

Chapt	ter 3	The vocational education and training system — provision and participation	55
3.1.	Initial v	vocational education and training	55
0	3.1.1.	Upper secondary level	55
	5.1.1.	3.1.1.1. Overall structure	55
		3.1.1.2. Basic principles	56
			58
		3.1.1.3. Responsibilities of county authorities	50
		3.1.1.4. Training models	
		3.1.1.5. Apprenticeship 3.1.1.6. Second chance — § 20 of the act concerning vocational	60
		training	62
		3.1.1.7. Curricula, courses and recognised occupations	63
		3.1.1.8. Scale and participation	63
		3.1.1.8.1. Global overview	63
		3.1.1.8.2. Participation by women	69
		3.1.1.8.3. Immigrants in upper secondary education and	07
		training	70
	3.1.2.	0	71
		3.1.2.1. Admission	71
		3.1.2.2. Public provision	73
		3.1.2.3. Private provision	74
		3.1.2.4. Network Norway	74
		3.1.2.5. Growth	75
	3.1.3.	Provision for individuals with specific needs	76
	5.1.5.	3.1.3.1. Upper secondary level	76
		3.1.3.2. Higher education	76
			70
3.2.		uing vocational training	78
	3.2.1.		78
	3.2.2.		79
		3.2.2.1. Technical colleges — training as a technician	79
		3.2.2.2. Resource centres	80
		3.2.2.3. Universities and State colleges	80
		3.2.2.4. Study associations (Studieforbund)	82
		3.2.2.5. Distance education institutions	82
	3.2.3.	Business-oriented competence enhancement measures	83
		3.2.3.1. In-company training	83
		3.2.3.2. Public measures	85
		<i>3.2.3.2.1. Consultancy services</i> (Veiledningstjenesten — VT) <i>3.2.3.2.2. The Norwegian Industrial and Regional Development</i>	85
			86
		Fund — SND	87
		3.2.3.2.3 Measures organised by various ministries	
		3.2.3.3. Private suppliers of continuing education	87
		3.2.3.4. Training provision by sectoral, employers' and	~~
		employees' organisations	88
	3.2.4.	Training as a labour market measure	89
		3.2.4.1. Labour market training (AMO)	90
		3.2.4.2. Rehabilitation	91
		3.2.4.3. In-service training (Bedriftsintern opplaering — BIO)	
			~~~
		and substitutes for unemployed	92

This chapter contains a comprehensive description of the VET system as of 1 October 1997. The distinction between IVT and CVT is made according to the description in Section 2.4.

### 3.1. Initial vocational education and training

#### 3.1.1. Upper secondary level

#### 3.1.1.1. Overall structure

Upper secondary education covers all education and vocational training between lower secondary school and higher education and caters for the age group 16–19. There are two main strands:

- three years of general academic education as a preparation for university or college studies;
- four years of vocational education and training, leading to a formal certification.

The latter normally includes a two-year period as an apprentice in a private enterprise or public institution (see below). Apprenticeship is thus an integral part of the new upper secondary education and training system.

In both strands, the first year is called Foundation Course and is followed by Advanced Course I.

There are a total of 13 foundation courses, each covering a general range of subjects.

#### A. General and business studies

This broad channel constitutes upper secondary general education and leads for most of its participants, after two years of advanced courses, directly to higher education. However, some participants follow a vocational pathway after the foundation course.

Pupils do not have to opt between vocational and general education at the beginning of the foundation year. They all take the same subjects, except for the *valgfag* (choice subject), which is the main determinant of whether they continue with vocational or general studies in Advanced Course I.

B. The following two specialised programmes do not lead to advanced courses providing trade certificates. Candidates choosing these foundation courses obtain entrance qualifications for higher education. Most of them enter higher education.

Music, dance and drama Sports and physical education.

C. The following foundation courses lead to specialised vocational studies and qualifications.

Health and social studies Arts, crafts and design studies Agriculture, fishing and forestry



56

Chapter 3

Hotel and food-processing occupations Building and construction occupations Technical building occupations Electrical occupations Engineering and mechanical occupations Chemical and processing occupations Woodworking occupations.

All the vocationally oriented foundation courses in A and C above provide basic education covering more than one specific occupation. Having completed the foundation course, pupils choose between about 100, more specialised Advanced Courses I, which also contain some general, academic subjects. See Annex 5 for details regarding the various paths leading to formal vocational qualifications at this level.

The 19 counties are responsible for the practical organisation and implementation of upper secondary education and training. The county authorities build and run the upper secondary schools, which normally offer both academic and vocational education. As a result of a broad public supply of high quality education and training, there is limited demand for a private supply at upper secondary level. As of 1997, there were 535 public and 64 private upper secondary schools in Norway.

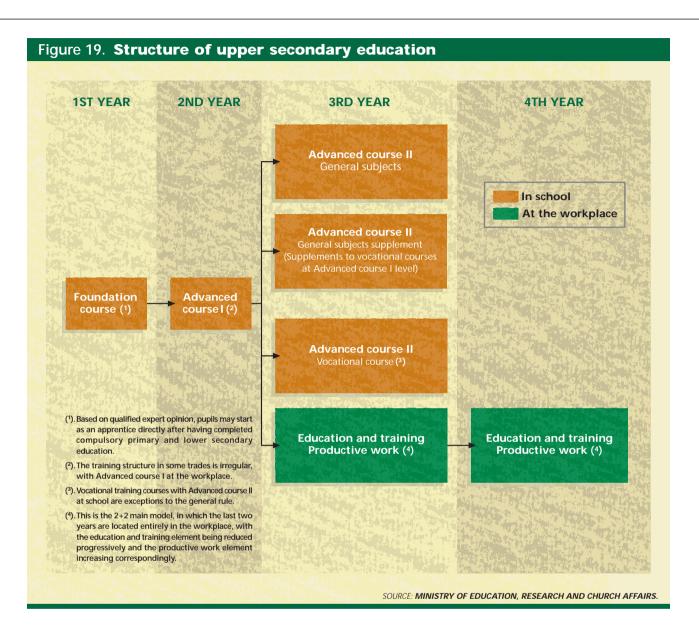
#### 3.1.1.2. Basic principles

All young people who have completed compulsory primary and lower secondary education or the equivalent, have a statutory right of access to three-years' upper secondary education. Furthermore, they have the right of access to one out of his/her three preferred foundation courses. In general, nobody is guaranteed access to their first choice among the three alternatives. However, those who have a well documented need for adapted (see glossary, Annex 4) education and training, are entitled to be admitted to their first-choice foundation course. They may also be given the right to an extended education up to five years.

The statutory right to upper secondary education covers three years' full-time upper secondary education within a period of five years. Pupils and apprentices must enter the training no later than one year after completing lower secondary education to obtain the full benefit of the legal right.

Upper secondary education provides university entrance qualifications, vocational qualifications or documented partial qualifications. Each young person who enters vocational training is given the opportunity to complete his or her education with a formal qualification or a partial qualification.

The system emphasises the development of broad competence in order to establish a solid basis for continuing training. Coordination of education and training activities between schools, private enterprises and the public sector, is encouraged. Modular curricula are intended to promote adult education and training, as modules may be taken individually and combined into a valid qualification as CVT and labour market training. Adults may sit for the examinations and the trade examinations as external candidates.



Pupils and apprentices who wish to obtain university entrance qualifications in addition to vocational qualifications at upper secondary level, may take additional theoretical courses after completion of vocational education or training. Such courses are based directly on the previous education (¹⁹). To make this possible, all pupils must obtain a broad, general and relevant body of knowledge. New curricula have been developed in all courses, designed to meet this requirement, with a balance between general knowledge and specialisation.

^{(&}lt;sup>19</sup>) If chosen directly after Advanced Course I, i.e. after two years of vocational education at school, one year of general education is required. If chosen after completing vocational training, having obtained the trade or journeyman's certificate, a half-year of general education is enough to obtain university entrance qualifications.



#### 3.1.1.3. Responsibilities of county authorities

Besides being responsible for providing education for young people with a statutory right, the county authorities must ensure that young people and adults without this statutory right are given the opportunity to obtain education. Although the number of adult students decreased considerably after 1994, as of mid-1997 there were still more applicants than places in the most popular subject areas.

The county is obliged to provide education and training with a volume corresponding to 25 % overcapacity (²⁰). The annual overcapacity of 25 % is meant to meet requirements from applicants who did not previously complete secondary education, but are too old to have the statutory right, as a second-chance provision.

In all counties the authorities have established a follow-up service with a responsibility to follow up drop-outs and young people who have not applied for, or accepted, a school or training place, despite their statutory right. The follow-up service is obliged to ensure that every individual within these groups, even if he/she has a job, gets the opportunity to obtain an education that leads to a recognised qualification.

Even if the county authorities have the formal responsibility for organisation and implementation, the role of the social partners in the shaping and implementation of vocational training must not be underestimated. As described above (Section 2.1.4), they are central at both national and regional levels in both advisory and decision-making bodies in the development of training appropriate to the needs of society.

Public planning and budgeting is based on the assumption that one third of the pupils entering upper secondary school will start vocational training. This corresponds to the social partners' analyses of the need for skilled workers, concluding that there is an annual need for about 17 000 new apprenticeship places.

The county authorities are responsible for vocational training in its entirety; both education at school and training in industry, business and the service sector. If there are not enough apprenticeship places, pupils have to be offered a place at an Advanced Course II at school to complete their training. When the entire training takes place at school, the total period is three years. Those who complete their training at school take the same trade examination as the apprentices and obtain the same trade certificate and the same formal status in working life (²¹).

^{(&}lt;sup>20</sup>) Related to the average number of students within an age cohort over a period of three years.

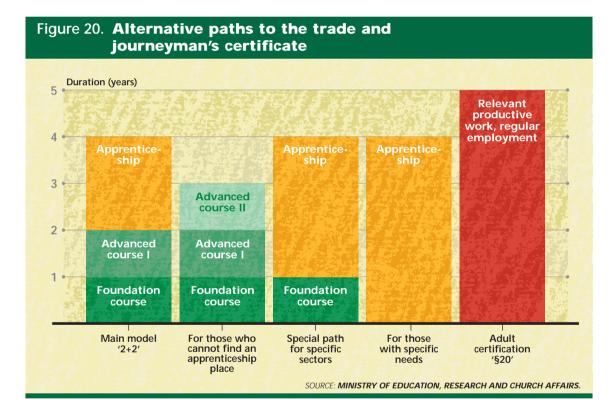
^{(&}lt;sup>21</sup>) However, the enterprises prefer candidates with a background as apprentices, because of their practical experience of working life.

