standards, particularly among those aged in their twenties (Table 1). In 1995 83 per cent of 18 year olds were participating in education, compared to an OECD average of 64 per cent. At age 24, 27 per cent were participating in education which was well above the OECD average of 17 per cent. Compared to the position in most countries, there is only a moderate decline in educational participation with increasing age in Norway.

**Table 1. Educational participation rates for ages 15 to 24, 1995**

Age	15	16	17	18	19	20	21	22	23	24
Norway	100	95	90	83	49	43	41	38	34	27
OECD country mean	93	88	79	64	47	39	33	27	21	17

*Note:* The participation rate is derived from the net enrolment in public and private institutions as measured by head counts.

*Source:* OECD (1997e).

***Schools***

Schooling in Norway is traditionally free and public. Norwegian children have typically started school at the age of seven<sup>2</sup> and completed nine years of compulsory schooling -- 6 years in primary school and 3 years in lower secondary school. Around 97 per cent continue to upper secondary education which is provided in separate comprehensive schools offering vocational and general education courses at Foundation, Advanced I and Advanced II levels. Thirteen upper secondary Foundation courses lead to 88 possible school-based Advanced I courses, and these in turn lead to 193 possible Advanced II courses. In addition 23 so-called special pathways were introduced in February 1998. These commence at Advanced I level and lead to 26 special pathways at Advanced II level. These new special pathways allow young people to sign an apprenticeship contract at the end of the Foundation year and complete Advanced I and II levels in an enterprise. This overall course structure within upper secondary education allows increasing specialisation within a particular area of study at each level.

Advanced II courses are normally available either as two year apprenticeships, spent in employment and training within enterprises<sup>3</sup>, or as one year school-based courses. Table 2 shows the distribution in 1996 of students over the 13 Foundation courses and their associated Advanced I and Advanced II courses, including apprenticeships. Foundation courses vary widely in the number of Advanced I and Advanced II courses that they lead to. They also vary in the number and type of exit points that they lead to. Some lead only to apprenticeships, some only to higher education, and some to combinations of higher education, apprenticeships and employment (in the latter case through one year Advanced II courses). Appendix 3 gives examples of these course sequences and exit points.

**Table 2. Upper secondary students by area of study, 1996 (per cent)**

Area of study	Foundation	Advanced I	Advanced II <sup>1</sup>	Apprentices as % of total at Advanced II
General and business studies	41	44	50	1
Music, dance and drama	2	2	2	n.a
Sports and physical education	3	3	3	n.a
<b>Total general subjects<sup>2</sup></b>	<b>46</b>	<b>49</b>	<b>55</b>	<b>1</b>
Health and social studies	11	14	9	38
Agriculture, fishing and forestry	3	3	2	10
Arts, crafts and design studies	8	6	4	33
Hotel and food processing trades	5	5	3	83
Building and construction trades	4	4	2	91
Technical building trades	1	1	1	48
Electrical trades	6	6	4	39
Engineering and mechanical trades	9	8	6	57
Chemical and processing trades	1	1	<1	95
Woodworking trades	1	1	<1	81
<b>Total vocational subjects<sup>3</sup></b>	<b>49</b>	<b>47</b>	<b>33</b>	<b>48</b>
Other	5	4	12 <sup>4</sup>	n.a.
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>16</b>
<b>Number of students</b>	<b>66,965</b>	<b>59,460</b>	<b>60,150</b>	<b>9,451</b>

*Notes:*

<sup>1</sup> Includes apprentices at Advanced II level, 42 per cent of whom gained their apprenticeship as adults rather than directly after the completion of an Advanced I course.

<sup>2</sup> The total overestimates the proportion in general subjects to the extent that it does not separately count those taking school-based vocational courses in the General and Business Studies area at the Advanced II level. The number of such students is not available from the County authorities.

<sup>3</sup> The total overestimates the number in vocational courses to the extent that it does not separately identify those taking university entry courses at Advanced II level in the Arts, Craft and Design and Agriculture Fishing and Forestry programmes. The number of such students is not available from the County authorities, but is likely to be quite small.

<sup>4</sup> The increase in the size of this category at this level is mainly due to the fact that the counties include all students attending technical schools in their Advanced II statistics, regardless of their level. These schools, which allow those with a trade or journeyman's certificate to improve their qualifications to technician status, accounted for some 5,000 students in 1996.

*Source:* KUF and KAD (1997), Tables 3.1.1 and 5.1.3

Norway's 178,000 upper secondary students are spread over 535<sup>4</sup> upper secondary schools. The average number of students per school is around 330 and the average number of students per grade within each school is a little over 100. Small school and grade cohort sizes constrain the choices available to students, particularly in vocational courses which account for around half of all enrolments and in which the range of choice is theoretically the greatest. Typically schools offer only a few of the thirteen Foundation courses, although within any one County all or nearly all are available. In practice only a small number of

the Advanced I and II options flowing from any one Foundation course are available within any one County.

### *Becoming a skilled worker in Norway*

Skilled worker certificates are awarded following external examinations which focus largely upon the practical skills required within a trade. Both members of the County Examination Boards which set these examinations are required to have qualifications and experience in the particular trade. Broad national guidelines for the examinations are set by the Ministry of Education, Research and Church Affairs.

Trade examinations may be sat by those who have completed an apprenticeship, by those who have completed an alternative Advanced II course after not having obtained an apprenticeship, and by Section 20 candidates, predominantly adults who have gained their skills through work experience. Until recently the pathway from initial education to skilled worker status has typically been a delayed and indirect one, although there are signs that this is beginning to change as a result of reforms to the apprenticeship system introduced in 1994. Employers have generally preferred to recruit young adults as apprentices rather than to recruit directly from the school system, with only 21 per cent of all apprentices in 1995 being under the age of 20.<sup>5</sup> Informal experience has been another important source of trade skills, with 41 per cent of all those who passed the trade examinations in 1995 being Section 20 candidates rather than apprentices.

### *Higher education*

Norway's higher education system underwent a substantial reorganisation, largely affecting the non-university sector, in the early 1990s, and more than 160 institutions, many of them very small, were merged into four universities and six university colleges, 26 state colleges and two arts, crafts and design academies. In addition there are 22 private higher education institutions, 19 of which receive partial public funding. About 50 per cent of higher education students are in the university sector, and 50 per cent are in the non-university sector.

Higher education expanded rapidly in Norway from the mid 1980s. In 1985 nine per cent of 18-21 year-olds, 13 per cent of 22-25 year-olds and 6 per cent of 26-29 year-olds were participating in higher education in Norway. By 1995 this had increased to 18 per cent, 24 per cent and 10 per cent respectively. While participation by the youngest of these age groups is somewhat below the OECD average, higher education participation rates by those over the age of 21 are about one and a half times higher than the OECD country mean (OECD, 1997e). Between 1984 and 1993 higher education enrolments grew by 85 per cent in Norway. Of the five largest fields of study, which collectively accounted for 70 per cent of all enrolments in the mid 1980s (humanities, religion and theology, fine and applied arts; teacher education; commercial and business administration, social and behavioural science and law; trade, craft, science, mathematics and engineering; and medical and para-medical) the greatest rate of growth (127 per cent) in the period was observed in the humanities field, and the lowest rates of growth (54 per cent and 57 per cent respectively) were experienced in the medical and engineering and science fields.

To be admitted to higher education all applicants, regardless of the course that they wish to enter, must have satisfactorily completed three years of upper secondary study including a Foundation course, an Advanced I course and an Advanced II course (regardless of the area of study), or a recognised vocational qualification. They must also have completed six core subjects within or in addition to these courses: Norwegian; English; History (post 1850); Social Studies; Mathematics; and Natural Science. Students must complete a specified number of modules and pass each of the six subjects. Those with a recognised

vocational qualification can be admitted after completing a supplementary general education programme, equivalent to six months of full-time study, to bridge the gap between the general education component of their vocational course and entry requirements in the six core general education subjects. Those who are 23 years or older can be admitted if they have fulfilled the minimum requirements in the six core general subjects and successfully passed them, and have a combination of five years of work experience or a combination of work experience, education and training. Prior to the introduction of these standard requirements substantial variation existed between the different faculties, with weight being given to factors such as work experience in particular industries or occupations. Higher education admission requirements are centrally set by the Ministry of Education, Research and Church Affairs rather than by the individual higher education institutions. Government policy favours the admission of all qualified applicants to courses in the humanities, the natural sciences and the social sciences.

The tendency of Norwegians to delay entry to higher education in order to travel, work or undertake military service means that the student body is relatively old, with more than one in four applicants being over the age of 24. The practice of awarding entry points on the basis of age, military service or work experience has meant that in the past school leavers have found it difficult to gain entry to competitive faculties such as medicine. It has also been common for many applicants to re-sit school examinations in order to improve their marks and increase their chances of entry to competitive faculties. To counter this “backwater effect” government policy now favours the imposition of quotas on all areas of study, from the year 2000, which will reserve 30-40 per cent of places for those up to the age of 21 with original upper secondary school diplomas. Within this quota points will no longer be granted for other activities, and there will be no opportunities to improve marks by re-sitting school examinations.

### ***Educational reform***

#### *Reform 94*

Beginning with the cohort that commenced upper secondary education in 1994, Norway embarked upon an ambitious and comprehensive reform of upper secondary education. The outcome of debate and policy formulation stretching over a number of years and involving all of the social partners, Reform 94 encompasses reforms to student rights, to ways of combining education and work, curriculum and pedagogy. A general impression, though, is that it has focused primarily upon making vocational courses more attractive, and has paid comparatively less attention to the nature of general education courses.

The additional costs generated by Reform 94 have been funded through a combination of the upper secondary education budget not being adjusted downwards to reflect a demographic reduction in the size of the 16 year old cohort, and a requirement that the Counties allocate a number of upper secondary places equal to a quarter more than the expected number of applicants over the three Foundation, Advanced I and Advanced II cohorts. In addition substantial resources have been allocated for curriculum renewal, teachers’ professional development, follow-up services for drop-outs, to support skills training in enterprises, and for equipment and text books.

The key features of Reform 94 are:

#### **(i) A statutory right**

Reform 94 created a statutory right to three years of upper secondary education leading either to a university entrance qualification or to a vocational qualification. The right has to be exercised within four

years. The 2+ apprenticeship model normally consists of two years of school and two years of apprenticeship. Each year of the latter attracts six months of public funding, and together the two count as one year of the four. This means that those who follow the 2+ apprenticeship model have five calendar years to exercise their statutory right. By extending the availability of courses at the Advanced I and Advanced II level it was intended to reduce the number of students taking multiple Foundation courses due to a lack of places at higher levels. Through improving internal efficiencies and progression rates within the system it was intended to ensure that more students left upper secondary education having obtained a work force qualification. But the statutory right also imposes a limit on the amount of upper secondary education undertaken, by implying that students who remain too long at the Foundation level will lose their statutory right, which has to be taken out within a four year period, or its equivalent in the case of the 2+ apprenticeship model.

Those entering upper secondary education are given a right to one of their first three choices of a Foundation course. But they are provided with no guarantee that they will be able to enter their preferred Advanced I, Advanced II or apprenticeship course. Those who miss out on a two year apprenticeship must be offered an alternative one year Advanced II programme in the same vocational area. Students may also be offered an alternative in the form of a general education course. Within the same vocational areas alternative Advanced II courses and in-firm apprenticeship training follow the same curriculum.

