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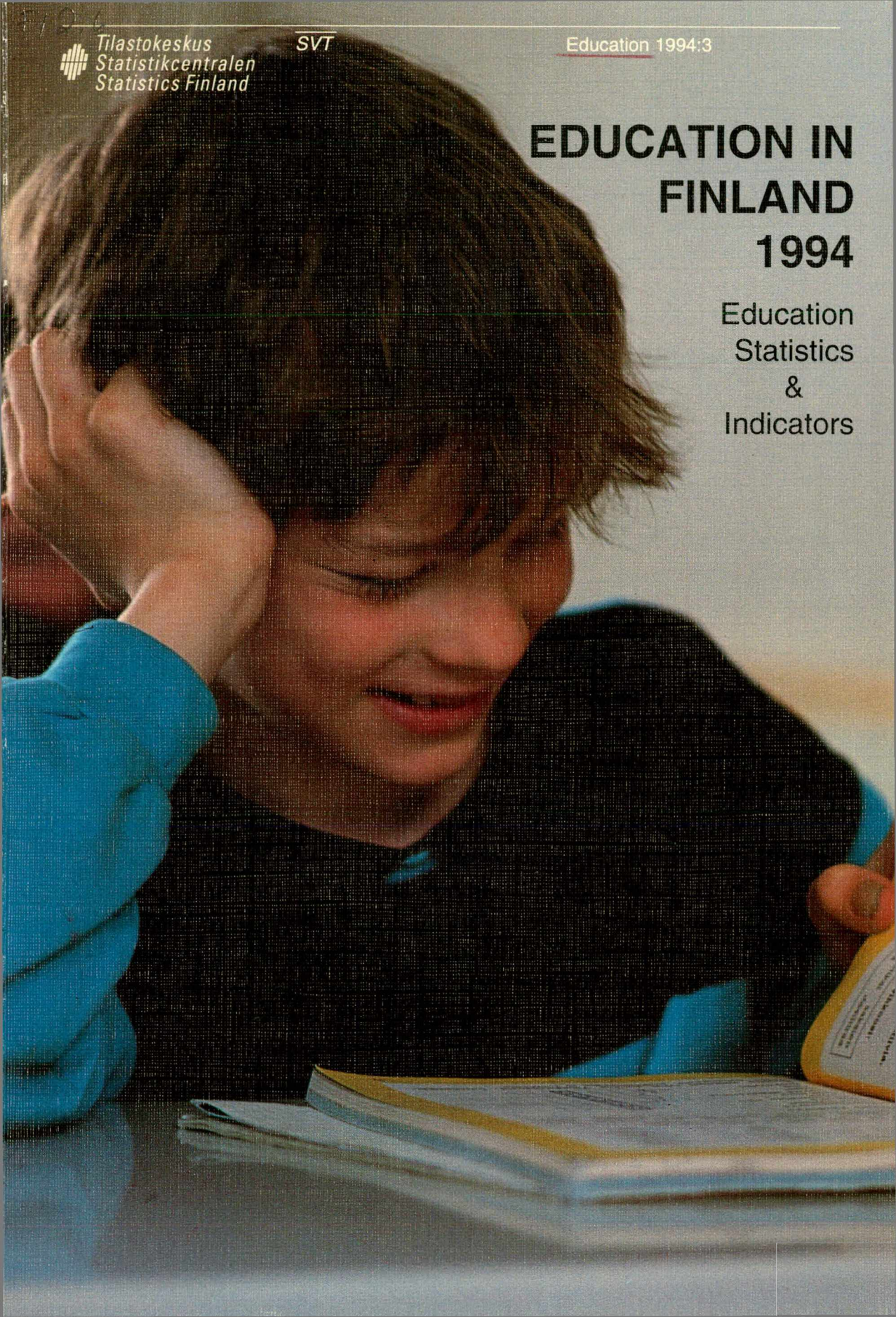
EDUCATION IN FINLAND 1994

Education Statistics & Indicators



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Education in Finland 1994
ISSN 1236-4746
ISSN 0789-6735

Foreword

Statistics Finland is a government body engaged in the compilation and publication of statistics concerning conditions in Finnish society. The purpose of the Education Statistics is to collect and analyse data related to the education system, educational attainment among the population and adult education, and to publish statistics, statistical surveys, educational indicators and standard classifications.