#### 3.1.1.4. Training models

The main model for training in recognised occupations covered by the act concerning vocational training implies two years at school followed by two years of in-service training and productive work in industry, business or the public sector (²²). This is known as the 2+2 model. The curricula cover the whole period at school as well as the apprenticeship period.

After Advanced Course I, the pupils sign an apprenticeship contract with an enterprise or institution which is approved the county education authorities. The enterprise or institution receives public support for assuming training responsibilities.

During the last two years of their vocational training, the apprentices take part in the day-to-day work of the enterprise within the recognised occupation in question. The training part of the apprenticeship period should be equivalent to one year of training at school, while the rest is supposed to be productive work.



 $^(2^2)$  The 2 + 2 years' system was preferred in favour of an alternating system, because the latter would have been too difficult and expensive due to low population density and long distances.



Most recognised occupations follow the main model, but there are exceptions. On the recommendation of a training council, the Ministry can decide that a particular recognised occupation is to have a different period of apprenticeship.

- In certain recognised occupations the foundation course is directly followed by two years of training in the enterprise, and then an additional year of work participation (i.e. working without a full salary). The apprentice has to receive instruction in theoretical subjects during the training period, e.g. periodical training courses at school, the content corresponding to the content of Advanced Course I.
- Occupations with a recognised need, e.g. due to a high degree of specialisation, are granted an extended training period of six months, either at school or at the workplace. However, the examinations and tests for these recognised occupations follow the same principles as the main model.

Exceptions can also be made for pupils with specific, documented (usually by a psychologist after thorough examination) needs. For example, pupils with particularly low motivation can enter apprenticeship directly from lower secondary school, that is to say, without taking two years in upper secondary school first (²³).

#### 3.1.1.5. Apprenticeship

To take on an apprentice, an enterprise or public institution must be approved by the county authorities as a training organisation (*lærebedrift*). In order to obtain such approval, the organisation must be in a position to meet the training requirements of the curriculum for the recognised occupation concerned. A qualified training manager must be appointed with responsibility for the instruction, whereas the actual training may be provided by several employees. The training is supervised by the employees' representatives and the training manager who make sure that the training facilities are adequate, that the curriculum requirements are met and, thus, that the apprentice receives the training he or she is entitled to.

Legally, the apprentice is an employee of the enterprise and has the rights and duties that follow from statutes and wage agreements. At the same time, apprentices are entitled to loans and grants from the State educational loan fund on the same conditions as pupils and students.

During the two years in the enterprise (which is considered as one year of training and one year of productive work), the apprentice receives a wage which increases every half year. The wage is determined as a specified percentage of the agreed minimum salary (*tarifflønn*) of a skilled worker in the specific occupation according to the following scheme:

(²³) It is also possible for pupils with very low motivation for schooling to have special arrangements with greater opportunities for training in an enterprise, the so-called placements. In such cases, the person is considered formally a school pupil and not an apprentice but nevertheless obtains part of the training in an enterprise for a shorter or longer part of the school period. However, it is not the same training as for apprentices. For example, the enterprise does not enter into an apprenticeship contract with the young person and does not have the same responsibilities for the professional progress of the pupil as it does for apprentices.

### Table 3. Apprenticeship wages, January 1997

Six-month period	Training arena	Wage as a percentage of negotiable salary of a skilled worker*	Example 1: Building industry, NOK per hour**	Example 2: Public service, NOK per hour**
First	School			
Second	School			
Third	School			
Fourth	School			
Fifth	Enterprise	30	27.30 ***	24.90
Sixth	Enterprise	40	36.40	33.20
Seventh	Enterprise	50	50.65	41.50
Eighth	Enterprise	80	68.25	66.40

* Minimum salary *(tarifflønn)* is negotiated every year by the social partners representing the various branches of the economy. There are wage differences between the various recognised occupations.

** Social costs are paid by the enterprise on the same scale as for regular employees. Tax is deducted from the apprentice wage.

** ECU 1 equals approximately NOK 8.43 (June 1998).

SOURCE: NORWEGIAN CONFEDERATION OF TRADE UNIONS.

Adult apprentices aged 21 or more, without a statutory right to vocational training, have a one month probation period, as does the training organisation. During this period both the apprentice and the establishment may cancel the agreement with 14 days' notice. The apprenticeship contract must be signed within the first month of the training period.

A significant number of enterprises are able to take on apprentices and assume responsibility for training in one or more recognised occupations, thus covering the whole curriculum. Others can provide training in only parts of the curriculum, due to a high degree of specialisation or an irregular flow of orders. In such cases, enterprises often cooperate through a training office or a training circle.

A training office (*opplaeringskontor*) coordinates training activities between member enterprises which have agreed to take on a joint responsibility for training apprentices. The apprenticeship contract is drawn up between the apprentice and the training office, and the training takes place in one or more of the member enterprises.

A training circle *(opplaeringsring)* is an arrangement whereby individual enterprises, each of which has contracts with apprentices, cooperate with each other and with enterprises which are not in a position to take on apprentices alone, in order to achieve the highest possible level of quality in training. The apprenticeship contract is drawn up between the apprentice and the enterprise which holds the main responsibility for training of the particular apprentice. Thus, an enterprise or a public institution may take part in the training of apprentices even in cases where it cannot on its own provide sufficient training.



Chapter 3

Training offices and training circles are in most cases established on the initiative of the employers' associations within the recognised occupations, but sometimes the initiative is taken by the county vocational training committees (see Section 4.1.2.2.1). Training offices and circles have to be approved by the vocational training board. Public sector institutions may establish their own training offices or circles, or they may cooperate with enterprises in the private sector in the relevant field of activity. Schools may also be associated with training offices and circles to help with organisation and training.

#### 3.1.1.6. Second chance — § 20 of the act concerning vocational training

Section 20 of the act concerning vocational training allows adults who wish to obtain a trade and journeyman's certificate to obtain formal recognition of knowledge and skills acquired over time in the context of a job. The Section 20 measure is not a training, but a documentation, measure. Candidates do not need to go through a formal education and training process, but must have relevant experience of at least 125 % of the normal apprenticeship period for the occupation, that is to say, normally five years. They must take the same final examination as the apprentices, including both theoretical and practical elements.

As opposed to the apprentices, adults who obtain a trade or a journeyman's certificate through the system of Section 20 do not need to pass an examination in the general subjects which are required in upper secondary education. The philosophy behind this is that adults have a lot of informal knowledge compensating for these school subjects (e.g. Norwegian language, mathematics, English language, social studies).

The Ministry has proposed eliminating this difference between adult and apprentices, claiming Section 20 candidates should have to prove identical knowledge and skills as apprentices. The proposal by the Ministry has been severely criticised by both the Confederation of Norwegian Business and Industry (NHO) and the Norwegian Confederation of Trade Unions (LO). Both sides of industry believe that increased general theoretical requirements would deprive many adults of the motivation to start studying and training for the examination, thus depriving them of the chance to obtain a formalisation of their real qualifications. This conflict between the Ministry and the social partners has been unresolved for several years.

Section 20 has become more important since 1994 because of the many newly recognised occupations (or trades). Many of these are in traditionally femaledominated occupational areas such as the caring professions, child and youth work, shop work, etc. Moreover, enterprises find Section 20 to be a means of recording the skill level of their workforce and thus an effective instrument for attracting potential customers.

As enterprises must have employees with the necessary vocational skills in order to take on apprentices, Section 20 is important for the recruitment of instructors and vocational guidance providers. This provides enough reason for many enterprises to encourage their employees to formalise their knowledge by taking the trade examination in accordance with Section 20. This has therefore become an important means of documenting and recognising the value of informal on-the-job learning by the award of formal qualifications.

In the mid-1990s the number of examinations passed by Section 20 candidates accounted for some 40 % of all trade certificates. For the period 1993–95, we have the following figures.

able 4. <b>Numl</b>	pers passing tr	ade and jouri	neyman's examinatior
Year	Total	§ 20	§ 20 as % of total
1993	14 830	6 532	44
1994	15 576	6 372	41
1995	16 319	6 712	41
	SOURCE: THE MINIST	RY OF EDUCATION, RESEAR	RCH AND CHURCH AFFAIRS, SASA-STATISTIC

#### 3.1.1.7. Curricula, courses and recognised occupations

From 1994 on, new modular curricula, including the specification of standards for formal certification, have been prepared in all subjects at all levels. The modules integrate theoretical and practical education. The modular structure is intended to promote flexibility and increase possibilities for obtaining formal certification.

As a result of the new curricula, vocational training is now based on a common platform with larger elements of theory and general subject areas. Distribution of subjects and duration of education in the various subjects are identical for all vocational subject areas, although the content differs according to the recognised occupation in question. Information technologies are strengthened in all areas of study.

The foundation course is meant to provide a broad knowledge base for specialisation and lifelong learning. A greater degree of vocational specialisation takes place in Advanced Course I (second year) and, especially, in Advanced Course II (third year) and in the apprenticeship period.

In June 1997, there were more than 180 recognised occupations in which training is completed by an apprentice period in an enterprise or in the public sector. Recognised occupations have been developed in new fields, especially in female-dominated professions and within the public sector, e.g. hotel reception work, shop work, office work, cleaning, the caring profession, child and youth work. Other newly recognised occupations include driver, mining, mechanics, forestry, fishing and hunting, and technician. In the period 1994–96, 42 new occupations were recognised. At the same time, the structure of recognised occupations under the act concerning vocational training is subject to continuous revision.