The statutory right has had a major impact on the apprenticeship system, with Counties feeling a strong obligation to obtain apprenticeship places for students, employment and training within enterprises forming part of upper secondary education, and the industry partners placing strong emphasis upon their obligations to create sufficient apprenticeship places to enable young people to exercise their rights.

### **(ii) A broader curriculum**

Reform 94 has reduced the number of tracks through upper secondary education by reducing the number of Foundation courses from 109 to 13, with corresponding although proportionally lesser reductions in the number of options at Advanced I and II levels. The general education content of vocational courses has been increased, and a broader concept of knowledge is being promoted, with general education to be taught in ways that link it to the world of work, and an emphasis to be placed upon personal, social and ethical values in teaching. Cross-disciplinary projects are encouraged, and schools are encouraged to work with those from outside the school system to create a wider educational environment for students. In vocational courses clear responsibilities are allocated to schools and to enterprises for teaching defined areas of the curriculum.

### **(iii) A stronger apprenticeship pathway**

Prior to the introduction of Reform 94 only a small proportion of all trade certificates were awarded to those who had entered an apprenticeship directly from upper secondary school, and few young Norwegians under the age of 20 became apprentices. Reform 94 introduced a number of initiatives designed to increase the number of apprenticeships, to increase access to apprenticeship by those with a statutory right to upper secondary education, and to raise its quality:

- A standard method of becoming a qualified worker through upper secondary education has been introduced in most trade areas, through which students undertake two years of school-based study followed by two years of employment and training within an enterprise (the 2+ apprenticeship system);

- The wages of apprentices have been reduced from roughly 80 per cent of those of a qualified worker to 50 per cent;
- A subsidy of NOK 60,000, roughly equal to the cost of educating a student in upper secondary school for one year, is paid to employers who take on an apprentice who is within the statutory right, together with a completion bonus of NOK 15,000 if the apprentice passes the final trade test. Together these payments can reduce the direct wage costs to the employer of taking on an apprentice by close to 50 per cent. Apprentices not within the statutory right attract subsidies of only half this level;
- The pooling of roughly half of these subsidies at a regional level by smaller and medium sized firms has enabled training offices to be created to assist enterprises with the recruitment of apprentices and with on-the-job training;
- The social partners have actively promoted apprenticeships, and more broadly Reform 94's goals, to their members;
- New apprenticeship classifications have been created in white collar and service occupations such as office work, care worker and retailing.

#### **(iv) A new pathway to higher education**

Prior to the introduction of Reform 94 those with a vocational qualification who wished to enter higher education were faced with complex and non-standardised requirements that were often inflexible and difficult to understand. The difficulty involved in transferring from vocational to general education pathways was seen to be a major reason for students' reluctance to undertake vocational education, raising participation in and the status of which have been principal concerns of Reform 94. The general education content of vocational courses has been increased, and a short (six month) supplementary general education course can now be taken by those with a vocational qualification in order to qualify for university entry. In addition students can now transfer from the vocational track to the general track after Advanced I level and complete the requirements for university entry in one year of study at the Advanced II level.

#### **(v) Better provision for drop-outs**

Provision for access to assistance by the Public Employment Office for those who are under the age of 20 and without a full-time job or a place in education (the Youth Guarantee) has existed since the early 1980s in Norway. It normally takes the form of an offer of participation in a trainee place scheme or a combination of a trainee place and ordinary secondary education. Reform 94 has matched this with an educational statutory right that encompasses the right of access to a follow-up service designed to reintegrate school drop-outs into education. To implement the follow-up service a well resourced administrative structure has been established at the County level that works with all three levels of government: the national Public Employment Office, the Counties' upper secondary schools; and Municipal health and welfare services. In combination the chances of a school drop out falling through the cracks are greatly reduced. More details are provided in Box 2.

#### *Reform 97*

Norway introduced significant reforms to compulsory schooling in 1997, a key element of which was the expansion of compulsory school from nine to ten years, and a requirement as of August 1997 for all

children to start school at the age of six. In the present context these reforms are of particular significance for the basis which they attempt to lay for lifelong learning. Reform 97 places significant emphasis upon project-based learning, cross-disciplinary learning, learning within teams, and upon students assuming responsibility for their own learning. In common with Reform 94 it occurs within a national core curriculum that sees education extending beyond the classroom and the pupil-teacher relationship to encompass peer culture, parent participation and the local community.

### **Box 1: Evaluation and monitoring of Reform 94**

On-going evaluation is one of the notable features of the implementation of Reform 94. The Ministry of Education has commissioned seven different research institutes to monitor and evaluate various aspects of the changes to upper secondary education brought about by the reform. Topics being studied by these institutes include the initial cohort's flow through the various levels of courses and the qualifications they obtain; the division of responsibilities among education authorities at different levels, and the ways that they interact with each other; the organisation and content of the vocational education programmes; the impact of the reform on young people with special needs, and adult applicants for places; and the effectiveness of the follow-up service for early school leavers.

In putting such a comprehensive range of evaluation studies into place, the Ministry has been conscious of the need to improve the information base on Norwegian education and training. Reform 94, involving as it does a sharing of responsibilities between the national and County levels of government and individual schools, and an enhanced role for employers, has made it even more important -- but also more difficult -- to be able to gain an overview of what is happening in upper secondary education and the outcomes for school leavers. In this regard an important aspect of the evaluations commissioned by the Ministry is that they are required to provide information and insights while the studies are in progress. This reporting on a progressive basis enables quick decisions to be taken on any necessary adjustments to the reform process.

The Ministry of Education, Research and Church Affairs has committed some NOK 22.3 million to the seven main sets of evaluations over the 1994-97 period, rising from NOK 2.7 million in 1994 to NOK 7.3 million in 1997. The fact that the studies are being undertaken by independent institutes gives the evaluation process greater credibility than if it was being conducted solely by the Ministry itself. The number and range of research institutes involved has broadened the range of perspectives brought to bear on the process, and also deepened the pool of expertise available for future evaluation work on upper secondary education.

### *Initiatives in lifelong learning*

In October 1997 an ambitious proposal for the introduction of lifelong learning for all Norwegians was submitted to the Ministry of Education, Research and Church affairs by a committee appointed by Royal Decree some 12 months earlier (KUF, 1997a). Its proposals are designed to raise the educational standards of the work force by ensuring that practical measures are in place to enable all adults to obtain a basic primary or lower secondary education, to complete an upper secondary qualification, to enter higher education, or to engage in continuing education and training. The widespread assessment and recognition by educational institutions of knowledge acquired at work and the flexible delivery of education through individually tailored programmes, distance education and information technology are central to the committee's proposals. It has recommended the creation of County and national mechanisms to achieve these objectives, the creation of statutory rights to basic and upper secondary education for adults to parallel that already granted to young people, and a statutory right to study leave. It has proposed that government bear the cost of primary and lower secondary education for adults, that the national student loan scheme and taxation rules be reviewed to encourage lifelong learning, and that continuing education and training become the subject of collective agreements between employers and the trade unions.

Norway's employers and trade unions are committed to the goals of the Green Paper on lifelong learning and will be seeking to achieve, beginning with their 1998 Spring negotiations, a solution to the funding issues that it has raised. A White Paper on lifelong learning will be presented to the Parliament in Spring 1998, and this will also discuss the funding principles for lifelong learning.

In harmony with these proposals, Reform 94 has suggested that those who leave upper secondary education with partially completed occupational qualifications should be given credit, through the wage system, for the partial competence achieved, rather than being treated as unqualified workers. The social partners agree with this in principle, but first wish to see a pilot project on partial competence completed before attempting to negotiate on the detailed implementation of the partial competence initiative.

### ***The labour market in Norway***

#### *The broad labour market context*

Norway is one of the strongest OECD economies. In 1995 its GDP per capita of US\$22,700 (at purchasing power parity) was exceeded only by Switzerland, the United States, and Luxembourg (OECD, 1997b). Unemployment -- at around 4 per cent of the total labour force -- is comparatively low, and Norway has managed to avoid the persistently high levels of unemployment experienced by most other European countries since the late 1970s. GDP growth in 1997 and 1998 is likely to be at least 3 per cent, which implies continuing job growth. Unlike many other OECD countries, Norway faces the problem of a shortage, rather than an excess, of labour.

Norway's strong employment performance has clearly been helped considerably by the wealth generated by oil and natural gas production (which now account for about 15 per cent of GDP). This wealth has enabled the authorities to increase public sector employment (in the 1980-95 period 176,000 jobs were created in the public sector while 59,000 jobs were lost in the business sector), and to reduce labour supply by increasing the numbers on various income support schemes and expanding education provision. Macro-economic policies have been significant in countering swings in the business cycle and keeping inflation relatively low. Real wages have also remained largely stable since economic growth started to recover following the 1988-92 recession. This has been mainly due to collaborative actions by the trade unions, employers and government to ensure wage restraint to assist employment growth and price stability (OECD, 1997b). There is also a strong focus on active labour market policies in Norway.

The majority of Norwegian workers are located in the service and public sectors (Torp, 1995). Only 5 per cent work in primary industries (down from 7 per cent in 1985), and 23 per cent in manufacturing (27 per cent in 1985). Around 33 per cent work in the retail, hospitality, transport, communication and finance sectors (up 2 per cent since 1985). The largest growth since the mid-1980s has occurred in the community, social and public services sectors. These areas now involve about 37 of the labour force, compared to 33 per cent in 1985. All of the net employment growth since 1981 has occurred in the public sector, and among OECD countries only Sweden has a higher share of public sector employment than Norway.

Enterprises in Norway are generally small. Eighty per cent of enterprises have fewer than 20 employees, and only 5 per cent have more than 100 employees. More than half of all employees (55 per cent) work in enterprises with less than 100 employees. This type of enterprise structure can make investment in on-the-job training difficult in the absence of co-operative arrangements or government support. In both the public and private sectors, collective wage agreements require employers to document the need for

continuing training, and to develop training plans. About one-third of workers attend courses organised by their employers each year, and Norwegian enterprises spend about 3.5 per cent of their annual wage bill on such courses. In the latter regard Norway is about mid-point of the range from 2 to 5 per cent that OECD countries are estimated to spend on employer-provided training (OECD, 1997b). Given the increasing pace of economic competition and technological change, the capacity of young people to participate effectively in continuing education and training is an increasingly important indicator of the transition from education to work.

Strong economic growth since 1993 has increased labour force participation rates and by 1996 participation stood at 79 per cent, which is one of the highest rates in the OECD, largely due to the high labour force participation of women. Part-time work is comparatively high (in 1995 about 25 per cent of the labour force was in part-time employment), and this combined with a long-term reduction in general working hours has led to the hours worked per person each year being lower than in most OECD countries. In general, part-time workers have similar rights and conditions on a proportional basis as full-time workers.