Education in Finland 1994 is the second statistical publication in English covering Finland's entire education system and is based on the statistics published in Finnish in *Koulutus 1993*. Education in Finland is published every other year and is sold by Statistics Finland.

Education in Finland 1994 is far broader in content than its predecessor and has been supplemented by new statistics, educational indicators and time series. It also includes a number of international comparisons based on data yielded by the OECD educational indicator project.

The new statistics cover the transfer from school to work, the educational and industrial structure of the population, unemployment and annual incomes. Finland, its population and economic trends are covered more widely than before. The chapter on adult education gives data from the new Adult Education Survey 1990. The book also contains a concise account of the assessment of the comprehensive school.

In addition to the statistics proper, the book presents new data of an indicator type: chapter 4 the results yielded by the ACGR (age-cohort graduation rate) indicator and chapter 7 by the ELP (educational level of population) indicator. The indicators have been developed at Statistics Finland in collaboration with the Ministry of Education. Development work on other educational indicators continues.

Education in Finland 1994 monitors significant developments and points out trends in major aspects of education in this country, using international concepts and classifications to provide basic information on the regular education system and other forms of education. The statistics have been regrouped to conform to the UNESCO International Standard Classification of Education (ISCED). Chapter 2 provides a general idea of the structure of the Finnish education system and the application of ISCED. This classification is discussed in more detail in Finnish Standard Classification of Education, ISCED Key, Appendix 1.

We hope that you will find the material helpful and invite you to provide us with comments on ways of making future editions even more useful.

The compilation of the publication has been directed by Heikki Havén, Head, Education Statistics, who also wrote the text.

Helsinki, April 1994

Riitta Harala
Director, Population Statistics

Contents

1 The country and its people

Five million Finns inhabit a country that is in area the seventh largest in Europe. In population, it is, however, one of the smallest countries in Western Europe, and one of the most sparsely populated (16 inhabitants per square kilometre of land). Only in the southern part of Finland in and around the capital are there more than 100 inhabitants per square kilometre. Since the aim is to make educational services readily available, the Finnish schools are on average small.

Forest accounts for 69% of Finland's territory, water for 10%, cultivated land for 8% and other types of land for 13%. Lakes with an area of at least 500 m total about 188,000 in number. The mean daily temperature during the coldest month of the year is $-5.7^{\circ}C$ in Helsinki in Southern Finland and $-15^{\circ}C$ in northerly Lapland. The mean daily temperature during the hottest month (July) is $17^{\circ}C$ in Helsinki and $11.6^{\circ}C$ in Lapland.

The capital of Finland is Helsinki, a city of half a million inhabitants.

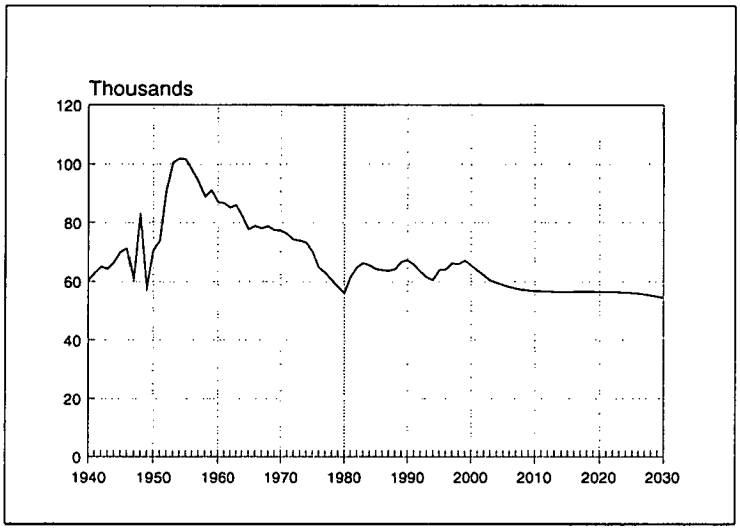
Finland is one of the Nordic countries. It has land borders with Sweden, Norway and Russia and a sea border with Estonia. Finland is a neutral country and is not a member of any military alliance.