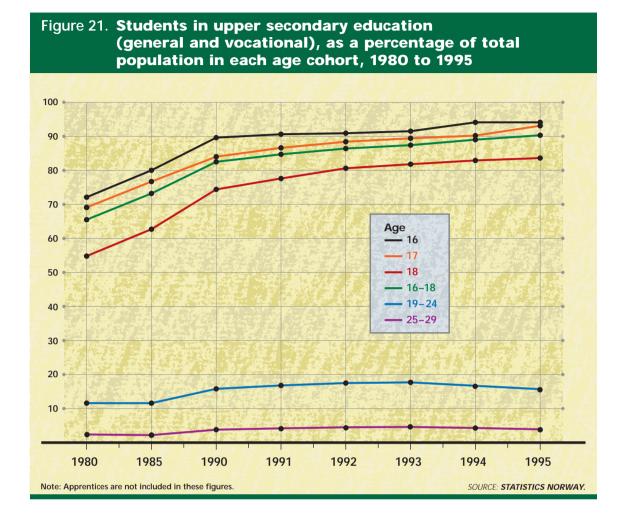
#### 3.1.1.8. Scale and participation

#### 3.1.1.8.1. Global overview

Over the last decades there has been a significant increase in the demand for upper secondary education and training. While 72 % of the pupils completing compulsory education in 1980 attended upper secondary school, the share has now risen to almost 95 %. In 1976 there were some 133 000 pupils registered at this level. During the 1996/97 school year, 393 out of a total of 535 upper secondary schools offered vocational training, catering for over 178 000 pupils, including general education.



Chapter 3



From the 1995/96 to the 1996/97 school year, around 5 700 pupils switched from one type of training to another. This amounts to 3 % of the total. One year earlier the corresponding number was 3.5 %.

Table 5. Students in upp 1 October 1996	oer sec	ondary	y educa	ation b	y subj	ject ar	ea and	age,
Subject area/age	-16	17	18	19	20	21-25	26-	Total
General and business studies	23 915	23 062	25 189	4 795	1 424	2 321	2 453	83 158
Music, dance and drama	1 277	1 196	1 082	147	38	43	11	3 794
Sports and physical education	1 982	1 799	1 685	254	58	39	11	5 829
Total general subjects	27 174	26 057	27 957	5 196	1 520	2 403	2 475	92 782
Health and social studies	4 672	5 260	3 015	1 256	782	1 835	2 306	19 126
Agriculture, fishing and forestry	1 177	1 201	1 0 9 1	398	242	460	294	4 864
Arts, crafts and design studies	3 451	3 111	1 903	542	270	515	472	10 264
Hotel and food-processing								
Occupations	2 3 3 4	2 409	1 007	331	172	335	222	6 810
Building and construction								
Occupations	1 737	1 871	539	190	105	195	145	4 782
Technical building occupations	532	605	317	140	73	213	149	2 030
Electrical occupations	3 362	3 120	1 739	309	134	323	175	9 162
Engineering and mechanical								
Occupations	4 078	3 849	2 235	737	330	501	332	12 062
Chemical and processing								
Occupations	340	282	43	24	25	83	52	849
Woodworking occupations	305	338	159	67	43	159	181	1 252
Total vocational subjects	21 988	22 047	12 049	3 995	2 175	4 619	4 328	71 201
Other	928	1 216	1 160	1 406	1 038	3 614	4 939	14 300
Total	50 090	49 320	41 166	10 597	4 734	10 636	11 741	178 283
			SO	JRCE: MINISTR	Y OF EDUC	ATION, RESEA	ARCH AND CI	HURCH AFFAIRS.

Apprenticeship contracts are not included in the above figures. The counties reported some 28 000 existing apprenticeship contracts on 1 October 1996.

Year	Number of contracts
1993	18 991
1994	21 247
1995	22 657
1996	27 944

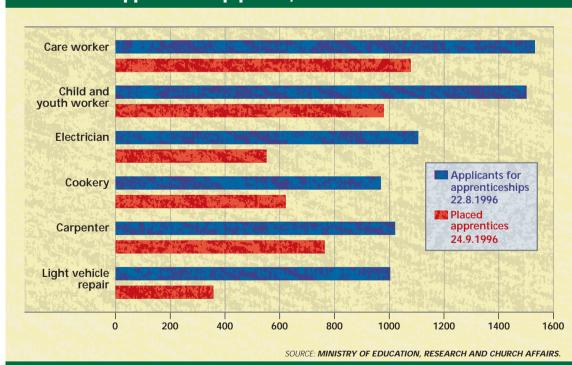
Preliminary reports from the counties from September 1996 show that more than 16 500 new apprenticeships were entered into in 1996. Of these, 7 000 were for adults. 6 400 of the 9 550 who had attended school courses in the new structure, were entitled to upper secondary education.



According to the 2+2 model, one can say that two thirds of the training takes place at school, whereas one third of the training takes place in enterprises. The explanation is that one of the two years in the enterprise is intended as regular work participation — not training. In practice, however, it can be rather different: when the first cohort under Reform 94 was due to enter apprenticeship in 1996, it was not possible to obtain apprenticeship places for all those who wished to have one. Thus, more than 3 000 applicants for company training, corresponding to more than 30 % of the total, had to receive all their training and complete their vocational education at school.

While there were too few apprentice candidates in some counties to fill all the apprenticeship places in some recognised occupations, there were young people in the same occupation in other counties who did not obtain apprenticeship places. In some recognised occupations there were too few apprentices also on a national basis. The Ministry and the social partners are cooperating closely to find appropriate measures to reduce this mismatch. They are looking for new measures to improve the framework conditions for training organisations.

As shown in the figure below, the problem of too few apprenticeship places is concentrated in a relatively small number of recognised occupations under the vocational training act. Forty-five per cent of the pupils covered by the reform who did not receive an offer of an apprenticeship were in six recognised occupations: care worker, child and youth work, the electrical occupations, cooking, carpentry and the repair of light vehicles (²⁴).



# Figure 22. Recognised occupations with a significant lack of apprenticeship places, 1996

(²⁴) This mismatch is probably due to several factors, such as insufficient labour market analysis and popularity trends (e.g. cookery) among young people. Public health institutions have been criticised for being too slow in taking on apprentices in new recognised trades, since there is an obvious lack of labour in this sector.

The following tables provide further information on trends in the supply and takeup of apprenticeship places during the period 1995 to 1997.

# Table 7. Demand for, supply and take-up of apprenticeship contracts in 1996

Foundation course (area of study) a	Students t Advanced Course I* 1.10.1995	Applicants for apprenticeship 22.8.1996	Intentional agreements** 22.8.1996	New apprenticeship contracts 24.9.1996
General and business				
studies		348	429	231
Construction and				
civil engineering	1 679	1 383	2 126	1 047
Electrics and electronics	3 433	1 841	1 258	970
Arts, crafts and design	1 614	1 356	949	815
Hotel and food-processing	2 760	2 194	1 981	1 456
Health and social care	4 134	3 028	2 135	2 053
Chemical and				
industrial processing	283	247	349	212
Engineering and mechanics	4 260	3 789	328	1 967
Agriculture,				
fishing and forestry	398	217	259	155
Technique in building				
and construction	562	417	724	305
Woodworking	472	387	438	240
Total	19 595	15 207	13 976	9 451

* Only students who attend Advanced Courses I which prepare for apprenticeship, are included. ** Intentional agreements are signed between the vocational training secretariat and enterprises which intend to take on apprentices. Later, they are replaced by apprenticeship contracts, between the enterprise and the individual apprentice. Intentional agreements can be seen as expressions of interest/need by the enterprises.

SOURCE: MINISTRY OF EDUCATION, RESEARCH AND CHURCH AFFAIRS.



Total         Female         Total         Female           Østfold         909         260         871         325           Akershus         1 084         357         1 049         374           Oslo         1 525         480         1 403         455           Hedmark         586         157         476         151           Oppland         665         209         557         183           Buskerud         862         243         800         229           Vestfold         915         278         819         217           Telemark         703         232         650         220           Aust-Agder         523         165         359         135           Vest-Agder         808         212         718         200           Rogaland         2 118         657         2 205         644           Hordaland         1 901         559         1 649         509           Sogn og Fjordane         447         108         409         112           Møre og Romsdal         1 109         287         979         254           Sør-Trøndelag         1 104         310 <t< th=""><th>County</th><th>1</th><th>996</th><th>19</th><th>97</th></t<>	County	1	996	19	97
Akershus1 0843571 049374Oslo1 5254801 403455Hedmark586157476151Oppland665209557183Buskerud862243800229Vestfold915278819217Telemark703232650220Aust-Agder523165359135Vest-Agder808212718200Rogaland2 1186572 205644Hordaland1 9015591 649509Sogn og Fjordane447108409112Møre og Romsdal1 109287979254Sør-Trøndelag1 104310966324Nord-Trøndelag558120465132Nordland958274887321Troms617183594170Finnmark1968718959		Total	Female	Total	Female
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Sogn og Fjordane447108409112Møre og Romsdal1 109287979254Sør-Trøndelag1 104310966324Nord-Trøndelag558120465132Nordland958274887321Troms617183594170Finnmark1968718959	Rogaland	2 118	657	2 205	644
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Finnmark 196 87 189 59	Nordland	958	274		
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Total 17 588 5 178 (29.4 %) 16 045 5 014 (31.2 %		196			
	Total	17 588	5 178 (29.4 %)	16 045	5 014 (31.2 %)

It can be seen from the above that:

- (a) the number of new apprenticeship contracts decreased in all counties except for Rogaland, which is the centre for the oil industry;(b) the female share of apprenticeship contracts increased.

	Table 9. Apprenticeships — applicants and intentional           agreements by county, 1997						
County	Applicants	Intentional agreements*	Difference				
Østfold	1 111	794	317				
Akershus	1 125	1 151	- 26				
Oslo	889	1 153	- 264				
Hedmark	707	543	164				
Oppland	753	505	248				
Buskerud	799	823	- 24				
Vestfold	681	742	- 61				
Telemark	734	570	164				
Aust-Agder	449	352	97				
Vest-Agder	686	558	128				
Rogaland	2 230	2 911	- 681				
Hordaland	1 842	1 586	256				
Sogn og Fjordane	452	482	- 30				
Møre og Romsdal	1 089	1 033	56				
Sør-Trøndelag	1 041	604	437				
Nord-Trøndelag	739	503	236				
Nordland	1 161	915	246				
Troms	589	640	- 51				
Finnmark	241	282	- 41				
Total	17 318	16 147	1 171				

* Intentional agreements are signed between the vocational training secretariat and enterprises which intend to take on apprentices. Later, they are replaced by apprenticeship contracts, between the enterprise and the individual apprentice. Intentional agreements can be seen as expressions of interest/need by the enterprises.