Wage formation in Norway is highly centralised, and government plays an active role in influencing the outcomes of collective bargaining agreements between trade unions and employers. It is estimated that the effective coverage of central wage agreements is about 75 per cent of all workers (OECD, 1997b). Such agreements also generally include non-wage conditions such as leave, and access to training. The centralised nature of wage determination reflects the strong equity thrust in Norwegian society. As a result, the dispersion of wages in Norway is among the smallest in the OECD area. Although there is some evidence of increasing wage dispersion in the private sector, in aggregate terms this has been outweighed by further compression of the spread of earnings in the public sector.

While wage compression can serve important equity goals it can also lead to allocative inefficiencies and reduced incentives for individuals to invest in education and training, or at least in courses that may lead to better career opportunities. It can also work against the interests of new entrants to the labour market -- such as young people -- who are outsiders in the wage-setting process.

Labour market policy is administered through the Ministry of Labour and Government Administration. The Public Employment Service, which has agency status under the supervision of the Ministry, has a network of offices and support services at county and district level. Private employment agencies operate in only limited areas of the labour market. Norway allocates a relatively high level of resources (1.4 per cent of GDP in 1995) to active labour market programmes (OECD, 1997b). In 1995, around two-thirds of the participants ordinary labour market schemes were in labour market training courses (including trainee places), and about one-third were in programmes for job seekers (including employment measures, job rotation schemes and wage subsidies)., Most of the participants in active labour market programmes have not completed upper secondary education..

The Norwegian authorities place a strong emphasis on shifting the unemployed from passive receipt of unemployment benefits to participation in programmes designed to improve their employability. This is especially noteworthy in the case of the young: as the benefits are related to prior earnings, it is not possible, for example, for young people to leave school and to immediately receive income support if they are unemployed.

### *The youth labour market*

Between 1984 and 1994 the number of 16 year-old Norwegians decreased from about 68,000 to 53,000. The size of the 16 year-old cohort is projected to remain stable until about 2001 when numbers will start to rise again, peaking at about 60,000 in 2008. This demographic situation has been favourable to youth. It has enabled the government to increase per student expenditure on post-compulsory education without a marked rise in education expenditure as a proportion of GDP. Young people seeking jobs in sectors where employers prefer young people have also benefited from reduced competition. On the other hand, the general ageing of the labour force and the trend for the cohorts retiring from work to decline in size have meant increased rivalry for the types of jobs where adults compete with young people.

The rise in education participation rates noted earlier has been associated with a decline in full-time employment by the young. The Norwegian authorities have concerns, though, that the tight labour market that Norway is currently experiencing could encourage more young people to leave the education system early, and thereby possibly fail to develop the skills to cope with an uncertain economic future over the longer term. Despite the fall in full-time employment by the young, especially teenagers, youth labour force participation rates have remained fairly stable, as large numbers of students also work part-time. The latter phenomenon has generated concerns in some quarters that students may be squeezing young non-students out of work, especially in the retail and hospitality sectors where part-time work is widespread. The evidence available to the review team on labour force participation by full-time students does not allow these concerns to be definitively tested, but it certainly suggests that there is value in a more detailed investigation of the ways in which the youth labour market is segmented between different age groups and the extent to which these do or do not compete with one another for different forms of employment.

Youth unemployment peaked in 1993, with the unemployment rate for 20-24 year-olds at around 11 per cent, and for 16-19 year-olds at around 6 per cent. Since that time the unemployment rate for 16-19 year-olds has fallen to under 4 per cent (which is close to the unemployment rate for those aged more than 25 years), and that for 20-24 year-olds has declined to about 8 per cent. Since 1987 the unemployment rate for 20-24 year-olds has consistently exceeded that for 16-19 year-olds. The rise in educational participation rates since the mid-1980s has had the effect of deferring entry to the full-time labour market and hence the age at which unemployment starts to become noticeable. It has also meant that people aged in their twenties who lack educational qualifications are now more likely to be competing against graduates from higher education in the search for jobs. Among 20-24 year-olds for example, the unemployment rate of those who have not completed upper secondary education is about 2.5 times the unemployment rate for university graduates.

Reflecting the strong emphasis on active labour market programmes in Norway, only relatively small proportions of the young unemployed (5 per cent of unemployed 16-19 year-olds and 15 per cent of unemployed 20-24 year-olds) are classified as long-term unemployed, that is, without a job for more than six months. As was noted in discussions with labour market authorities, the comparatively small numbers of long-term young unemployed means that the young people concerned are likely to have an array of social and personal difficulties that require a higher per capita expenditure of resources on counselling and remedial services than when youth unemployment is more widespread.

### *Trends in the demand for education and training*

In common with other OECD countries, the long-term trend in Norway is towards a more highly qualified workforce, and a concomitant increase in demand for education and training. Between 1985 and 1995 the

number of Norwegian workers with less than an upper secondary education declined by 320,00 (or 30 per cent), while those who had completed upper secondary or higher levels of education increased by 300,000 or one-third (OECD, 1997b). Better-educated people on average experience higher rates of labour force participation, lower unemployment, higher earnings, and improved career mobility. However, within this general pattern there are notable differences between different occupations. In general, higher education graduates in education and health-related fields have had little trouble finding work within the public sector, whereas unemployment rates among engineering graduates have been comparatively high as a large increase in the number of new engineering graduates coincided with the slowing down of investment on the Norwegian continental shelf.

Projections of labour market and demographic changes over the next 10 to 15 years prepared by the Norwegian labour authorities indicate a likely excess of supply of workers who hold less than upper secondary education qualifications, excess demand for workers with upper secondary level vocational qualifications, and an approximate parity of supply and demand for higher education graduates (although in particular professional fields the current excess of supply over demand is likely to increase even further). These projections provide considerable support for the Norwegian authorities' efforts to increase the attractiveness of vocational education at upper secondary level. They also suggest that continuing attention needs to be paid to integrating labour market information services into the education system, and to improving the signalling function of the wage system.

### **3. DOES NORWAY HAVE A PROBLEM WITH THE TRANSITION FROM INITIAL EDUCATION TO WORKING LIFE?**

#### *The principal transition tracks*

Norway is most commonly characterised as having two tracks that lead from initial education to working life: a general education track that leads to work through higher education; and a vocational education track that leads to work through the 2+ apprenticeship system. It is more accurate to describe Norway as having a three track system. These three tracks, and their principal connections and exit points, provide a useful framework for evaluating and monitoring many aspects of Reform 94, including internal flows and student destinations.

**The general education track** is entered by about half of those who commence upper secondary education. Perhaps an additional one in ten transfer to it during their upper secondary education, principally after the Advanced I level. Many of these transfers are voluntary, but others appear to be default transfers by those offered a general education alternative course as the result of failing to gain an apprenticeship. The general education track has two exit points. 1995 data show that 43 per cent of those who completed an Advanced II general education course and left upper secondary education, or between one in five and one in four of the total cohort, moved directly into higher education (KUF and KAD, 1997, Annex II, Appendix II, Table 3). This suggests that some six in ten of those who exit upper secondary education from the general education track, or perhaps between a quarter and a third of the total cohort, move from it either directly into work, or take a more indirect route into either higher education or employment through activities such as military or social service or travel.

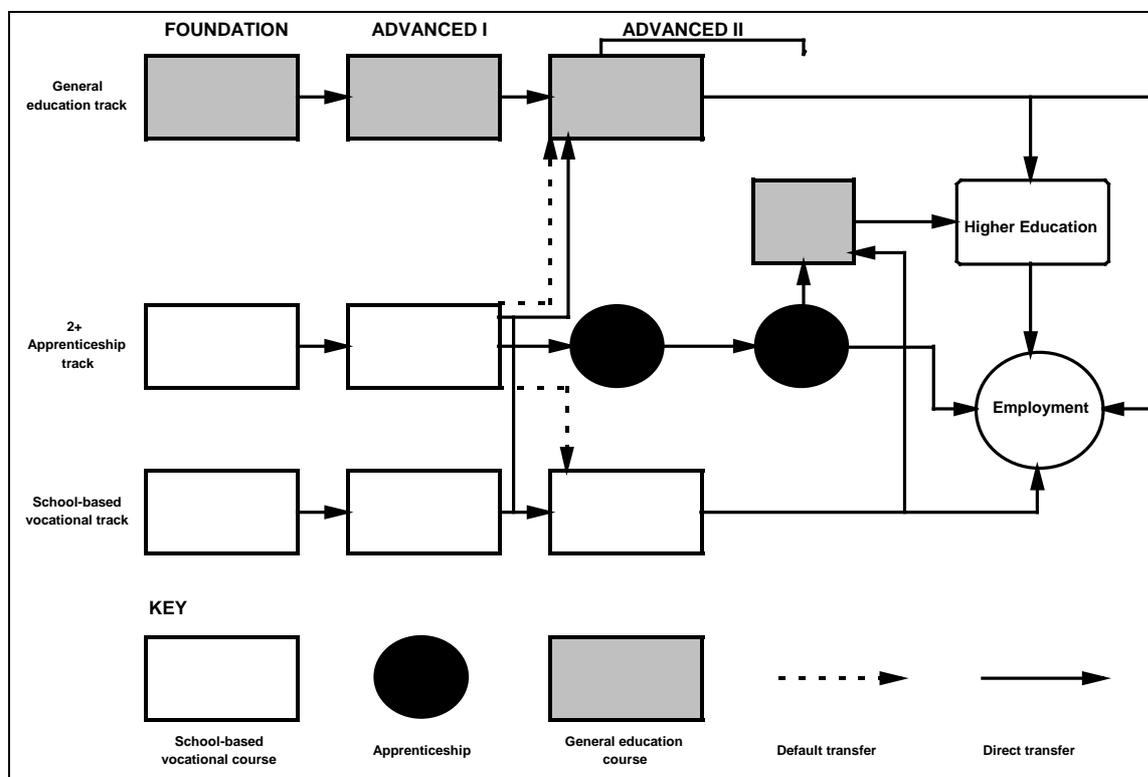
**The school-based vocational track** is entered by around one in four of those who commence upper secondary education. It has two branches. The first, which commences at the Foundation level, consists of three year courses that lead to a vocational qualification but not an apprenticeship. Among these are: the Nursing Auxiliary course and a number of other health and social studies courses; mapping and

surveying; a number of graphics and design courses; and a number of agricultural, and forestry courses. Around 75 per cent of those taking Advanced II vocational courses at school appear to be in this branch of the track. The second branch of the school-based vocational track is a default branch. It is entered from the Advanced I level by those from the apprenticeship track who cannot obtain an apprenticeship. Perhaps one in four of those taking a school-based Advanced II vocational course fall into this category<sup>6</sup>.

**The 2+ apprenticeship track** is entered by around one in four of those who commence upper secondary education, and appears to account for slightly more than one in six of those who exit from upper secondary education.

**Figure 1**

**The principal connections between and exit points from Norway’s three principal tracks<sup>7</sup> from initial education to working life**



Those who enter the largest course in the general education track (General and Business Studies) can keep their options between university entry and a vocational qualification open until the end of the Foundation I year. Those who choose the Sport and Physical Education or Music Dance and Drama courses (around one in ten of those in the general education track) are locked into the general education track for three years.