Finland is a member of the United Nations, the OECD and the Nordic Council. It also takes part in the activities of a number of specialist organisations in the fields of education, training and scientific research. It is a participant in such European Union programmes as COMETT, ERASMUS, TEMPUS, etc., and the number of bilateral agreements on training cooperation between individual educational institutions in various European countries has rapidly increased in the past few years. One of the goals of Finnish educational policy is in fact to increase the international mobility of students, teachers and experts on education.

1.1
The population by age group in 1950–2030

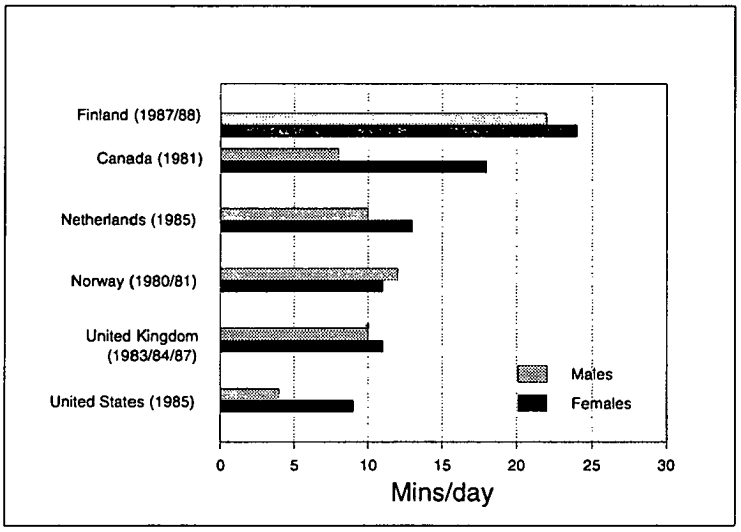
	Total		Age group			0-years old
			0–14	15–64	65–	
	Thousands	%	%	%	%	Thousands
1950	4,030	100	30	63	7	96
1960	4,446	100	30	63	7	79
1970	4,598	100	24	67	9	61
1980	4,788	100	20	68	12	63
1990	4,998	100	19	67	14	65
2000	5,096	100	18	67	15	57
2010	5,076	100	16	67	17	56
2020	4,984	100	16	62	22	55
2030	4,772	100	16	60	24	51

Statistics Finland, Population Statistics and Population Projections 1993–2030



1.2
The 7-year-old population in 1940–2030

Source: Statistics Finland, Population Statistics and Population Projections 1993–2030



1.3
The reading of books in certain countries in the 1980s (population aged 20–59)

Source: Foundation Archive at Time Budget Data

The period 1946–1950 saw the birth of the 'large age groups'. From then onwards the average number of births per year began to fall, and between the 1970s and the late 1980s the annual birth rate was one of the lowest in the industrial countries. The number of children starting school was smallest in 1980 (Figure 1.2). Defining the population aged 5–29 years as being of school age, Finland had the fifth smallest school-age population of all the OECD countries in 1991.

The large age groups born after the Second World War and the low birth rate have made the ratio between the population of working age and the total population one of the highest in the world (Table 1.1). The number of old people will, however, begin to rise quickly after the turn of the millennium.