SOURCE: MINISTRY OF EDUCATION, RESEARCH AND CHURCH AFFAIRS

The tables show considerable geographical variations, but no systematic trend can be observed. The lack of applicants for available apprenticeship places is greatest in the recognised occupations in the fields of mechanics and electro-mechanics (traditional metalwork, shipbuilding industry).

#### 3.1.1.8.2. Participation by women

Women play a major and important role in Norwegian working life, but they tend to choose occupations in line with a traditional pattern of sex roles. Health and social work, teaching and cleaning are sectors in which women are in the majority. The proportion of women is also high among lower-level officials in public administration.

Traditionally, the male-dominated occupations have had a formalised supply of training, regulated by the act concerning vocational training. Many female workers in traditional women's jobs had no possibility to obtain certification as a skilled worker. This to a certain extent explains the low female share of candidates for trade examinations.



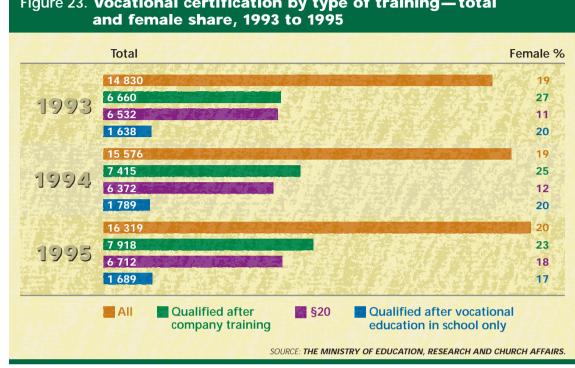


Figure 23. Vocational certification by type of training - total

There is reason to expect an increased share of female candidates for trade examinations in the years to come, due to formal recognition of occupations within traditionally female-dominated professions such as social work, reception work, shop work and cleaning.

#### 3.1.1.8.3. Immigrants in upper secondary education and training

In the definition of 'immigrants', Norwegian educational authorities first of all emphasise language background. The concept that is most often used, is 'non-Norwegian-speaking pupils' or 'pupils from language minorities', referring to people who have a mother tongue other than Norwegian, Sami, Danish or Swedish. The terms cover all groups of immigrants, including refugees, asylum-seekers, people with residence status for humanitarian reasons, people with temporary residence status on a collective basis, those pursuing education and training, and reunited families. There are large differences between and within the various groups, ranging from people with a university background, to illiterates. Some of them have just arrived in Norway, while others were born here. Some speak Norwegian perfectly, while others hardly know the language at all.

Non-Norwegian speakers who have a valid Norwegian residence permit, whether permanent or temporary, have the same right as Norwegians to upper secondary education and training. Under age asylum-seekers may also be admitted to school while they await confirmation of their status, but have no right to complete the school year if their residence application is rejected.

People from Nordic countries and countries within the EEA area have the same right to upper secondary education and training as people who have received their primary and lower secondary education in Norwegian schools. In order to be

admitted, an applicant must normally have completed a nine-year period of primary and lower secondary education or the equivalent, i.e. corresponding both in content and level.

There are no language requirements for admission. The State finances extra language training for non-Norwegian speakers and for Sami pupils who have had little or no Norwegian language training in compulsory school. Extra language training is not financed for:

- pupils who have received extra language training for at least three years in compulsory school;
- people born in Norway;
- people who have legally resided in the country for at least 10 years;
- exchange students who are in the country for a period of one year.

Non-Norwegian speaking applicants not older than 20 years, who have a special need for adapted language training, may receive the training over a prolonged period, not exceeding five years, if this is considered necessary by an expert evaluation.

Research reveals that immigrants have weaker recruitment rates and results and higher drop-out rates than other pupils in upper secondary education and training. They have better results in general than in vocational subjects. Those who attend special classes do better than those in ordinary classes, and girls do better than boys. It seems that the drop-out rate in general education is higher for immigrants than for other pupils, and higher for boys than for girls within this group.

A study by the Vocational Training Committee in Oslo, reveals that non-Norwegian speakers have special problems when it comes to obtaining apprenticeship places.

In the school year 1996/97, the counties increased the effort to find placements in enterprises for Advanced Course I immigrant pupils. This is important, as direct contact between applicants and schools may reduce the difficulties in drawing up apprenticeship contracts. Experience from Oslo shows that placements in this respect are of special importance to non-Norwegian speaking pupils.

#### 3.1.2. Higher education

Higher education in Norway is divided into two sectors; the university sector and the non-university sector. The latter comprises 'colleges' and 'university colleges'.

Most higher education institutions are State owned and tuition at these institutions is free. In addition, some private institutions are certified by the Ministry to offer higher education.

It is becoming more and more popular for students to study abroad; this is also considered an important element of Norwegian education policy.

#### 3.1.2.1. Admission

Admission to higher education is decided centrally by the government. In general, both the universities and the colleges have the same requirements.



72

A general matriculation standard has been introduced setting minimum requirements which include the following components:

- successful completion of three years of general upper secondary education comprising Foundation Course, Advanced Course I and Advanced Course II; or
- a recognised vocational qualification / trade or journeyman's certificate.

There is a prerequisite that the applicant has passed examinations in general theoretical subjects corresponding to a specified level of attainment defined in terms of lessons per week (²⁵): Norwegian (14), English (5); history and social studies (6); mathematics (5) and natural science (5). Students attending general upper secondary education meet this requirement by successfully passing the final examinations at each course level. Students who complete two years at school as a part of their vocational training have to attend a specific Advanced Course II with a theoretical focus, whereas skilled workers, i.e. persons who have successfully passed the examination for a trade or journeyman's certificate, have to spend only a half-year in upper secondary school in order to get access to higher education.

Applicants can, however, be admitted to higher education without having passed the normal upper secondary final examinations. Such students must fulfil the specific minimum subject requirements mentioned above, be 23 or more years old, and have at least five years of work experience or a combination of work experience, education and training.

For some study programmes, for example, engineering, medicine and translation, there are also more specific entrance requirements such as exams from advanced-level courses in particular subjects in upper secondary school.

Admission to many areas of study is competitive since demand exceeds the number of places available. Entry to higher education is thus regulated quantitatively and is determined by the capacity of the individual institution. This applies to study at university and non-university institutions alike.

In response to the demand for higher education, an administrative measure called national access (*nasjonal åpning*) was introduced with effect from the 1995/96 academic year. The *numerus clausus* was abolished in the faculties of Humanities and Natural and Social Sciences at the universities at a national level, meaning that all qualified applicants will be accepted by the faculty they apply to, but not necessarily at the university of their choice. The aim is to ensure education for all and to avoid too much pressure on the most popular institutions. Provisions regarding the *numerus clausus* for specific study programmes or faculties are open to revision on a yearly basis (²⁶).

 $^(^{25})$  The requested number of lessons per week corresponds with the total after three years of general upper secondary education. For example, 14 lessons per week means 5 + 5 + 4 lessons per week at Foundation Course, Advanced Course I and Advanced Course II, respectively.  $(^{26})$  Decided by the *Storting* for the universities and by the government for the colleges.

To ensure the right for all citizens to have their real skills formally evaluated also at the higher level, a special provision to that effect has been introduced into the Universities and Colleges Act, as follows:

Whoever satisfies the general and, as the case may be, special admission requirements, as well as other requirements for taking the examination in a given discipline or course of study, is entitled to sit for the examination. This also applies to students who have not been admitted to the discipline or course of study.

In the autumn of 1995, this concerned about 5 100 persons, mostly at the universities, and most of all at the University of Oslo. The practical application of this provision i.e. arranging examinations for a large number of external candidates, has led to some legal and administrative difficulties. Private candidates are charged a fee to cover costs of examination arrangements.

#### 3.1.2.2. Public provision

As a part of the educational reforms of the 1990s, the non-university sector was reorganised starting in August 1994. Ninety-eight regional and vocational colleges were merged into 26 'State colleges'. By mid-1997, higher education in Norway was offered at the following public institutions:

#### The university sector

- 4 universities;
  - University of Oslo, University of Bergen, Norwegian University of Science and Technology (Norges teknisknaturvitenskapelige universitet — NTNU) in Trondheim, and University of Tromsø.

 6 'university colleges', i.e. highly specialised national higher education institutions; Norwegian College of Agriculture, Norwegian College of Veterinary Medicine, Norwegian School of Economics and Business Administration, Norwegian College of Physical Education and Sport, Norwegian State Academy of Music, Oslo School of Architecture.

#### The non-university sector

26 State colleges (statlige høgskoler);

• 2 colleges/academies of arts and crafts (Kunsthøgskolen in Oslo and Kunsthøgskolen in Bergen).

Most traditional vocationally oriented university programmes, for example medicine, odontology, psychology, pharmacy, theology and law, have a duration of five to six years. This also applies to the university colleges.

For purposes of vocational training, the State colleges are of particular interest. They vary in size from 165 students (Saami College) to nearly 8 000 students (Oslo College) and offer programmes in teacher education, health and social work, engineering, business administration and a range of studies corresponding to traditional university subjects for the lower degree.



Vocational training offered by the State colleges is mainly short programmes with a duration of two to three years. Health and social work, engineering and teacher training are the major disciplines. Teacher training is described in Section 5.2.

Health and social work training comprises the following fields: child welfare work, laboratory technology (bio-engineering), occupational therapy, physiotherapy, radiography, social work, nursing, social education work, audiography (2 years), dispensing, dental hygiene and prosthesis and orthoptics. A large part of these programmes is spent in supervised practice in direct contact with patients or clients.

Engineering studies (27) at the State colleges last for three years. Optional specialisations include:

Civil engineering:	Building, construction technology, technical planning, site engineering
Computer engineering:	Computer science, management of data systems
Electrical and power engineering:	Power engineering, electronics, tele-communications, automation technology
Chemical engineering:	Analytical chemistry, biotechnology, chemical technology
Mechanical engineering:	General mechanical engineering, construction technology, manufacture, control and energy engineering

#### 3.1.2.3. Private provision

A total of 22 private higher education institutions offer study programmes recognised by the Ministry. Nineteen of them receive State funding for (part of) their activities.