Those who enter the two vocational education tracks can move to the general education track at the end of their Advanced I year, and emerge with a partially completed vocational qualification as well as a university entry qualification. If they choose to complete a vocational qualification they can qualify for university entry by subsequently completing a further six months of general education. Around half of those who enter a vocational track will have only the apprenticeship track open to them (for example those who choose the Woodworking Trades Foundation course) unless, by default through failing to gain an

apprenticeship at the end of their Advanced I year, they are forced on to the school-based vocational track or the general education track. The remainder enter Foundation courses such as Health and Social Studies that can lead either to the school-based or apprenticeship tracks depending upon the particular Advanced I course that is chosen.

Those who drop out of the system, at any point, have up to a year to reinsert themselves without formally losing their entitlement to the opportunity to gain an upper secondary qualification. Those who change courses within a track, or who change tracks other than, as described above, by moving from a vocational to a general education course at the end of the Advanced I year, will in theory although it appears not in practice exhaust their statutory right to three years of upper secondary education before obtaining a qualification. This will occur for example if a student completes a Health and Social Studies Foundation course and then decides to undertake a Hotel and Food Processing Trades programme. Opportunities for the crediting of studies completed in one Foundation course area within another appear to be minimal at present.

Figure 1 gives a schematic representation of the principal links between the tracks, and Table 3 estimates their size. Table 3 suggests that appreciable bottlenecks exist at the point of transfer from the Advanced I to the Advanced II level within the two vocational tracks, with the size of both shrinking appreciably. Some of the change in relative size between the tracks at that point is due to transfers from the apprenticeship to the school-based vocational track. But it is also likely to be due either to transfers from the two vocational tracks to the general education track, to disproportionately large drop-outs from the two vocational tracks after the Advanced I level, or both.

**Table 3. Estimated distribution of students across the general, school-based vocational and apprenticeship tracks by grade level, 1996 (per cent)**

<b>Track</b>	<b>Foundation</b>	<b>Advanced I</b>	<b>Advanced II</b>
General education	48	51	63
School-based vocational	27	23	19
Apprenticeship	25	26	18
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source:* Derived from Table 2.

The 2+ apprenticeship track, which at present accounts for around one in four of those at the Foundation level, has been the principal focus of attention, both within and outside of government, in the implementation of Reform 94. But effective transitions to working life are important for those in all tracks. In our discussions, we were surprised at the lack of attention that many have given to the school-based vocational track. It was also apparent that the connections between the general education track and working life have yet to loom large as an issue in Norway. Yet these two tracks account for the majority of Norway's upper secondary students.

### *Indicators of transition problems*

In large part reflecting a labour market in which unemployment is less than half the OECD average, Norway stands relatively well in relation to other countries on some key indicators of the status of youth (Table 4). In 1996 the unemployment rate among 16-24 year-olds was 12 per cent, which was towards the lower end of OECD countries as a whole for 15-24 year olds (OECD, 1997d). The proportion of the total 16-24 year-old age group who were unemployed was, at seven per cent, similarly low, and again both below the OECD average and towards the lower end of the overall OECD experience. Unemployment is also a relatively brief and transitory experience for Norwegian youth, particularly for those under the age of 20. In mid 1996 those unemployed for 26 weeks or more constituted only five per cent of those unemployed and under the age of 20. Among 20-24 year-olds long term unemployment accounted for only 14 per cent of the unemployed, compared to 31 per cent of the unemployed in the labour force as a whole (KUF and KAD, 1997, Annex I, Table 4). In absolute numbers long term unemployment among those under the age of 20 is insignificant in Norway, accounting for less than 200 young people in the entire country in mid 1996. Among 20-24 year-olds long term unemployment accounted for roughly 2,300 persons in mid 1996<sup>8</sup>.

While these overall indicators are favourable, some young people do appear to experience particular difficulties in making the transition from initial education to working life. While unemployment rates may be low at any one time, Norwegian research suggests that the problem of repeated spells of unemployment may be concentrated in certain groups of youth, particularly those from working class families with low levels of education, and those working in retail and construction industries in which employment tends to be highly seasonal (Hammer, 1997). Table 5 highlights the particular difficulties that the very small absolute number of teenagers who are under the age of 18 and who are not students have in securing work. Among such teenagers, most of whom are school drop-outs, only one in four have employment as their principal activity, and as such should be regarded as being at a particularly severe risk in the transition from initial education. (Given the generally inverse correlation between employability and early school leaving, the low absolute unemployment rates among early school leavers in Norway is a substantial policy achievement).

The generally low unemployment rate for the 16-24 year-old group as a whole has marked a growing divergence in the 1990s between the unemployment rates experienced by those under the age of 20 and those aged 20-24. In the mid 1980s unemployment rates for the two age groups were both around three per cent. By the mid 1990s the rate for 20-24 year olds had risen to nearly eight per cent, yet the rate for 16-19 year-olds had remained essentially stable. Table 5 shows that the probability of being either unemployed or involved in labour market assistance measures doubles after the age of 18, and does not fall appreciably by the age of 24. One senior official that the review spoke to suggested that those young people in their early 20s who emerge from the general education track with no formal vocational qualification and who do not proceed to higher education are among the groups most likely to experience problems in the transition from initial education to working life in Norway. A study of all those who finished their education in 1989-90 showed that two years later only half had found permanent jobs, with the rest being either unemployed, in fluctuating employment or not in the labour force (Ministry of Local Government and Labour, 1996). This reinforces the impression that many young Norwegians take a long time to establish themselves in the labour market after leaving initial education.

Table 5 illustrates the tendency for Norwegian youth to drop out of formal education and employment for a period after completing upper secondary schooling after around age 18. A third of those aged 20-21 are not primarily involved in either education or employment, but of this group only one in three are formally unemployed or involved in labour market assistance measures. The rest are likely to be involved in activities such as military or social service or travel. These experiences, like much early labour market

exploration by school leavers, can be of significant benefit in developing career decidedness, maturity and confidence in the transition to adult life. On the other hand research in Sweden (Schröder, 1996) and the United States (Klerman and Karoly, 1995) points to substantial risks of young people being trapped not in constructive career development but a cycle of temporary work, labour market programmes and unemployment.

**Table 4. Unemployment indicators, 1994**

	Youth labour force participation 15-24 year-olds (A)	Youth unemployment rate 15-24 year- olds (B)	Youth unemployment to population ratio (A*B)	Adult unemployment rate 25-54 year- olds (C)	Ratio of youth to adult unemployment (B/C)
Australia	70	15	10	7	2.2
Austria	60	7	4	5	1.4
Belgium	33	21	7	9	2.4
Canada	62	16	10	9	1.9
Czech Republic	50	7	4	3	2.2
Denmark	74	11	8	6	1.8
Finland	45	25	11	14	1.8
France	29	26	8	11	2.4
Germany <sup>1</sup>	56	8	4	8	1.0
Greece <sup>1</sup>	37	28	10	7	3.8
Ireland	44	18	8	11	1.7
Italy <sup>1,2</sup>	39	32	13	9	3.6
Japan	48	7	3	3	2.5
Korea	35	6	2	2	3.8
Mexico	53	7	4	3	2.4
Netherlands	66	12	8	6	2.2
New Zealand	68	12	8	5	2.4
<b>Norway<sup>3</sup></b>	<b>60</b>	<b>12</b>	<b>7</b>	<b>4</b>	<b>3.4</b>
Poland <sup>1</sup>	40	31	12	12	2.7
Portugal	44	17	7	6	2.6
Spain <sup>3</sup>	44	42	19	19	2.2
Sweden <sup>3</sup>	48	16	8	7	2.2
Switzerland	64	5	3	4	1.3
Turkey	47	13	6	4	2.9
United Kingdom <sup>3</sup>	71	15	10	7	2.1
United States <sup>3</sup>	66	12	8	4	2.8
<b>Country mean</b>	<b>52</b>	<b>16</b>	<b>8</b>	<b>7</b>	<b>2.4</b>
<b>Norway's ranking</b>	<b>9th</b>	<b>Equal 15th</b>	<b>Equal 16th</b>	<b>Equal 19th</b>	<b>4th</b>

Notes:

<sup>1</sup>. 1995

<sup>2</sup>. 14-24 and 25-59

<sup>3</sup>. 16-24

Source: OECD (1997d)

The youth to adult unemployment ratio (defined as the ratio of the unemployment rate among those aged 15-24 to the rate among those aged 25-54) in Norway is among the highest in the OECD (OECD, 1997d). In 1996 it was 3.4, exceeded only by Korea (3.8), Greece (3.8) and Italy (3.6). This compares to an OECD average of 2.4, and figures at the lower end of 1.0 for Germany, 1.3 for Switzerland, and 1.4 for Austria. The Norwegian figure has been both of the same order and consistently among the highest in the OECD since the mid 1980s. Norway's unemployment figures however include full-time students who are looking for work, whereas some other countries' do not, and this inflates the youth to adult unemployment ratio relative to the OECD average. Nevertheless, where youth to adult unemployment ratios are high this can be an indication that there are structural barriers to young peoples' labour market entry, and that particular difficulties exist in their ability to compete with adults for the available employment.

**Table 5. Principal activities by single years of age, 1994 (per cent)**

	Employment <sup>1</sup>	Education <sup>2</sup>	Unemployment or labour market measures	Other <sup>3</sup>	Total	Proportion of non full-time students having employment as their principal activity (%) <sup>4</sup>
16	1	93	<1	5	100	17
17	3	88	3	6	100	28
18	8	79	5	8	100	40
19	23	43	11	23	100	40
20	30	36	12	22	100	47
21	34	34	11	21	100	52
22	39	32	11	18	100	58
23	44	28	11	17	100	62
24	51	22	10	17	100	65

*Notes:*

<sup>1</sup> Includes those combining full-time employment with education

<sup>2</sup> Includes those combining education with part-time employment

<sup>3</sup> The exact composition of this group is not known, but after the age of 19 it is thought to include significant numbers of males involved in either military service or social service.

<sup>4</sup> This column shows the per cent of those who were not full-time students who had employment as their principal activity. It is calculated by dividing the number whose principal activity is employment by the number who are not in education, which in the case of 16-18 year-olds is very small. When rounding errors are taken into account, the resulting figure is roughly equal to column 1 divided by (100-column 2). The final column is an approximate indicator of the chances that those who have left full-time education have of finding employment.

*Source:* KUF and KAD (1997), Annex I Appendix II

The Norwegian background report prepared for this review cites a 1994 study by an expert group which concluded that high initial wages for youth do not appear to be a significant labour market problem (KUF and KAD, 1997, p. 28). On the other hand there are suggestions that preference given to those with the greatest seniority in hiring and firing decisions, restrictive unfair dismissals legislation and restrictions on the use of labour on a temporary basis (OECD, 1997b) might act as disincentives to employers wishing to hire new labour market entrants. Certainly Norwegian employees feel substantially more secure than do

employees in many other countries (OECD, 1997c). There has also been a concentration of employment growth in recent years in the public sector, where recruitment has favoured those who have completed higher education and obtained professional qualifications and penalised younger job seekers without such qualifications.