In the 1950s the Finnish economy began to undergo fast structural change. Workers started to transfer from agriculture to other occupations, resulting in mass migration from the rural areas to the urban centres and to the southern parts of the country. In the 1960s and 1970s a large number of young people of working age also emigrated to Sweden. The migration of persons born abroad to Finland has been slight in the past few decades, right up to the early 1990s. Further information on the industrial and educational structure of the population is given in chapter 9.

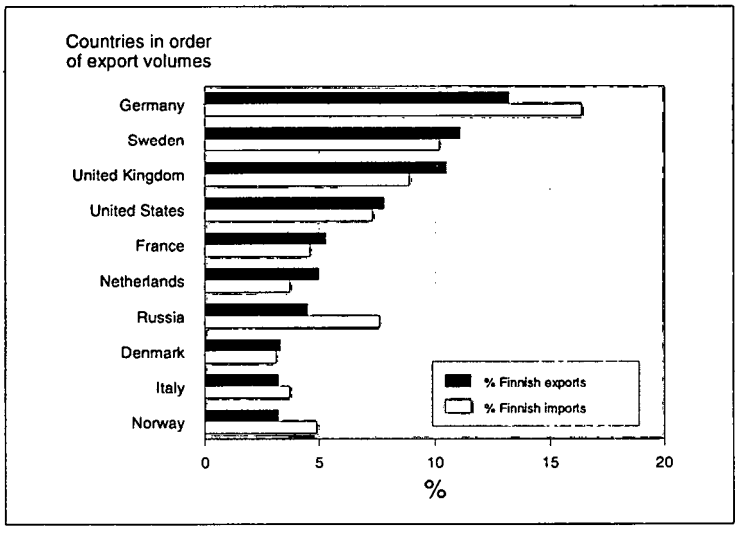
Most (93%) of the Finns speak Finnish, a Finno-Ugric language. Swedish is the mother tongue of some 6% of the population, most of whom live on the coast. Under 2,000 speak Lappish (Sami) as their native tongue.

Finnish and Swedish are both official languages. Every citizen is entitled to use either language in dealing with the authorities, and the two languages have equal status in culture and education. Both language groups have their own school or college units. The differences between the language spoken at school and home were smaller in Finland than in any other OECD country at primary and secondary level (OECD, Education at a Glance 1993). In recent years efforts have been made to improve the availability of native languages other than Finnish or Swedish.

Finland has two national churches: 88% of the population are members of the Evangelical-Lutheran Church, 1% of the Orthodox Church and 10% have no religious affiliation. The Freedom of Religion Act was passed in 1922.

Finland is a parliamentary democracy with a multiparty system of government. It has developed into a country with a Nordic legal system, a high standard of living and advanced social security.

Although Finnish literature is not readily accessible to an international readership, it has been immensely significant for the Finnish language and national self-analysis. The Finns are avid readers of books. Time budget surveys carried out in the 1980s revealed that more time was spent reading books in Finland than in any of the other countries in the comparison (Figure 1.3).



1.4
Finland's 10 main trading partners in 1993

The importance of the audio-visual media in everyday life has grown. In the late 1980s the Finns spent about 30% of their leisure time watching television and videos; this is about average for the countries compared. The corresponding figure for the countries with the highest viewing rates, the United States and Britain, was 40%.