The private institutions cover a wide range of studies such as theology and religious studies, teacher education, nursing, social work education, engineering, computer technology, business administration and marketing, ballet and music. These programmes are either recognised as similar to programmes in public (i.e. State) higher education, e.g. in nursing and social work, or as alternatives at the same level, e.g. teacher training for anthroposophical schools (Rudolf Steiner).

#### 3.1.2.4. Network Norway

In a 1988 Royal Commission report on higher education and a 1991 White Paper, the term 'Network Norway' was coined to denote a national higher education and research network based on the principles of specialisation, cooperation and communication.

A governing principle of the network is that new study programmes should be planned and viewed in relation to an overall national plan. Since then, it has been an overall goal to develop the Norwegian university and college system into a joint, integrated knowledge system characterised by consolidated academic environments and internal work-sharing and by greater coordination between all the institutions involved in higher education and research. By means of the 'Network', the intention is to increase both total quality and total productivity in the sector.

^{(&}lt;sup>27</sup>) For the 'hoegskoleingenioer' degree.

#### 3.1.2.5. Growth

There was a substantial increase, some 70 %, in the number of students in higher education from the mid-1980s to the mid-1990s. This was partly due to a rise in unemployment and partly to a change in the general attitude to higher education.

In 1995, there were some 176 700 students in higher education:

- 80 600 in the university sector, of which 74 300 in the universities;
- 68 700 in the non-university sector, of which 13 600 in private institutions.

In addition, there were 9 500 students studying abroad and 4 445 'private students' at the universities who were not formally registered.

	Table 10. Students in higher education, by gender1 October, 1986 to 1995						
Year	Total	Men	Women				
1986	101 187	49 500	51 687				
1990	132 760	61 142	71 618				
1995	176 745	78 164	98 581				
			SOURCE: STATISTICS NORWAY.				

# Table 11. Students in higher education by sector/<br/>discipline, 1995

Sector/discipline	Students
Medicine and Dentistry, Health and Social Work	24 957
Business, Engineering, Technology, Natural Sciences	41 031
Pedagogical Education and Training, Theology	18 761
Architecture and Arts	1 912
Humanities and Social Studies, Law	63 026
Others	27 058
Total	176 745
SOURCE: MINISTRY OF EDU	CATION, RESEARCH AND CHURCH AFFAIRS

Since 1996, the demand for higher education seems to be flattening out, parallel to a drop in the unemployment figures. By 1997, the main concerns of the higher education institutions were linked to the consolidation of the new structures and further development of 'Network Norway' in order to ensure and develop further the quality in higher education.



#### 3.1.3. Provision for individuals with specific needs

#### 3.1.3.1. Upper secondary level

Young people with specific needs, based on physical or mental disabilities, poor qualifications, psychosocial problems or other disadvantages can be admitted to upper secondary education and training on special terms. Furthermore, they have a legal right to obtain specially adapted training. Many of them also have a legal right to adapted technical equipment such as a wheelchair and/or a computer.

Data from 8 out of the 19 counties show that 5.7 % of the students in upper secondary schools in 1995/96 were admitted on special terms. This corresponds to 8 000 pupils on a national basis. Roughly two out of three of them were boys. One fifth (18 %) attended general education, preparing for higher studies. As many as three out of five (59 %) were attending the three vocational subject areas — mechanical occupations, health and social studies, and the hotel and food-processing occupations. This distribution pattern varies significantly from the overall distribution of pupils within upper secondary education and training (see Section 3.1.1.8).

In accordance with a basic political objective of maximum integration, almost two thirds (60–65 %) of the pupils with recognised, specific needs receive adapted training within normal classes. Many of them may, however, receive parts of their training individually or in extra classes. The remainder attend classes with fewer pupils and/or reduced progress ('stretched') courses. Such a supply may also cover a smaller range of subjects. In some cases, schools organise courses which lead to partial qualifications. The supply is organised differently between counties, between schools, within the same county, and between professions and subjects. The specific need of the individual is, of course, the most decisive factor.

Young people with special training needs have the same legal right to vocational training as other pupils. If considered necessary after assessment by an expert, the duration of their training can be prolonged, or they may be allowed to take their entire training programme as an apprentice. However, the theoretical and practical requirements are the same as for ordinary training courses.

In the case of apprentices who need adapted training, the State provides extra financial and other support to training organisations which may request extra support for making adjustments at the workplace. An evaluation showed that 88 % of those candidates, who completed their training in an establishment which received extra support over the period, passed the examination for the trade and journeyman's certificate. This is close to the result for ordinary apprentices.

Despite the specific measures, the counties have great difficulties in finding enterprises which can provide apprentice places for pupils with specific training needs.

#### 3.1.3.2. Higher education

As of 1997, the policy of an equal right to education concerns all levels. Within higher education, however, there is no legal basis for this policy. Each institution is responsible for the provision of advice and assistance to its disabled students. In practice, few institutions make a real effort to provide special services for disabled students.

In order to improve the situation and promote equal access to higher education, a number of measures have been introduced:

- all higher education institutions are legally obliged to set up a permanent committee to look into study conditions for disabled students at their institution and spend at least 5 % of their maintenance budget on measures to facilitate physical access for these students;
- financial conditions for disabled students are improved, and student housing is adapted to their needs;
- State colleges are allowed to reserve up to 10 % of places for applicants with special needs, meaning that, once general academic access requirements are met, these applicants may be exempted from normal competition;
- specific government grants are offered to cover costs of extra administration and expenditure in order to provide necessary equipment and services during examinations, such as PCs, secretaries, inspectors at prolonged exams and the renting of extra rooms.



### **3.2. Continuing vocational training** (28)

According to the definitions used in this publication (see Section 2.4), most of the CVT provision falls outside the formal education and training system. Training provided by the technical schools is an exception. Within CVT, there is no clear pattern regarding which institutions deliver what kind of training, nor is there any formal standardisation of provision. There are many actors on the supply side of continuing training, and the division of labour is not clear in every field. The financial arrangements vary considerably.

These facts make it hard to identify a logical organisational principle for the pages below. Following a short description of the scale of participation and trends of delivery, we have chosen to give short presentations of the provision by type of supplier. In the two last sections, special emphasis is put on labour market training and business-oriented competence enhancement measures. For some recent developments relating to CVT provision, see Section 6.1.6.1 below.

#### **3.2.1.** Scale of participation and trends in delivery (29)

In the mid-1990s, approximately one quarter of the adult population participated every year in organised education and training. The main activities were internal training within enterprises and courses arranged by the study associations, each accounting for around 40 % of the total number of participants. There were no significant changes in this percentage during the previous years. In addition, comprehensive, informal training takes place through everyday work in the workplace — an activity which is seen as very important in the development of the individual employee's own skills.

A growing number of employees attend courses in order to fill gaps in their formal education. Primary, lower secondary and upper secondary education are offered by both public education authorities and various private suppliers (see below). Many adults participate in continuing education over several years through part-time studies in addition to their work, sitting for one exam at a time. Almost half of all the trade and journeyman's certificates are adult so-called § 20 candidates (see Section 3.1.1.6 above).

Training as a master in a recognised occupation is CVT for qualified craftsmen with several years of experience who wish to set up their own business or to hold a managerial position in a craft enterprise. The master's certificate should be considered as part of the formal training. It is administered by a publicly appointed Master Certificate Examination Board. The Confederation of Norwegian Business and Industry (NHO) is the secretariat for the examination board and is responsible for the practical administration of the arrangement. The study associations arrange courses in the four core subjects: business, management, marketing and vocational

^{(&}lt;sup>28</sup>) This section is mainly based on the Green Paper NOU 1997:25, on continuing vocational training.

^{(&}lt;sup>29</sup>) As of 1997, there were still gaps in the basic statistics and in the information on who has access to continuing training and the impact of such training. Furthermore, the statistical distinction between what falls within our CVT definition on the one hand, and other types of adult education and training on the other, is not clear in all respects.

theory. The master certificate training is thus mainly a business-administration continuing training, but, it also strengthens the participants' theoretical basis. From 1999, it is expected that the technical colleges will offer this theoretical training (see Section 3.2.2.1).

In 1997, the development of a more comprehensive system of adult education and continuing training was given high priority by both national authorities and the major social partners.

#### 3.2.2. General provision: major suppliers and types of training

#### 3.2.2.1. Technical colleges — training as a technician

The technical colleges are public schools owned and administered by the county authorities, and their activities are regulated by the act on upper secondary education. Although the training which these schools provide is not at the level of higher education, technical colleges are not upper secondary vocational schools. The technical colleges provide a two-year module-based further education for people with a trade and journeyman's certificate and a minimum of two years relevant practical experience. Applicants for technical colleges may also have longer vocational experience, education or a combination of the two.

Successful completion of studies at a technical college confers the status of technician. Training as a technician implies theoretical studies and specialisation based on the training for the trade and journeyman's certificate and the practical experience of the students. As of 1997, fully-trained technicians were admitted to higher education institutions in areas which offered further specialisation in the same field, for example engineering. Training as a technician is considered an appropriate background for entering a position as manager or foreman. Many of the trainers in upper secondary vocational education are trained at the technical colleges.

The number of students at the technical colleges dropped from almost 8 000 in 1992, to 3 747 in the school year 1996/97 (³⁰). The drop might be seen as a consequence of the uncertainty of the future role and status of the technical colleges after the introduction of Reform 94. This was still under review in 1997. New admission requirements and curricula were expected to come into force in the autumn of 1999 when the training as a technician will give full admission to higher education and cover the theoretical requirements for the Master of Crafts Certificate (*Mesterbrevsordningen*) — see also Section 3.2.1.

Table 12.	Studer	nts at teo	chnical c	olleges	, 1990 to	o 1996	
Year	1990	1991	1992	1993	1994	1995	1996
Students	7 422	7 591	7 971	7 488	6 672	5 423	4 919
			SOURCE: TH	E MINISTRY OF	EDUCATION, RE	SEARCH AND C	HURCH AFFAIRS.