#### 4. BUILDING BETTER PATHWAYS

##### *Indicators of effective pathways*

One of the fundamental goals of Reform 94 has been to increase the effectiveness of students' pathways through upper secondary education. There are a number of ways in which effective pathways can be judged. For example: Are they long enough so that students acquire the knowledge and skill needed at their destination? Do they link to other pathways or have they been constructed in isolation? Do they have unexpected blockages? Do they have strong connections to their destinations? (Raffe, 1994)

There are early signs that the pathways through initial education to working life are becoming more effective following the introduction of Reform 94:

- **Internal flows have improved and drop-outs have been reduced.** A comparison of the 1989 and 1994 9th grade cohorts shows that 66 per cent of the former yet 87 per cent of the latter were still in education in the autumn of the year that they began upper secondary education. There has been a ten per cent increase in the proportion of students who follow “normal progression”, moving from one level to the next without either dropping out or repeating the same level. This has been particularly evident within vocational programmes where the proportion following a normal progression has increased from 30 per cent to 58 per cent of the total.
- **Increased numbers are taking vocational education courses.** The proportion of Foundation students taking the main general education track fell from 57 per cent to 51 per cent between 1993 and 1994, and by the 1996 Foundation year intake it had fallen again to 46 per cent. Over the period there has been a corresponding rise in the proportion of students undertaking vocational programmes (KUF 1997c, p.8; Sandberg and Vibe, 1995, p.45). It is reported that 90 per cent of students have been able to gain their first choice of a Foundation course, not simply one out of their first three choices, although a small number have had to accept a place at a school some distance from their home in order to take up their first choice.
- **Apprenticeship numbers have increased as has young peoples' access to apprenticeships.** In 1996, the first year in which Reform 94 students competed for apprenticeships, the number of new apprenticeship contracts was nearly 13,000, an increase of 22 per cent on the previous year. In the autumn of 1996 36 per cent of apprentices were under 20 years of age, compared to only 21 per cent the year before, with the biggest increase being among 18 year olds (Statistics Norway, 1997). Preliminary figures for 1997 show a 15 per cent increase in the number of apprenticeship applications from those with a statutory right, and unofficial reports point to a further increase in the share of new apprenticeships captured by those under the age of 20.

- **The reinsertion of drop-outs has improved.** In the 1996-97 school year seven per cent of those with a statutory right were eligible for assistance by the follow-up service, and of these only 11 per cent either refused assistance or were unable to be contacted. In mid 1997 over 97 per cent (over three cohorts) of those contacted by the follow-up service were either receiving education, were employed or were participating in a labour market scheme.

These are important achievements, as impressive for the speed with which they have occurred as for the fact that they have occurred.

### *Are pathways of the correct width?*

In the Norwegian context an issue of particular debate has been the width of pathways. The several advantages and disadvantages of broader pathways that have been articulated in this debate are likely to be relevant to other countries. Reform 94 has attempted to broaden vocational pathways by reducing the number of entry points to upper secondary education, and by reducing, although in the face of some resistance by employers, the number of options available at successive levels. Broader pathways can have several advantages. They may provide better preparation for future flexibility. If there are fewer pathways then each school or district can offer more of them, a particular concern in Norway where school sizes are small. Broader pathways can more easily be related to academic subjects. And broader courses of study reduce the risk that students will want to move from one pathway to another.

On the other hand narrower pathways can produce graduates who are more immediately useful to employers, and this is likely to be a particular concern for smaller employers, who play a significant role in the Norwegian labour market. This is likely to increase employers' willingness to offer jobs and apprenticeships to young people. Teachers are more likely to be competent to teach specialised occupations when pathways are narrow, and to have difficulty teaching wider combinations of subjects when pathways are broad. And for students who have decided upon an occupational specialty, limiting instruction to that specialty is likely to be more satisfying than providing them with less focussed curriculum content.

The present number of Advanced I courses is still more than many within Norway's education system would like, with a reduction in the number having been resisted by some sections of industry. In reality many students are unable to take advantage of the potentially wide range of choices available to them at the Advanced I level. Their choices are constrained by insufficient class sizes, by lack of appropriate equipment and facilities for all of the options that flow from any one Foundation course, and by teaching staff having the expertise to teach only a limited range of the available options. These constraints operate at both the school and the County level. In practice these factors, rather than student interest or local labour market demand, can often determine which Advanced I course a student ends up in. In these circumstances it would make sense to offer fewer but broader Advanced I options. Doing so would allow students to delay specialisation and help in reducing costs -- for example by making larger class sizes possible. It would also help to address the mismatch problem which has arisen since the introduction of Reform 94, with significant imbalances existing between the demand for and supply of apprenticeship places in particular trades and in particular localities. The mapping of common elements between Advanced I courses would be an important first step in achieving a reduction in the number of courses at that level.

### **Box 2: Norway's Follow-up Service**

With very high rates of school participation in Norway, the labour market consequences for those who do not have a basic upper secondary qualification have become more severe, and the reintegration of the relatively small absolute numbers of drop-outs who have low levels of achievement, low aspirations, personal difficulties or who are disaffected with school becomes both more pressing and more resource intensive. One of Reform 94's key initiatives was the establishment of a follow-up service for school drop-outs (around three per cent of the cohort drop out in the first 12 months of upper secondary education), which has much in common with Sweden's Municipal Follow-up Responsibility. Co-ordinated at the County level, the fundamental goal of the service is to reintegrate early leavers into school, and to do so quickly, within the period of their statutory right, so that they are able to gain an upper secondary qualification. Managed at the County level, the service operates through a network of coordinators who in turn work with local counsellors or mentors who are the principal point of contact with the young people. The service contacts all those who are entitled to an upper secondary place but fail to apply, as well as those who drop out of school.

The service works closely with the school counsellor service and the school psychological service which among other tasks work to prevent drop-outs (at times co-locating with it, or being run by it), with the Public Employment Service, and with health, welfare and other community services. Each young person who accepts an offer of assistance is assigned a personal counsellor or mentor, and is required to develop a personal action plan that is regularly reviewed. The assistance that is provided is not standardised, but closely tailored to individual need. In addition to personal advice, counselling and access to community services, young people can be offered trainee places in firms, subsidised employment, education and training opportunities, or combinations of these.

The service is well resourced. As an example in Akershus County, which has a group with a statutory right of some 16,000, of whom perhaps five per cent constitute the target group for the follow-up service, the service has the full-time equivalent of 14 staff. These are in addition to the nine employees of the school psychological service and the youth officers of the Public Employment Service with whom the follow-up service works closely.

Initial evaluations of the follow-up service have been positive, with drop-out rates falling and very high proportions of those contacted by the service engaged in positive activities. The combination of a trainee place within a firm, which offers subsidised employment and on the job training, with some school attendance has been found to be the most successful approach in re-motivating and reinserting drop-outs.

Offering fewer but broader options at the Advanced I level will have significant implications for teacher education and development. It will require vocational teachers who have largely come from a mono-skilled workplace culture to become multi-skilled, just as has the introduction of the new and broader Foundation courses. This is an issue that will need to be addressed in the new model for vocational teacher education whose detailed planning will commence in 1998, and whose first courses will commence in the year 2000. To gain admission to the new teacher education programme, students will be required to have a vocational qualification, two years of relevant work experience, and general higher education entrance qualifications. It is intended that the programme will comprise a theoretical component that develops a broad conceptualisation of vocational education, and an integrated pedagogical component.

In the case of Advanced II courses there seem to be good grounds for being more cautious about any reduction in their number. In an economy such as Norway's in which the average firm size is small, it is important for employers to be able to tailor skills to the needs of the enterprise. Too broad an aggregation of skills and competencies within courses at the Advanced II level would impose considerable difficulties for employers' capacity to tailor apprenticeship training to the realities of production.

### *Do side tracks and dead ends exist?*

There are three groups for whom present pathways run the risk of leading to side tracks or dead ends. These are:

- Those who fail to obtain an apprenticeship and are offered an alternative school-based vocational course;
- Those who fail to obtain an apprenticeship and take, as an alternative, a general education course; and
- Those who appear to have exhausted their statutory right before either obtaining a vocational qualification or, having obtained one, before having qualified for higher education entry.

For many of those who fail to obtain an apprenticeship and are offered an alternative school-based Advanced II course in the same vocational field, the school-based vocational track carries fairly high risks. To the extent to which reliance is placed upon school attendance and school grades in apprenticeship selection, these young people are likely to be the students with the lowest grades and those for whom school attendance and classroom study, compared to practical experience at work, is the least attractive option. Failure rates in some of these alternative school-based Advanced II course courses have been high. The results from 17 of the 19 Counties for those sitting the journeymen's exams in mid 1997 after completing an alternative Advanced II course show an overall pass rate of only 60 per cent. (The failure rates appear to be greatest in some of the more traditional trades such as electrical trades and light vehicle repair, and lowest in some of the newer trades such as child care and youth worker and care worker.) Even among those alternative Advanced II candidates who pass the journeymen's exams there are reports of employer dissatisfaction with their standards, and of a reluctance to employ them. Suggestions for both making alternative school-based vocational courses more interesting for these students, and raising the standard of their performance, will be raised in Section 5.

There are similar reasons for believing that the general education track is a risky one for many of those who fail to find an apprenticeship and take, as an alternative, a general education course rather than a school-based vocational education course. Of those whose final lower secondary school marks fall in the top 50 per cent of all candidates, some three quarters subsequently enter the general education track in their Foundation year<sup>9</sup>. Lower academic achievers are, as a consequence, heavily concentrated in the two vocational tracks. They are likely to be even more heavily represented among those who transfer to the general education track at the Advanced II level after failing to find an apprenticeship, given that school marks appear to play a significant role in apprenticeship selection. While such students may potentially be able to exercise their right to achieve an upper secondary qualification, they will not emerge with a vocational qualification, and it is likely that many will also fail to qualify for higher education entry, for evaluations of Reform 94 show that those who attend a supplementary general education course after the Advanced I level receive lower results than do those students who follow the principal courses from the Foundation year that lead to university entrance qualifications.

For these young people implementation of the partial competence initiative is likely to be of considerable importance. While the relatively small gap between the wages of qualified and unqualified workers in Norway reduces the opportunities for significant wage incentives to be linked to the granting of partial competence, there are other important grounds for encouraging it: increased labour market flexibility; incentives to continue within education; and individual motivation and fulfilment are among them. It would also be important to create for this group of young people, in parallel to the six month bridging courses available to those vocational track graduates wishing to enter higher education, a mechanism that

allows them to complete their vocational studies and gain a work force qualification, and to do so within their statutory right.

In theory those who obtain an upper secondary vocational qualification, but wish to complete a supplementary six month general education course in order to qualify for higher education entry, will have exhausted their statutory right to three years of upper secondary education. In theory those who complete one Foundation level vocational course and then change to another will exhaust their statutory right before being able to obtain an upper secondary qualification, and thus the choice of an inappropriate Foundation course appears a risky one to many young people. However the appearance of blocked pathways in both of these instances is just that. In practice the requirement for the Counties to allocate a number of upper secondary places that is equal to one-quarter more than the expected number of candidates over three cohorts is able to accommodate those wishing to backtrack in these ways. However this point appeared not to be well understood by the young people that the review team met, who appeared to believe that the statutory right was implemented in a fairly tight manner, even though educational administrators took a more sanguine view. More open and public assurance to students that backtracking need not lead to blocked opportunities to gain a work force qualification or higher education entry, and that the statutory right is interpreted in a broad and flexible way, has much to commend it. The ease with which students can transfer from one vocational course to another at the end of the Foundation year would also be facilitated by a more systematic mapping of the common elements between courses, which appear to be significant in some instances on the basis of the curriculum documents provided to the review team, and by the widespread publicising of the effective credit that can be granted to those who move from one course to another.