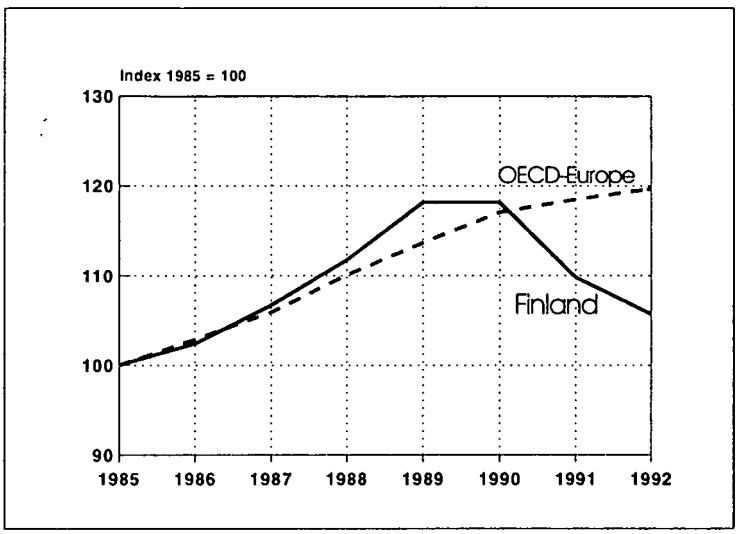
Finland is a member of the European Free Trade Association (EFTA) and the European Economic Area and is negotiating membership of the European Union. Its most important trading partner in 1993 was Germany, followed by Sweden and the UK. Germany accounted for 13% of Finnish exports and 16% of Finnish imports (Figure 1.4).

The EU area accounted for 47% of Finland's exports and imports, the EFTA area for 17% and 18%, respectively. All other countries together accounted for just on one third of trade.

The possible accession to the European Union will boost international cooperation and competition. The Finns have learnt to trust in the power of culture and education. Increasingly difficult challenges will have to be met with dwindling economic resources.

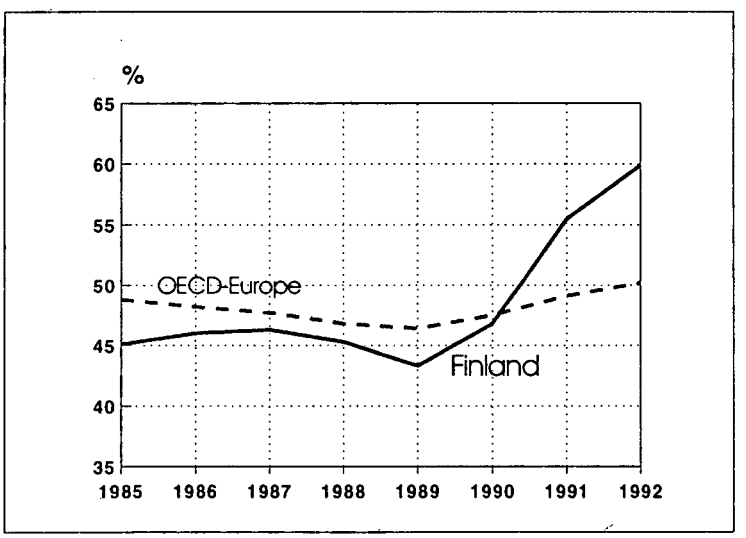
The Finnish economy grew faster than the OECD average throughout the 1980s but was plunged into a recession at the beginning of the 1990s (Figure 1.5). As a result of the growing unemployment, the drop in the GDP and the increase in social security expenditure, total government outlays as a proportion of the GDP began to grow quickly in the early 1990s (Figure 1.6).

In 1992 the per capita GDP was USD 14,545, placing Finland 18th among the 24 OECD countries. The comparative data have been adjusted for the difference in purchasing power (PPP).