80

#### 3.2.2.2. Resource centres

Resource centres are established to provide a link between public training organisations and the local or regional labour market. They are expected to contribute to a better use of resources and to enhance the skills in schools and local society. The centres promote, market and provide training to private and public institutions on a commercial basis. The centres are often organised as separate departments within upper secondary schools, but can also be organised as limited companies or foundations.

Most of the 232 centres (1996) are small. Half of them sold courses for less than NOK 100 000 in 1994. However, the total turnover is estimated to be at least NOK 230 million. The major part of turnover is related to labour market courses (see Section 3.2.4). However, the turnover derived from training for enterprises was at least NOK 60 million.

Most centres were established during the latter part of the 1980s. At the time, the network of upper secondary schools was well developed and there was pressure in the labour market. Rapid technological development demanded flexibility in business and industry. Increasingly, the schools were expected to supply competence development for the enterprises and had to offer courses or other competence developing measures especially adjusted to the needs of the local enterprises.

The geographical distribution of the resource centres is very decentralised. Thus, the centres are able to offer specialised training to the local labour market in close cooperation with the enterprises. Examples of such training tasks are courses in foreign languages for enterprises, certification of welders for the oil industry, computer training and the placement of teachers in enterprises. Many of the centres have training on a contract basis for the employment authorities as their main activity.

The resource centres which have been involved in competence needs analysis in enterprises receive more requests for services, but only 30 % of the total offer this service (1996).

Centres which cooperate with the customer on tailoring courses before they are sold succeed in selling more courses to the enterprises. More than 80 % of the enterprises in a survey answered that the education system should focus more actively on the enterprises. It seems that the enterprises think that the authorities can offer the training and competence which they need, but that the school system is under-exploited as a source of competence in the regions.

#### 3.2.2.3. Universities and State colleges

With the act on universities and colleges of 12 May 1995, the universities and colleges became responsible for providing or organising continuing education and training in their own subject areas. One of the challenges for the universities and State colleges will be to organise in-service courses and formal postgraduate education for primary and lower secondary school teachers.

Historically, the contact between universities and colleges on the one hand, and enterprises on the other, has been limited to certain areas. Some study programmes at universities and colleges include compulsory in-service training, such as supervised practice in a hospital or at a school. Today, the contacts are broadening, due to

practical economic reasons and a general change in attitude in the academic environment. The universities have set up special offices responsible for establishing contacts with industry.

At university and college level, continuing education (videreutdanning) includes courses which are mainly based on, and presuppose, completed higher education and lead to examinations and formal qualifications. Continuing education is flexible and the goal is to adapt it to the needs of the participants. It is offered both as standard education at the school or university and in various forms of flexible education, such as distance, part-time and decentralised education.

Further education *(etterutdanning)* consists of shorter courses in limited subjects. Normally, they do not lead to an examination or a formal qualification. However, it is not always fruitful to make a clear distinction between continuing and further education. The same training can be offered both as continuing and further education. The goals and the formal qualifications of the individual will determine whether the training is considered to be one or the other.

In addition, several organisations and institutions offer consultancy services to enterprises. These services may be organised by associated institutions or may be carried out by departments at the universities and colleges. They often include a considerable element of competence development and not just product development. The universities and colleges are responsible for ensuring the quality of the advanced-level education programmes provided by study associations and for recognising the qualifications of staff teaching at study circle programmes leading to examinations.

The number of students participating in continuing education at public universities and colleges was, in 1996, estimated at approximately 85 500. They include full-time as well as part-time students. This number had sharply increased in comparison with two to three years earlier. In addition, a considerable number of students participated in continuing education at private colleges. Approximately 16 500 persons completed university or college level education, organised by a recognised distance education institution, and approximately 33 000 persons participated in courses arranged by the study associations (see Section 3.2.2.4) allowing them to sit for exams at universities or colleges as external candidates. The number of courses attended by each individual is not known, so that it is not possible to calculate the number of year equivalents.

Commissioned courses in universities and colleges constitute an important part of the institutions' work regarding dissemination of knowledge and technology and enhancement of skills. The system makes it possible for enterprises to buy specially tailored or branch-oriented continuing training courses for their staff. In addition, the commissioned activities of the higher education institutions include research and development work. In 1995, the commissioned activities accounted for 15 to 21 % of the operational budgets of the universities, and 4.6 % of the colleges.

Although the activity of the individual institutions within the field of continuing education varies considerably, it has increased in most institutions during recent years. This is in line with the goals of the Ministry of Education, Research and Church Affairs. Several universities and colleges have hired specialised personnel and established units or departments for commissioned activities — including continuing education.



In cooperation with the Norwegian Executive Board for Distance Education at University and College Level *(Sentralorganet for fjernundervisning på universitets-og høgskolenivå — SOFF)*, many of the continuing education courses are being provided through distance education.

To increase continuing education in the working community, an initiative has been taken to establish a network between continuing education institutions which teach technological subjects. Within the framework of the new plan for the education of engineers, continuing education is included as an integral part of the institutions' programme of subjects.

#### 3.2.2.4. Study associations (Studieforbund)

There are 22 recognised study associations in Norway. The study associations are umbrella organisations for a total of 359 voluntary organisations, including most political parties, employers' organisations, humanist organisations, sports organisations, organisations for the handicapped and other interest groups.

The study associations organise various types of training in close cooperation with their member organisations. Their training is an important supplement to the public supply, inasmuch as it responds directly to the needs of adults. Due to a decentralised structure, their activities are available to most local communities and business environments and also, to a large extent, the individual workplace.

As umbrella organisations for the employers' organisations, some of the study associations have considerable experience in administering and running large parts of in-company training, among others the trade certificate according to § 20 of the Vocational Training Act (see Section 3.1.1.6 above). Continuing education for most recognised occupations is administered and developed by the study associations.

The study associations offer a variety of courses all over the country. The training is aimed at adults at all levels, from the most elementary up to university and college level. Most of the courses are part of non-formal education, but the involvement in formal education is increasing. Annually a total of 750 000 participants attend their courses (1996), including approximately 22 000 adults at upper secondary level (including 5 400 § 20 candidates) and approximately 33 000 at college and university level.

Another major area of activity is to provide education and training commissioned by the employment authorities, private enterprises and public institutions.

Subsidies to specific target groups, of which various kinds of disabled persons constitute more than 90 %, are mainly used for topping-up the funding of studies. In 1996, 24 021 participants (62 % women) received public grants.

#### 3.2.2.5. Distance education institutions

Distance education institutions in Norway are central actors within the field of adult education. Their activities receive public funding and their goal is to give adults access to initial continuing training responding to their needs, using specially adapted training material and distance communication with a teacher.

Seventeen independent institutions were recognised in July 1996. In 1995, 94 000 students registered for distance education courses, and 61 000 completed courses.

These activities measured in standard number of hours, correspond to 6 200 fulltime students.

Distance education institutions offer courses over a wide range of studies. These are primarily non-formal education, but the number of courses leading to examinations, especially at upper secondary and higher educational level, is increasing. In 1994, a study on distance education revealed that 70 % of the attenders sought to improve work-related skills. Three quarters of the participants had full-time employment. Most of them would not have been able to enhance their skills without the supply of distance education — partly because they would not have had the opportunity to absent themselves from their work and partly because there was no relevant local supply in their field and at their level.

In the period 1994–95, the average age of participants in adult education and training was well over 30 and the share of women approximately 60 %.

Since modern communications technology was brought into use in distance education, there has been an increasing focus on this teaching method by education institutions. Today, distance education is offered by branch schools, independent distance education institutions and public education and training institutions.

In the period 1993–96, a national contact network for open and distance learning between public and private higher education institutions was set up through the Norwegian Executive Board for Distance Education at University and College Level *(Sentralorganet for fjernundervisning på universitets- og høgskolenivå — SOFF)* and a series of pilot projects was initiated. One of these projects, which started in 1994, consists of formalised cooperation between four institutions of higher education in open, flexible learning using electronic networks. In addition, new methods in open, flexible learning are being tested.

The Norwegian distance education institutions have a long tradition of supplying education and training throughout the country and have achieved wide recognition internationally. The secretariat of the International Council for Distance Education (ICDE) is based in Norway.

#### 3.2.3. Business-oriented competence enhancement measures

A major part of continuing training in enterprises is targeted towards certain sectors, industries and enterprises. The measures are organised and financed in various ways. Whereas enterprises must arrange the competence enhancement themselves, a number of actions are taken and large sums of money are spent through public arrangements, administered by large trade associations. Private suppliers are becoming more active, offering courses that are tailored to the needs of the enterprises.

#### 3.2.3.1. In-company training (31)

A major part of the training which the individual employee needs to perform his job takes place in the enterprise. All employees have a basic competence when joining

 $^(^{31})$  The section is to a large extent based on the results of two research programmes from 1996 which are described in NOU 1997:25.



84

the enterprise. On this basis, competence related to the special tasks of the individual employee has to be developed. When the employee masters the tasks, continuing competence enhancement is necessary in order for the employee to perform his job in the best possible way. In addition, change brings a need for new competence.

Various forms of in-company courses are among the major measures aiming at competence enhancement. This applies to both in-company training within a certain recognised occupation as well as in-company management training. The in-company courses may be arranged inside or outside the enterprise. They can be run by external consultants visiting the enterprise or by the enterprise's own employees.

Various forms of job training, e.g. systematic training with or without a consultant or a trainer, apprenticeship-type training, work experience placements and induction courses for new employees, are used increasingly. Planned job rotation is another measure which is used for competence enhancement. According to the employees, competence enhancement by trial and error in everyday work is just as important as various forms of organised training. Organised in-company training probably constitutes just a small part of the total competence production in working life. A major challenge in the future will thus be to make the enterprise visible as a major arena for non-formal competence enhancement.

Enterprises spend from 1.5 to 4.5 % of work hours on training related activities. The competence enhancement seems primarily to be governed by market demands and changes in the production technology. Only a few enterprises, quite often the big ones, said in 1996 that they had a long-term plan for competence enhancement.

However, it is evident that there is a growing awareness of competence needs in the enterprises and the public sector. In 1997, the basic work and wage agreements between the employers and the employees in the private and public sectors have sections related to the development of skills and of continuing training. An increasing number of enterprises have carried out, on their own initiative and in cooperation with either their branch organisation or the public infrastructure, a mapping of skills as part of strategic planning.