### ***Improving connections between pathways***

One of the significant achievements of Reform 94 has been the granting of opportunities to those on the vocational education tracks to transfer to the general education track: through transferring at the end of the Advanced I level before obtaining a vocational qualification; or through taking a supplementary six month general education programme after obtaining a vocational qualification and thereby qualifying for university entry. Half of those choosing vocational courses at the Advanced I level are reported to have expressed an interest in taking the additional six months of general education needed to qualify for university entry after obtaining a vocational qualification. Some three per cent of those completing a vocational course at Advanced I level are now transferring to a general education programme at Advanced II level. The combination of an upper secondary vocational qualification and a higher education degree made possible by this option can be seen as a highly desirable form of preparation for an increasingly uncertain global economy. In addition, if students have to work part-time while enrolled in higher education, there is a practical benefit in holding a vocational qualification which presumably allows them to earn a higher hourly wage.

Even greater opportunities exist to make the path from vocational education to higher education easier. Many existing vocational education courses appear to demand high levels of theoretical understanding, conceptual skills and abstract knowledge, which there is a clear case for higher education institutions taking into account when selecting students. An example is provided by the Advanced II programme in Space Technology. Other courses have the potential, through their subject matter, to form a more clearly articulated pathway to corresponding higher education courses and professional careers. A case in point is the potential for the Nursing Auxiliary Advanced II course to form an articulated entry point to professional nursing courses, allowing nurses to be produced who combine their theoretical understanding with a high level of practical patient care skills.

There is scope for more flexible higher education entry requirements to be introduced, involving a more careful examination of the content of particular vocational courses against the real academic and intellectual demands of particular higher education courses. This need not conflict with a requirement to minimise the use of criteria other than grades in selection for higher education entry, but it does argue that a broader range of subject grades - both vocational and general - should be taken into account in the case of individual faculties and individual vocational courses. Such an initiative could make moves from the vocational to the general education tracks simpler by reducing the amount of additional general education studies needing to be completed.

### **Box 3: Enterprise education and active learning**

The Norwegian national Core Curriculum (KUF, 1997b), which spans primary, secondary and adult education, places a heavy emphasis upon the development of enterprising qualities in students: inventiveness in the face of the unfamiliar; the capacity to take responsibility for one's own learning; personal initiative; resourcefulness; and the ability to recognise and take advantage of new opportunities. It enjoins schools to use pedagogical methods that are appropriate to the development of these qualities: enlisting in practical work both as providers and recipients of services; the use of projects and teamwork; allowing pupils to share responsibility for planning, executing and evaluating their own work; learning through experience; active learning by doing. And it encourages schools to see the wider community, its industry and its services, as part of the total learning environment in which these qualities can be developed.

The key Norwegian educational reforms of the 1990s (Reform 94 and Reform 97) support entrepreneurship by:

- Making project work mandatory in primary and secondary education;
- Connecting theory and practice in the learning situation;
- Encouraging and requiring cross-disciplinary work;
- Motivating for creativity and innovation; and
- Encouraging schools to see themselves as resource and cultural centres for the local community.

In its White Paper No. 12 (1994-95) the Parliamentary Committee for Education, Research and Church Affairs requested the Ministry to develop a long term strategy for the ongoing development of entrepreneurship in primary and secondary education as an important element in the development of a learning society. The intent is to foster within schools the development of activities that are steered by participants, problem oriented, experience-based, project-based and result-oriented. The Ministry works in cooperation with the Ministries of Agriculture, Local Government and Labour, Fisheries and Trade and Industry both to develop entrepreneurship and to foster creative links between business and industry.

**Local-active schools** is a national initiative of these five Ministries which has operated since 1990. It encourages the involvement of schools both in business development and in the social and cultural development of their community. During the 1995-96 school year roughly 150 Municipalities - a third of the total - took part in local-active school initiatives. In order to encourage the use of local resources central grants are not given to support local-active school initiatives. However the local-active school network is supported by information, a newsletter, professional materials and teaching aids through a national office located at the College of Stavanger.

## **5. CONNECTING EDUCATION AND WORK**

Many of the pedagogical initiatives that have been taken during the 1990s to reform Norwegian schools will have a fundamental and long term impact upon the effectiveness with which all of Norway's young people, not only those in the upper secondary vocational tracks, are prepared for working life in a learning economy. Box 3 outlines some of these, and in particular the impact of the new national core curriculum and the emphasis that is being placed upon the development of enterprising qualities. Teachers are the

key to the effective implementation of the emphasis upon active and project-based learning that is embodied in these reforms, and Reform 94 has properly placed substantial emphasis upon teacher development and injected substantial resources into it. In some upper secondary schools project-based work now appears to be a standard part of students' experience. However there are also instances of teachers from different course areas being reluctant to cooperate in creating and supervising cross-disciplinary projects, and many of the projects that are undertaken remain within the boundaries of the school rather than being carried out within the wider community as well.

### *Improving supply and demand signals*

Education can be connected with the labour market in a variety of ways and at a number of levels. The connections can be national or system-wide, regional or local. They can focus upon information exchange or upon behaviour change. They can operate at the institutional level or involve networking between the key actors: teachers, employers and students. It is important that these connections be effective at all levels of the education system and the labour market: schools as well as higher education, general education as well as vocational education; for enterprises of varying sizes -- small and medium as well as large; and at the local level as well as the national level. Effective signalling on supply and demand can assist the labour market, schools and education systems as institutions, as well as improve the effectiveness with which students and enterprises make decisions.

In discussions with the review team Norwegian policy makers expressed strong concern for better and longer term forecasts of employment demand as the basis of better resource allocation decisions. Ways to improve signalling about both supply and demand at the local level appeared a less urgent concern. It was also clear that there are differences between the views of the social partners at the peak national level and the views of many of their local members on how the education system should be relating to the labour market. The peak bodies, who have the greatest influence upon government policy formulation, are the more likely to take a longer term view of the economy's needs, and to argue for broad pathways, an emphasis upon generic employability skills, and for programmes that lay the basis for lifelong learning. At the local level employers are more likely to argue that those who leave the school system should have the specific skills that will make them immediately employable within particular enterprises. Hence the small and medium sized enterprises at a local level are more likely to argue for the retention of specialised courses and a wide range of options at the Advanced I level.

The mismatch problem -- the imbalance between supply and demand in some apprenticeship classifications -- brings many of these issues to the fore. In trades such as care worker, cooking and light vehicle repair there has been an excess of applicants. In the building and construction trades and in some of the mechanical and engineering trades, among others, there has been a shortage of applicants. On the west coast of Norway the ship building, fishing and food processing industries find that it is hard to attract young people, and some local communities worry about their future economic viability if they cannot resolve this problem. However in the southern parts of Norway shortages of applicants in some of these occupations and industries are not as apparent.

What is clear about this problem is that it is not one that is open to Norway to solve through sole reliance on central labour market forecasting or through central planning. The Counties are the vehicle through which students' statutory right is implemented. The central government is not able to direct the Counties not to allow students their first (out of three) choice of a Foundation course if the number of applicants is unable to be matched to labour market demand. Neither can it direct how places are to be allocated at the Advanced I or II levels. In the broad sense central assessments about present and future trends in supply and demand are important for making key decisions about the allocation of resources between sectors and

about the priority that needs to be attached to broad skill areas. But these limitations on central government suggest that a combination of adjustments in wages and working conditions and improved local signalling systems are far more important in helping supply and demand to balance at the regional or local level than is central labour market forecasting.

Signalling systems can take a variety of forms. Career education and guidance are among the more important. In the context of the mismatch problem it is important both prior to the selection of a Foundation course by lower secondary students, and at the points of choosing Advanced I and II courses. The strengthening of career guidance in lower secondary schools has been a highly appropriate response by government to the mismatch problem. It is also encouraging to see the effort and resources that the Confederation of Norwegian Business and Industry has devoted to producing national print- and video-based educational and careers resource material, working in conjunction with the national association of careers advisers, to assist the implementation of Reform 94. It is important for such national material to be complemented by material that allows young people to gain an understanding of opportunities in their local labour market, and of how these connect to wider educational and employment opportunities. Stronger connections and closer working relationships between individual schools and the careers and guidance officers of the Public Employment Service would be one way in which such local labour market knowledge could grow. The partnerships that are rapidly developing between individual enterprises and lower secondary schools (Box 4) are very important, as they can create and reinforce networking between individual teachers, individual employers and individual students through which key labour market information about jobs, skills and training opportunities is exchanged. Teacher placements within industry and project-based learning that takes students into the community and the world of business can serve a similar function.

Just as important in improving signalling systems -- national as well as local -- is the regular and systematic collection of information about the employment and educational outcomes of school and higher education graduates, and the provision of this information not only to policy makers at the national level, but to parents, students and teachers at the local level. Significant effort is being put into the evaluation of Reform 94, including studies in which students' destinations are tracked and monitored. This information will be of great interest and value to researchers and policy makers. However it is important that it be complemented by the provision of information about student outcomes at the local level, and information not just about the national picture, but about outcomes in the particular school, university, college, course, region or locality. It is likely that instruments other than those designed for the evaluation of Reform 94 would be best suited to this purpose. While surveys of the employment outcomes of higher degree university graduates have been conducted for some 25 years, there appears at present to be no common mechanism in Norway for tracking graduate destinations -- particularly from upper secondary education -- and for feeding the results back to colleges, schools, students and parents. The advantages of developing such mechanisms in addressing issues such as the mismatch problem are considerable.

### ***Connecting the general education track to work***

In implementing Reform 94 comparatively little attention has been paid to the connection between the general education track and work. It is important to do so, as it appears that at most 50 per cent of those who leave the general education track from the Advanced II level move directly into higher education. For those students who leave upper secondary school without a vocational qualification and without either the grades required for higher education entry or an interest in attending higher education, the labour market is likely to pose particular problems. On this ground alone there are good reasons for encouraging students in the general education track more frequently to choose combinations of general and vocational

studies, for promoting this option within career guidance and counselling, and for seeking the cooperation of the industry partners in developing some models of valued combinations of subjects from the two domains. There is also a strong argument from the perspective of lifelong learning for encouraging such combinations, for they will encourage a higher proportion of students to see the world of work and the world of study as intertwined from an early age, and to minimise the boundaries between academic and vocational studies.

#### **Box 4: Partnerships Between Business and Schools**

The Confederation of Norwegian Business and Industry (NHO) has launched and is heavily resourcing a major national project to bring schools and local businesses more closely together. It owes its origins both to the positive opportunities afforded by the new national curriculum for learning to be extended beyond the classroom, and to concerns felt by NHO about the gap between many schools and the world of work.

The project's principal objectives are: to give students a realistic picture of the role played by business and industry as a generator of wealth; to improve young peoples' choice of career and education; and to include local companies as a natural part of the teaching environment.

Schools and companies are encouraged to sign partnership agreements through which the company nominates the contributions that it will make to the school's educational goals. These can include: lectures from the company; structured visits to the company by students or teachers; case studies and project work for students; teacher placements within the company; teacher participation in the company's training programmes; and company representatives as permanent consultants to student enterprise projects.

Activities that will improve lower secondary students' knowledge of local firms and industries as a basis for their later choice of Foundation courses have been an important focus to date, although an increasing number of partnerships are now including project-based opportunities for implementing the general education curriculum.

The project was launched early in the 1996-97 school year, and a year later some 550 partnership agreements had been signed. In many cases schools begin by signing only one agreement, and then extend this to agreements with many local firms, thus allowing students to gain a broader perspective on working life. Similarly some firms have partnership agreements with several local schools.

NHO argues that partnerships benefit schools by extending opportunities for the new national curriculum to be implemented, by allowing greater coherence between general and vocational education, by integrating schools more effectively into their local communities, and by improving the knowledge and skills of teachers. Companies benefit through achieving more effective recruitment of youth, through enhanced employee motivation as the result of working in a socially responsible company, through their improved public image, and through the creation of a school curriculum that better reflects the realities of working life.

Recruitment problems caused by young people's lack of interest in applying for apprenticeships, and other forms of locally available employment, in particular occupations and regions, have been a significant spur for employers' involvement in partnerships at the local level.

The existing structure of Advanced I and Advanced II courses makes it relatively easy to construct such combinations. Unlike students in the vocational tracks, who have little freedom to choose non-compulsory subjects alongside their compulsory subjects, students in the general education track can devote 40 per cent of their time at Advanced I level and around half of their time at Advanced II level to the study of subjects of their own choice (Table 6). Potentially they have the opportunity to construct programmes, given appropriate advice and support, that could lead them a fair way towards a vocational qualification, alongside their academic studies, by the end of upper secondary education. The partial competence pilot project could, if judged a success, be used to support such an option by providing

students who take some vocational studies with opportunities for their skills to be recognised by the industry partners. As with students who transfer to the general education track from the vocational tracks at the Advanced II level, it would be important to allow this group of young people access to a mechanism, in parallel to the existing six month bridging courses available to those vocational track graduates wishing to enter higher education, that allows them to complete their vocational studies and gain a work force qualification, and to do so within their statutory right.

#### **Box 5: Resource Centres**

A resource centre is an office within a school, an external foundation or a private company which sells education and training services to local employers and to the community. Resource centres are normally connected to one or more upper secondary schools through formal agreements. Most commonly schools are formal shareholders in the centres. Centres have their own budgets and separate accounts and management boards. There are some 250 resource centres in Norway, one for every two upper secondary schools.

In meeting employer and community education and training needs resource centres typically draw upon the human and physical resources available within the school system. These include teachers, classrooms, laboratories, workshops and equipment. In addition they can draw upon instructors from enterprises and other educational institutions, and may offer aspects of higher education courses through distance education mode. Thus they act as brokers between upper secondary schools and local employers and the community.

Examples of the services provided by one centre include computer numerically controlled machining training for local firms' employees, intensive supplementary training for apprentices prior to taking their tradesman's test, supplementary theoretical instruction for apprentices that small firms do not have the resources to provide, training in-firm apprenticeship instructors, short tailored courses in computing and programmeable logical controllers, the provision of collaborative courses in association with the nearest Regional College, satellite delivery of courses from the University of Bergen, and participation in a local lifelong learning project.

Resource centres are a way to develop teachers' skills and to bring them closer to working life in their local labour market. They help small and medium sized enterprises to meet their competence needs effectively and flexibly, and in doing so contribute to regional economic development through providing a practical demonstration that schools are a community resource. They provide a local and regional focus for lifelong learning, and develop upper secondary teachers' skills in teaching adults. Nationally they have a turnover of around NOK 500,000,000 and are supported by a self supporting national network providing advice, information and training to local resource centres.

While Reform 94 has to date had a lesser impact upon the general education track than upon the two vocational tracks, it has posed particular challenges for teachers of general education subjects within the vocational tracks. Their subjects are now to be taught in a way that is relevant to students' chosen vocational area, but without compromising standards or reducing students' chances of later meeting university entry requirements. The increased time devoted to general subjects has also raised issues of student motivation and interest, particularly among those of a strongly practical orientation who find the point of spending increased amounts of time on general subjects hard to grasp. A variety of methods have been discussed and experimented with in order to address these difficulties. They include team teaching by general and vocational teachers, the integrated teaching of general subjects by vocational teachers, developing increased teacher understanding of industry through teacher placement programmes, sometimes as part of school-industry partnerships, and the development and use of special resource materials. Continued resourcing of in-service teacher education and development is likely to be needed for some time in order to address the difficulties currently being faced by teachers in this regard.

**Table 6. The weekly allocation of time between subject areas in general and vocational courses (per cent)**

	Foundation	Advanced I	Advanced II
<b>General and business studies</b>			
Compulsory general subjects	100	60	47
Compulsory vocational subjects	-	-	-
Optional subjects	-	40	53
Total	100	100	100
<b>Vocational courses</b>			
Compulsory general subjects	31	23	-
Compulsory vocational subjects	63	71	100
Optional subjects	6	6	-
Total	100	100	100

***Connecting the school-based vocational track to work***

In seeking to improve access to and the quality of vocational education and training, Reform 94 has to date paid greatest attention to the 2+ apprenticeship track. The number of students in the school-based vocational track seems to be at least as great as the numbers in the apprenticeship track, and it is likely that large numbers will persist in this track for the foreseeable future, even if an increased supply of apprenticeship places reduces the flows into it at the Advanced II level. The school-based vocational track has both an intentional and a default form, yet there are common issues between them. A key reason for seeking to improve the connections between the school-based vocational track and work is the difficulties faced by those young people who do not gain an apprenticeship and are offered an alternative Advanced II course. Given both the academic achievement mix of those in the vocational tracks and the role played by grades and school attendance in apprenticeship selection, these are students for whom classroom attendance is likely to be the least attractive option and practical learning from experience the most attractive. The experience of the follow-up service in finding that activities which combine learning in workplaces with classroom learning are the most likely to re-motivate school drop-outs is highly relevant for this group of students.

Norway can demonstrate some excellent examples of vocational preparation being conducted through the school-based vocational track, in which extended unpaid work placements are integrated with classroom-based instruction. In the Nursing Auxiliary course for example, students undertake 12 and 16 weeks of work placements in their Advanced I and II years respectively. The time in the workplace is used for structured learning against curriculum outcomes agreed by the industry partners. While in the workplace students are assigned to a nominated mentor or supervisor, and they have the opportunity to rotate through several workplaces in order to gain varied experience, wider skills and broader understanding. Their learning is assessed by the workplace supervisor against the learning outcomes contained within the curriculum, is recorded in the students' log book, and makes a substantial contribution towards the student's school grade. Classroom teachers keep in regular contact with them and with their workplace supervisors to check on their progress and to maintain a relationship with the enterprises offering work placements.

It is important for Norway to extend and build upon such examples of good practice and to make it explicit that they are legitimate and valuable. Programmes like this have much in common with the new national upper secondary model introduced by Sweden in 1995 as the result of pilot programmes that followed legislation introduced in 1991. There, the some 60 per cent of upper secondary students who take vocational programmes are required to spend 15 per cent of their time over three years learning within enterprises as part of the upper secondary curriculum. These arrangements work well in large part because of the strength of the relationships that exist at the local level between teachers, students and employers that are able to make the centrally negotiated training frameworks a reality.

There is a reluctance to extend the use of unpaid work placements to strengthen the workplace connection for those who are in alternative Advanced II courses, as there is a fear that employers might prefer to take students on work placements rather than hire apprentices. This is an understandable concern, and would need careful discussion between the social partners. However there are circumstances in which the two can be seen as complementary rather than in competition with one another. For example in some industries those on work placements can spend a series of short periods in the firm such as a fixed day each week, rather than continuous blocks of time. Such arrangements make it easier for the young person to be seen as a learner, whilst still being part of the work team, and without the spot that they occupy being seen as in competition with the place of an apprentice. And where firms have apprentices, it is possible for second year apprentices to act as the mentors of those on work placements, thus expanding the skills of both parties. The training offices that have developed as the result of Reform 94, through which small and medium sized firms are assisted in the training of apprentices, would seem to be well placed to act as brokers between the schools and enterprises in arranging and monitoring work placements.

There are a number of other models that Norway can either draw upon or extend in order to supplement work experience outside the school. One of these, which is already used in Norway in teaching commercial and business subjects, is the practice firm, or SIMU-enterprise, in which a firm created within the school trades in fictitious products, services and money. Another is the school-based enterprise. This can be defined as any school-sponsored activity in which students produce goods or services for sale or use to other people. Norway has embraced the principles that support this concept, especially in primary and lower secondary education, where student enterprises are being used to promote active learning as envisioned in the core curriculum (see Box 3).

At the upper secondary level, there is evidence from other countries that school-based enterprise can provide a valuable supplement to work experience outside the school. For example, Denmark started using school-based enterprise as part of its vocational education system when recession in the late 1980s made it difficult to find enough places for apprentices in private enterprises. Somewhat unexpectedly, school-based enterprises were found to offer certain advantages of their own, and Denmark continued to use them after the recession ended. In Germany and Switzerland, where large firms have created training centres for apprentices within the company, some of the training centres have the apprentices form small enterprises to make and sell products to other divisions of the parent company or to outside customers. In effect, these are school-based enterprises within enterprise-based schools offering a kind of work experience that is not otherwise available, even within the firm. Studies in the United States have described the learning opportunities available in school-based enterprises -- job rotation, transfer, self-management -- that are difficult to arrange for students in non-school enterprises (Stern et al. 1994, Bragg and Hamm, 1996, Stasz and Kaganoff 1997).

In Norway, school-based enterprise at the upper secondary level could be useful in several ways. As in Denmark, it could serve as a partial alternative to apprenticeship outside the school -- though it is clearly desirable for apprentices to have experience outside school if possible. As an adjunct to outside work

experience, school-based enterprise can cover some skills that apprentices may not have an opportunity to learn in their particular work placements. School-based enterprise can also address the curriculum target of enabling students to plan and organise their own work, individually and in groups. School-based enterprise could also help students find immediate practical applications of concepts and methods contained in academic subjects. This would be especially valuable for vocational students during the formative years and at Advanced Level 1, when many of them are said to be resisting continued instruction in general subjects. Even for students in the general education track who are preparing for university, school-based enterprise could offer interesting possibilities for the projects they are assigned at least once a year. For all students, curriculum targets in certain courses related to the study of enterprise could also be achieved through school-based enterprise. The wider introduction of school-based enterprise will, like the wider use of work placements within alternative Advanced II courses, raise a number of industrial issues, concern about unfair competition being one of them. But the consequence of failing to address these issues is likely to be continued student failure and dissatisfaction, and a lower quality of skills than might otherwise be developed.