In many enterprises competence enhancement is to a great extent the responsibility of the individual employee. His or her motivation for continuing training may thus be crucial. The enterprises seem to have flexible borders between the needs of the enterprise and the wishes of the employees. They try to meet the needs of the employees who take on responsibility for their own training and development. However, the training should be initiated by the individual employee, and quite often it is expected that it takes place after working hours.

When it comes to buying competence services in the form of courses or participation in courses from external suppliers, the research revealed that private suppliers are given more emphasis than public suppliers. One in three enterprises bought competence services from public suppliers in 1995, whereas almost two thirds bought services from private suppliers.

Even if there is little information available on cross-company provision of CVT, it is known that many enterprises cooperate on CVT measures, either arranged by themselves, or as commissioned courses. Some of the training receives public support, and is organised in close contact with the social partners or with the branch organisations.

Coordinated steps by enterprises for the supply of tailor-made continuing education have first and foremost been initiated by the branch organisations in the form of specialised training establishments or branch-oriented development centres.

Quite often the networks in which enterprises cooperate deal primarily with other matters and training is only one of their activities. The networks are often characterised by personal contact and complementarity concerning problem solving, i.e. the enterprises complement each other in a way which is advantageous for all participants.

Another model is cooperation in continuing training between large companies on the one hand and small and medium-sized enterprises on the other. Such cooperation may have several forms. Often a large enterprise has a network of SME sub-contractors. In some cases, large enterprises arrange various kinds of training to ensure quality in the products or services provided by the sub-contractors. Some large enterprises require that their sub-contractors obtain certification according to an international standard such as the ISO 9000. Often business chains, for example hotel chains, arrange courses for their member enterprises.

There are no exact figures on the amount of in-service training within enterprises and the working community in general. Figures from the OECD indicate that Norway is close to the average of the member countries, as some 40 % of the workforce participates in continuing training annually. The annual investment in such training by the working community is estimated at NOK 11 500 million.

There is a clear indication that adults with upper secondary and higher education have a higher participation rate than those with a weak formal education basis.

#### 3.2.3.2. Public measures

The authorities make considerable efforts to improve skills in small and mediumsized enterprises, whether in the form of programme- and project-based activities, supports for continuing education and training courses, or simply business consultancy.

Business-oriented competence enhancement measures are administered by several ministries, with the Ministry of Trade and Industry (NHD) as the major actor.

The contribution in the form of programme- and project-based activities is channelled first and foremost through the programmes managed by the Norwegian Industrial and Regional Development Fund (*Statens nærings- og distriktsutviklingsfond — SND*) and the Research Council of Norway (*Norges forskningsråd — NRF*). The SND was established in 1993 with the aim of encouraging economically and socially profitable industrial development throughout the country.

#### 3.2.3.2.1. Consultancy services (Veiledningstjenesten - VT)

The public consultancy services (VT) were established in order to give small and medium-sized enterprises (SMEs) access to external resources for consultancy, continuing education and training and relevant information.



86

The consultancy services consist of a national network of private foundations and limited companies, in addition to government agencies, in which the Ministry buys services. There are a total of approximately 600 employees in the consultancy services (1996). In 1997, the authorities allocated a total of NOK 173 million to buying VT services on behalf of SMEs and entrepreneurs. The total turnover of the consultancy services was approximately NOK 400 million in 1995.

The competence enhancement of the consultancy services covers a wide range of activities, from free business-oriented information, training in setting up a new business, consultancy and guidance (including competence mapping) to laboratory and testing activities, seminars and courses, as well as continuing education.

The activities cover both technical and business/administrative subjects, including internationalisation. Some of the activities are targeted towards the individual, whereas others are targeted towards the management and the total competence base of the enterprise. Most of the competence enhancement activities are carried out as in-company training. The courses are often tailor-made to the individual enterprise, since the training needs of the various enterprises differ from each other. The in-company courses take place both during and after working hours.

The Norwegian Trade Council is part of the public consultancy service, and offers services which are meant to contribute to increased exports and the internationalisation of Norwegian trade and industries. The grants amount to a total of NOK 185 million.

#### 3.2.3.2.2. The Norwegian Industrial and Regional Development Fund — SND

Among the means used by the Norwegian Industrial and Regional Development Fund (SND) are loans, guarantees and grants. These are only to a certain extent spent on the training of employees. Development grants are given to competence enhancement activities in the enterprises.

The Research Council of Norway (NFR) and the Norwegian Industrial and Regional Development Fund (SND) organise extensive programmes for competence enhancement or other training in small and medium-sized enterprises. The NFR programmes primarily focus on the transfer of technology to SMEs. However, there are also more general competence enhancement programmes with other focuses, such as SME competence.

The programmes of SND are mainly of a business/administrative character. However, they also have technological programmes, such as one for establishing enterprises by means of new technology. FORNY is a programme run jointly by NFR and SND concerning research-based innovation.

The Norwegian Institute of Training is run by the Norwegian Trade Council. The institute offers a continuation of the standard college education and a number of shorter courses and seminars, as well as more general guidance, in fields such as international personnel administration.

In 1996, a total of NOK 45.7 million was granted by the Ministry of Local Government and Labour (KAD) and the Ministry of Trade and Industry (NHD) to cross-sectoral programmes administered by the NFR. The grants to SND from the two above mentioned ministries amounted to NOK 126.3 million in 1996.

There is no complete survey of the number of enterprises which are assisted in their competence enhancement by the consultancy services or programme activities. In order to indicate the scope of the courses, it should be mentioned that the National Institute of Technology (*Teknologisk Institutt — TI*), which is the major course supplier among the consultancy organisations, arranged various courses for a total of approximately 7 000 participants (from 1 966 enterprises) in 1995.

#### 3.2.3.2.3. Measures organised by various ministries

The goal of the Ministry of Local Government and Labour (KAD) is to contribute in various ways to competence enhancement in business and industry. This is to a large extent carried out by means of national regional development programmes, which were granted a framework support of approximately NOK 89 million in 1996. In addition, KAD had resources of NOK 83.7 million for its business and industry development in the counties and municipalities programme, as well as its labour market policy funds (In-company training — BIO — see Section 3.2.4.3 below).

The Ministry of Agriculture (LD) is engaged in various competence enhancement activities through its external administration, such as the county governors' agricultural department. In 1997 NOK 420 million was earmarked for this activity, including competence development, investment and change promotion measures in the agricultural sector.

The agricultural sector also has a fund for further education and operational business measures. In 1995, approximately NOK 5 million was allocated to courses, of which 75 % was offered by the study associations. In addition, the export programme (NOK 13 million in 1997), the consultancy and network programme (NOK 10 million in 1997) and various research programmes, as well as support to organisations focusing on competence enhancement measures, amounting to a total of NOK 14.8 million in the current year, should also be mentioned.

The Ministry of Fisheries (FID) granted NOK 11.68 million to business-oriented competence enhancement skills in 1997. These funds are administered by the Norwegian Fishing Industry Joint Board of Competence Development and the Council of Women in the Fisheries Industry (FKU). In addition, SND grants a total of NOK 50 million, via the budgets of NHD and KAD, to training the managers and middle managers in the fishing industry through the Federation of Norwegian Fishing Industry.

All of these competence enhancing measures are important because of their basis in business and industry. The measures focus on meeting the needs of the target group, and are provided throughout the country, from regional and local bases. Geographical proximity between suppliers and the target group is often an important condition for transfer of competence, as well as experience in the industry of the various enterprises. The enterprises vary in their competence needs. This necessitates differentiated competence enhancement activities. Several of these activities are in-company and thus ensure that the individual's competence enhancement is a direct contribution to strengthening the total competence base in the enterprise.

#### 3.2.3.3. Private suppliers of continuing education

Over the past years, the consultancy and advisory sector has been rapidly growing. Consultancy enterprises target their work towards most sectors and enterprises,



ranging from local and national authorities to the food and fishing industry, the processing industry, the mechanical industry and services and trade, offering tailormade courses, development programmes, advice and skills packages.

Approximately 75 % of the customer enterprises had fewer than 150 employees. A good third of the turnover consisted of sales to the public sector, the rest were to private enterprises. The consultants seem to act as good motivators and stimulators for the development of skills, and as a source of qualifications.

In 1996, 938 consultancy enterprises were registered in this market, of which 45 % were based in Oslo. These enterprises had a total of almost 8 600 employees, a turnover of more than NOK 6 300 million and a customer base of almost 94 000.

In principle, anyone can provide training if there is a market for it. However, the Ministry of Education has defined required levels of competence for providers of training leading to a formal qualification and examination. The same requirements apply to education and training which receive public financial support.

### 3.2.3.4. Training provision by sectoral, employers' and employees' organisations

The social partners have been heavily involved in providing information about the importance of a continuous development of skills and in motivating and encouraging enterprises to map their skill requirements. Joint initiatives are seen in the development of information material, in regional and local campaigns, and direct meetings with representatives from individual enterprises, with the aim of increasing the awareness of competence building and of presenting available methods and tools for the mapping of skills.

Within specific branches, agreements have been made between the social partners on various development programmes. Some of the programmes offer guidance and practical assistance in carrying out a systematic mapping of skill requirements to enterprises, free of charge. One such example is the 'development through cooperation' branch programme, which is managed jointly by the Federation of Norwegian Engineering Enterprises (TBL) and the Norwegian United Federation of Trade Unions (LO). For the purpose of mapping skills, enterprises are organised in regional networks.

Several social partner organisations offer vocational training at various levels, either on their own or together with their 'adversary'. The measures are targeted both towards the individual and the enterprise. Large trade associations carry out competence mapping in their member enterprises and organise continuing training for selected skilled workers.

Most of the social partners are members of study associations. Training activities may thus be included in the activities of the study associations.

The organisation and development funds (the O&U-funds) are a part of the wage system in the private sector. The Norwegian Confederation of Business and Industry (NHO) has entered into agreements concerning the O&U-funds with several trade unions, of which the most important partner is the Norwegian Confederation of Trade Unions (LO). Only enterprises covered by the wage agreements contribute to the O&U-funds.

The revenues from the funds are distributed by the main organisations in accordance with their joint decisions. The revenues are used for joint measures and, increasingly, for development measures in individual enterprises.

Employers and employee organisations continue to provide comprehensive training as part of their regular activities, partly through cooperation with training organisers and partly on their own account. As examples of the special measures, the following can be mentioned:

• The PIL (Federation of Norwegian Process Industries) School and the Norwegian School of Timber Technology (the sawmill industry) are established outside the traditional system for continuing education and training. They use distance education in providing CVT at the individual workplace. Both schools are recognised by the authorities as distance education institutions.

• The Norwegian Electrotechnical Development and Research Centre (ELBUS) is a non-profit institution which is owned 50/50 by the employees' and employers' organisations in the electrotechnical sector, where 93 % of the enterprises have fewer than 11 employees. Since 1993, ELBUS has created a structure of 16 regional centres, all over the country.

• The Norwegian Association of Medical Laboratory Technologists (NOBI) is one of the 36 members of the employee organisation, the Confederation of Academic and Professional Unions in Norway (*Akademikernes Fellesorganisasjon* — AF). NOBI has a membership of 2 982 women and 279 men, and is a good example of a small professional association which systematically organises continuing vocational education. In addition to organising an active continuing education and training programme for its members, both centralised and decentralised, NOBI participates as a partner in a Leonardo da Vinci project concerning a continuing education programme for medical laboratory technologists in Europe.

• The Norwegian Physiotherapist Association (NFF) has 6 500 members. Among the professionally active members 2 700 work in the public sector and 2 000 in the private sector. The further education programme of NFF consists of 60 module-based courses in physiotherapy. There are modular courses in the fields of child physiotherapy, health and environment, psychiatric and psychosomatic physiotherapy, rehabilitation and manual therapy. Each course consists of 10 modules.

NFF's module-based course system constitutes a systematic continuing education within a specialised field of physiotherapy. The organisation serves as a listening post for its members when it comes to new political and vocational challenges. The courses are in harmony with the public physiotherapist education. The professional personnel participate in the development as well as the implementation of the courses. The courses are partly funded by the employer or by the individual physiotherapist. In addition, NFF organises conferences and seminars; 1 500 physiotherapists attend the courses annually.

#### 3.2.4. Training as a labour market measure

Labour market measures, especially training ones, are crucial in counteracting the exclusion of the unemployed from the labour market and maintaining and



strengthening their abilities and qualifications in order to channel them swiftly into vacant jobs. The labour market measures are designed to support the employment offices, with the goal of improving the efficiency of finding jobs for the unemployed and reducing the mismatches in the job market.

One of the goals is to fill the gap between the skills of the job seekers and the demands of the employers for certain skills. An effort is therefore made to meet the employers' needs for certain skills by means of labour market training (*Arbeidsmarkedsopplaering* — AMO) as well as other measures.

The labour market measures to a certain extent also include continuing training of employees in order to prevent exclusion from the labour market.

#### 3.2.4.1. Labour market training (AMO)

Labour market training (AMO) is offered to the unemployed and the occupationally handicapped as part of the labour market strategy. The target group is unemployed, older than 19 and occupationally handicapped. Within this target group, the long-term unemployed with a weak educational background are given priority. At the end of November 1995, 70 % of those participating in labour market measures had not completed upper secondary school.

Some of the AMO courses lead to a trade and journeyman's, or other formal, certificate. Others provide specific skills and an updating of qualifications to meet acute needs in the local labour market. In exceptional cases, labour market training of a more general character is provided, for example for people with such a weak educational background that they cannot profit from vocational training.

The AMO courses are meant to be a supplement to the standard educational system, but there are often parallels in continuing education. Several AMO courses may be combined, and each of these courses may constitute modules in continuing training, so that in the long term participants may complete a training leading to a recognised occupation.

AMO courses are offered within several fields. In 1995, the majority of the AMO participants were trained in clerical work, mechanics and construction work. In these fields the demand for qualified labour was not met. Another major group is the so-called sundry courses, where applying for jobs is one of the subjects. A large number of the courses are at upper secondary level, but there are also courses at primary school level. A considerable number of the courses cannot be defined in relation to the various educational levels, but are targeted towards certain elements or part qualifications.

The courses last from one week to 10 months and are fully financed by the State. No fees are paid by the participants. On the contrary, the participants receive financial support during the training period.

The labour market training courses are the joint responsibility of the employment authorities and the education authorities. Whereas the Ministry of Local Government and Labour is financially responsible, the Directorate of Labour and its regional and local employment agencies determine the design, location, extent and type of course to be provided, taking into account both the requirements of the labour market and the individual job-seeker's qualifications and training need. The

employment agencies are responsible for the recruitment of trainees. The Ministry of Education, Research and Church Affairs has the professional and pedagogical responsibility, including responsibility for the curricula and the working conditions of teachers.

The employment authorities buy the AMO courses from the upper secondary schools, the resource centres and private suppliers.

Some labour market training courses are tailor-made to cater for immigrants, who are over-represented among the unemployed. The employment authorities and the local municipalities often cooperate in the training of newly-arrived immigrants.

The number of AMO courses varies according to market fluctuations, as the employment authorities adjust the activity according to the changes in the unemployment figures. In the period 1985–88, when unemployment was modest, between 17 500 and 11 300 participated in labour market courses. This was less than 1 % of the workforce. In 1989, unemployment increased, and the number of participants in AMO courses increased considerably, to 51 800, which was 2.4 % of the workforce. In 1994, there were approximately 77 300 participants, which was 3.6 % of the workforce. Later the number was slightly lower, due to decreasing unemployment. However, in 1995, the participants still constituted 2.8 % of the workforce (some 60 000 participants).

#### 3.2.4.2. Rehabilitation

There is a close link between work and welfare, both for the individual and society. For the individual, work has an intrinsic value in the form of income and a feeling of belonging to and participating in society. In Norway, there is no political dispute about the idea that the disabled, as far as possible, should have full opportunities to qualify for the regular labour market. Re-education and competence building are important measures offered through the rehabilitation system.

Rehabilitation is targeted towards persons with a physical, mental or social disability which reduces their chances of getting a job. Through rehabilitation, the individual receives education and/or job training which improves his/her chances on the job market. The rehabilitation measures are partly financed as labour market measures, receiving funds from the employment authorities, and partly from the National Insurance Scheme funding of vocational rehabilitation. The type of funding depends on the reason for the rehabilitation and the measures applied.

In 1996, an average of 54 650 persons were registered as occupationally handicapped in the employment authorities' register. Of these an average of 40 250 participated in various measures, whereas an average of 14 400 were being evaluated or were waiting to participate in measures.

More than half of the occupationally handicapped, i.e. approximately 30 000, received rehabilitation grants in 1996. These grants are meant to support the subsistence of the occupationally handicapped with a permanently reduced capacity for work or considerably limited number of choices when it comes to finding a job due to illness, damage or disability. Grants are given both when the person participates in rehabilitation measures and when the person is waiting to participate in such measures.



Other forms of subsistence grants during vocational rehabilitation are sickness benefits, rehabilitation grants, disability allowances, course grants or salaries.

Rehabilitation grants are meant to cover costs related to a recognised rehabilitation measure. The objective is to cover the extra costs incurred by the rehabilitation measure for the occupationally handicapped. Thus, rehabilitation grants are offered only during the period of rehabilitation.

Rehabilitation grants are among other things meant to cover training materials, practical assistance, daily travel expenses, visits home, housing expenses, moving expenses and subsistence expenses.

There are many kinds of rehabilitation measures, as they are specifically adapted to the needs of the individuals. Most measures are for a limited period. That applies to work training and all forms of competence-development. Permanent measures, such as sheltered work, may also be a solution for some.

The major training measure for occupationally handicapped is standard school/education. In 1996 there was an average of 13 000 participants in rehabilitation measures in the standard school system. The majority of these participants receive rehabilitation grants.

For some occupationally handicapped people vocational training in sheltered workshops is an appropriate solution. There are some 100 commercial enterprises which, as part of their activity, run sheltered workshops, financed by the labour market authorities. The training in the sheltered workshops aims at giving the participants formal qualifications, such as trade certificates, course certificates, diplomas etc.

For young people who have become occupationally handicapped, rehabilitation is an introduction to working life. For older occupationally handicapped people, who already have work experience, the rehabilitation often implies an advancement or a re-qualification. Job training will give the individual practice, experience and competence in new jobs. The training may be based on the educational background of the individual, so that the person in question is qualified for new jobs within the same sector. The training may also be used to assist the occupationally handicapped to find a job in a new sector.

### *3.2.4.3. In-service training (Bedriftsintern opplaering — BIO) and substitutes for unemployed*

In-service training (BIO) is another labour market measure directly targeted towards the enterprises' need for skills. BIO is meant to contribute to training in relation to change and recruitment in small and medium-sized enterprises. Part of the salaries of the employees participating in the training is covered by the authorities. The amount varies according to the industry. The training is provided by the resource centres, study associations, trade associations and private suppliers. In 1996, there was an average of 650 participants who received funds through this arrangement, and a total of NOK 83.7 million was spent.

The arrangement of substitutes for unemployed is a labour market measure aiming at meeting the needs of the enterprises for updating the employees' competence, as well as the need of the job-seekers for work experience. Through this arrangement

the enterprises get substitutes for employees participating in various forms of training, by temporarily hiring a job-seeker. A substantial part of the substitute's salary is covered by the employment authorities. The maximum duration is 10 months. Enterprises may make use of the arrangement on the condition that there is an unemployed person who needs the kind of work training which the enterprise can offer. The substitute is selected by the local employment office. In 1995, there was a total of 6 200 participants under this arrangement, with at any one time during the year an average of 3 330 participants. Some 70 % of the employees/jobs were in the public sector. The aim is to increase the share of jobs in private enterprises.

#### 3.2.4.4. Basic training of non-Norwegian speaking adults

With the aim of integration in Norwegian society regarding both education and work, all immigrants receive training in the Norwegian language and civic life. Non-Norwegian-speaking adults may have up to 500 hours of training, and a further 250 hours if necessary. Immigrants, and especially immigrant women, are given priority access to this extra tuition. The municipalities are responsible for setting up and organising the training.