### ***Connecting the apprenticeship track to work***

There is no doubt that Reform 94 has led to some significant improvements in the quality of apprenticeship training in Norway:

- There is a more careful screening of the training capacity of firms wishing to recruit apprentices;
- The new wage arrangements encourage a higher proportion of the apprentice's time in the workplace to be used for training rather than productive work;
- The use of log books encourages a more systematic approach to training and provides apprentices with greater motivation through being able to monitor their own skill gains;
- The new curriculum structure makes it very clear what has to be taught within the firm and which elements are the responsibility of the classroom, and this clear division of responsibility is reflected in the apprentices' log books;
- Funding has been provided to train on-the-job apprenticeship supervisors; and
- There has been a growth in intermediary bodies, in the form of the training offices that assist the smaller enterprises with training, and which enable multi-employer arrangements to operate whereby the apprentice can be rotated through more than one firm in order to cover all aspects of the skills needing to be taught during the apprenticeship.

In introducing Reform 94 Norway has chosen a model of apprenticeship in which the two year period of employment and training within the enterprise in most cases follows an equivalent period spent at school studying both general education subjects and trade theory. This contrasts with many other countries' apprenticeship systems, in which time spent in the enterprise is interspersed in an ongoing way, through day- or block-release, with classroom instruction. This traditional model has many advantages, the greatest of which is that it makes it easier for the apprentice to see the relevance of the theoretical instruction and to relate it to working life.

Among the employers and young people that the review team met, as well as among many teachers, there was a strong if not virtually unanimous feeling that the practical content of the first two years should be increased and the theoretical content decreased in the first two years and spread over a longer period in order to reduce the separation from working life that is now evident in the initial period of the apprenticeship track. The review team agrees with their judgements. From the perspective of employers a stronger practical emphasis in the first two years would make the apprentice more immediately employable, and as a result decrease the training costs of the initial period of indentures and increase the probability of more apprentices being employed. From the young person's perspective the increased general education component of the apprenticeship track, as well as the trade theory taught in the first two years, would be easier to accept, and its relevance clearer, if it was interspersed with practical work and combined with working life. If the theoretical and classroom elements of Norway's apprenticeship system were more clearly able to be related to working life there would be benefits in terms of higher skill levels as well as improved student interest and motivation and greater enterprise productivity. Present arrangements are frustrating for many young people and present teachers with considerable pedagogical problems in trying to relate trade theory to a world with which the student has little contact.

Prior to the introduction of Reform 94 it was common for Norwegian apprentices to undertake their theoretical and classroom instruction on a day-, or more typically a block-release basis. However the costs and travel difficulties of providing instruction in this manner, given the geographically dispersed nature of Norway's population, persuaded the reform's designers to opt for the 2+ model. In many instances the argument has merit. The argument here is not for the abandonment of the 2+ model in favour of the previous, but for the introduction of greater flexibility -- between as well as within trades, and between regions, in order to suit the needs and circumstances of the parties. We can envisage circumstances in which different arrangements might operate in different trades, or within the one trade between different localities. The key is to ensure that a common set of curriculum targets and focal points underpin whatever delivery model is adopted, with a common log book for the recording of skill gains, clearly agreed payment principles and a clear differentiation between paid work and unpaid work placements.

There are a number of options available for increasing the way in which school and workplace learning are mixed more flexibly over the four years of the apprenticeship track. These include:

- A shorter initial period of school attendance combined with a period of school attendance at the end of the apprenticeship to consolidate and review skills gained at work;
- Part-time mixes of paid work and schooling, as is currently being experimented with in Australia's part-time apprenticeships, such that the apprentice attends school for two or three days a week and takes part in paid work for the remainder of the week, with this pattern spread over a three year period after the completion of the Foundation year;
- Sandwich attendance models, with extended periods of school attendance, perhaps of a term in length, being interspersed with periods in the workplace; and
- A greater use of unpaid structured work placements and school-based enterprises in the Foundation and Advanced I years, directly linked to the attainment of specified curriculum outcomes, and with formal credit being granted towards a trade qualification for learning in the workplace, as now occurs in some of the courses offered within the school-based vocational track.

The funding principles adopted for Reform 94, with students having an entitlement that can be exercised within both the school and the firm, and the funding following the students when they are learning within the firm, removes many of the policy difficulties that might be associated with similar suggestions in other countries. The closer interleaving of the workplace and the classroom during the four-year period would have the additional advantage of encouraging school teachers to become more closely involved with the firms where their students are apprenticed, and thus to inform their teaching with a greater knowledge of the realities of working life. The present model discourages this, in that it suggests a clean break between school and working life, a suggestion that is paradoxical given Norway's strong commitment to lifelong learning principles.

## **6. CONCLUSION**

Achieving effective arrangements for the transition from initial education to working life can be likened to a jigsaw puzzle. If the puzzle is to be solved all of the pieces must be in place, not just some of them, and they must fit together properly. Norway has taken a number of closely related steps to improve the ways in which young people move from initial education to working life. As a result of Reform 94 young people are now provided with an educational guarantee that helps to lay a broader foundation for lifelong learning. It sits alongside a pre-existing guarantee provided to those young people who have left school and who have been unable to find a secure place in education or employment. This post-school guarantee in turn is supported by an emphasis upon active labour market assistance and by financial assistance policies which attempt to ensure that young people see unemployment as the least attractive alternative. Equally as important in laying the foundation for and supporting effective transitions from initial education have been recent initiatives taken to reform the compulsory years of schooling and to make lifelong learning a practical and affordable reality for all adult Norwegians.

Reform 94 is a striking example of a national reform, involving both the education sector and the labour market, that has paid serious attention both to nearly all elements of the transition jigsaw and to the ways in which they should fit together. It is both comprehensive and integrated. Student income support, arrangements for school drop-outs, evaluation and monitoring, new wage arrangements and their link to the recognition of skills and qualifications, sufficient resources to make change possible, the production of new text books, teacher education, links to lower secondary education and curriculum development are just some of the elements of the puzzle that have been addressed, even if not all solved to the satisfaction of the reformers, in putting into place an integrated rather than piecemeal approach to fundamental reform. This feature alone of Reform 94 makes it a model from which other countries might profitably attempt to learn.

Reform 94 is impressive for the fundamental goals that it has set itself: to lay the foundations for a learning economy; to ensure that universal access to educational qualifications can be a basis both for working life and active citizenship; and to strengthen the links between education and working life. Norway has made the correct judgement that its long-term economic health and social stability require on-going investment in high quality education and training that is open to all.

In planning and implementing Reform 94 Norway has been highly successful in achieving a commitment to shared goals, and a high degree of trust in working towards the achievement of these goals, among bodies as diverse as the education and labour Ministries, employers, the trade unions, pupils' organisations, teacher organisations, training advisory bodies and the Counties. This cohesion has been a powerful force in introducing effective change, and the review team was struck by the universal support for the basic principles of Reform 94 at all levels and among all key stakeholders. It is an additional feature of the reform process that many other countries will find of interest.

Reform 94 has also been introduced in association with and has resulted in a substantial degree of institutional creativity. Examples include the follow-up service, training offices, education-business partnerships and resource centres. The value of such intermediary bodies that can help to bring disconnected employment, education and training experiences together into a more coherent whole is supported by Norway's experience in the implementation of Reform 94.

Perhaps for all of these reasons Reform 94 has been able to show results quickly. Although the evaluation studies have yet to be fully completed, it appears that student movements between year levels and courses have become more efficient; the take-up of places in vocational courses has risen; apprenticeship numbers are up and young people are gaining more of the apprenticeships that are on offer; and school drop-outs have declined in number, with those who do drop out being more easily reintegrated into education and employment activities. It is also clear that the fundamental strength of the Norwegian economy and labour market has made it easier to finance the necessary reforms.

This report has suggested changes that represent a fine tuning rather than any fundamental realignment of goals or of basic policy instruments. In broad terms these can be summed up in four suggestions:

- More attention needs to be paid to the ways in which the general education track leads on to working life;
- The attention that has been paid to improving the quality of the apprenticeship track needs to be complemented by equal attention to the quality of the school-based vocational track;
- Greater flexibility needs to be introduced to the apprenticeship track in order to increase its links to working life;
- The excellent relationships that exist among the key institutional stakeholders at the national and regional levels could be complemented by an equal effort being devoted to a strengthening of the links between the key actors at the local level -- the students, their teachers, and employers.

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#### In addition interviews were conducted with representatives of:

The Norwegian School Student Union (NGS)

The Norwegian student Council Board (NEO)

Teachers' Union Norway (Lærerforbundet)

Norwegian Union of School Employees (Skolenes Landsforbund)

The Confederation of Norwegian Business and Industry (NHO)

The Confederation of Trade Unions (LO)

The Training Council for Electromechanical, Mechanical and Engineering Trades (ORMET)

**APPENDIX 3: Examples of course sequences and exit points**

<b>FOUNDATION</b>	<b>ADVANCED I</b>	<b>ADVANCED II</b>	<b>EXIT POINT</b>
Music, Dance and Drama	Music  Dance Drama	Music  Dance Drama	Higher education  Higher education Higher education
General and Business Studies	General Studies  Business studies Reception services  Retailing Office work	General Studies  Business studies Reception services Travel services Security officer Retailing Office work	Higher education  Higher education Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship
Agriculture, Fishing and Forestry	Fishing, hunting at sea  Aquaculture Agriculture and land management  Reindeer hunting Forestry  Market gardening and garden management Landscape gardening/sports grounds	Fishing, hunting at sea  Aquaculture General farming  Ecological farming Reindeer hunting General forestry Forester Forestry equipment operator Gardener  Landscape gardener  Sports groundsman Management of natural resources	Apprenticeship  Apprenticeship Employment  Employment Employment Employment Apprenticeship Apprenticeship  Employment  Apprenticeship  Apprenticeship Higher education
Woodworking trades	Lumber trades  Joinery  Wood-carving Upholstering  Boat-building in wood Piano tuning/repairing	Lumber trades Laminated wood trades Joiner Wooden model builder Basket maker Cooper Parquet layer Wood carver Upholsterer Industrial upholsterer Sail maker Wooden boat builder Piano tuning/repairing	Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship Apprenticeship

## ENDNOTES

- 1 As a consequence of the change of government that occurred in October 1997, as of January 1 1998 the Department of Labour was moved to the new Ministry of Labour and Government Administration.
- 2 As of the cohort that started school in the Autumn of 1997 the starting age will now be a year earlier and the compulsory phase of schooling will be extended by a year.
3. In some trades an extra year of schooling is undertaken prior to commencing the apprenticeship, and/or in association with an additional half year of productive work.
- 4 The number of upper secondary schools has fallen by around 200 since 1990, with reductions being concentrated among the smaller schools.
5. The 1995 figures do not include the effects of Reform 94 since the first apprentices under the reform did not start their apprenticeship training until Autumn 1996.
- 6 In 1996 2,450 students were offered an alternative Advanced II vocational course. This represents 24 per cent of all Advanced II enrollments once those in general education courses and “Other” courses are excluded. A further 2,200 students were offered an alternative Advanced II general education course. In total the two groups represent around 30 per cent of those in the apprenticeship track at Advanced I level.
7. Figure 1 does not show the special pathways introduced in February 1998 or those trades in which an extra year of schooling is undertaken prior to commencing the apprenticeship.
- 8 Derived from Directorate of Labour *Annual Report 1996*, Table 10.
- 9 Unpublished data from the Ministry of Education, Research and Church Affairs.