1.5
Finland's gross domestic product (GDP) in 1985–1992

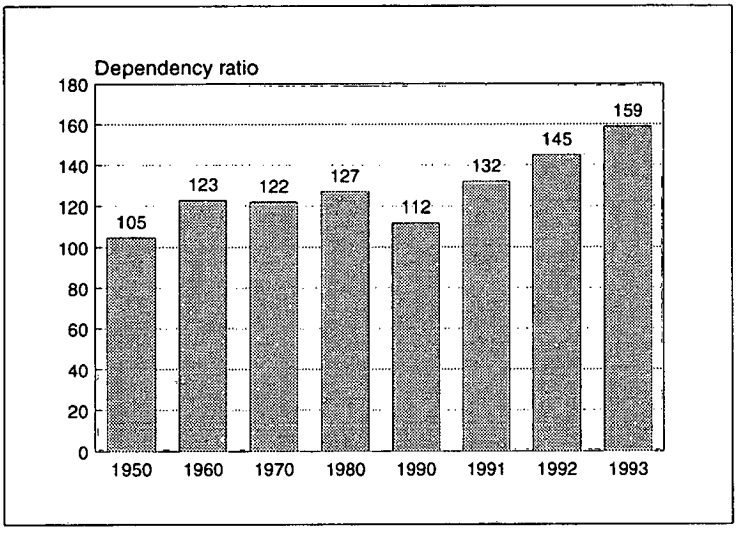
OECD National Accounts, 1994
Statistics Finland, National Accounts



1.6
General government total outlays as a percentage of the nominal GDP in 1985–1992

OECD Economic Outlook 54, December 1993
Statistics Finland, National Accounts

The dependency ratio (the number of children, students, old people, the unemployed and other persons not in the labour force per 100 persons in employment) has rapidly deteriorated in the 1990s. Figure 1.7 shows the trend in 1950–1993. The ratio was most favourable in 1950, when there were 105 persons to be supported by 100 in employment. In the 1960s and 1970s the ratio remained at a good 120:100, falling below 120 in the 1980s. In 1990 the good employment situation is still reflected in the ratio, but by 1993 the figure had risen to 159:100, an increase of 40%. Further details of unemployment are given in chapter 9.



1.7
The number of persons either outside the labour force or unemployed per 100 persons in employment in 1950–1993

Appendix.
The population by age in 1950–2030

Age	1950	1960	1970	1980	1985	1990	1995	2000	2010	2020	2030
0	96,113	79,219	60,983	62,656	62,526	65,276	61,345	56,770	55,716	54,812	50,589
1	99,602	80,389	63,865	63,026	65,048	63,181	63,153	57,410	55,789	55,177	51,031
2	102,897	79,041	69,268	63,414	66,839	63,240	64,982	58,205	55,887	55,491	51,533
3	102,797	83,435	72,260	64,814	66,363	59,894	66,745	59,102	55,997	55,741	52,066
4	101,259	86,504	73,068	65,621	63,966	60,894	65,604	60,047	56,127	55,942	52,624
5	91,393	85,605	73,721	64,386	63,485	62,976	66,001	61,853	56,283	56,119	53,201
6	73,926	86,753	75,953	61,394	63,817	65,469	63,924	63,666	56,466	56,282	53,785
7	70,596	87,012	77,271	55,962	64,226	67,288	63,972	65,489	56,704	56,445	54,373
8	57,808	91,283	76,925	58,237	65,536	66,807	60,620	67,218	56,973	56,566	54,903
9	83,330	88,768	77,290	60,599	66,382	64,287	61,627	66,058	57,318	56,658	55,376
10	60,485	93,895	77,705	63,042	65,034	63,877	63,634	66,435	57,802	56,740	55,801
11	70,784	97,062	78,331	64,874	62,022	64,135	66,038	64,353	58,425	56,805	56,153
12	69,180	100,577	76,563	70,232	56,520	64,509	67,827	64,336	59,150	56,841	56,406
13	65,435	100,873	81,050	73,143	58,705	65,757	67,288	60,969	59,979	56,894	56,599
14	63,194	99,771	84,297	73,809	61,063	66,613	64,756	61,931	60,840	56,950	56,728
15	63,949	90,655	83,850	74,259	63,365	65,195	64,306	63,878	62,556	57,033	56,834
16	61,684	73,509	84,379	76,281	65,112	62,093	64,420	66,188	64,248	57,112	56,897
17	58,921	69,798	83,572	77,328	70,333	56,566	64,759	67,901	65,922	57,224	56,937
18	62,595	56,953	86,155	76,387	73,059	58,640	65,915	67,278	67,512	57,380	56,949
19	64,465	81,523	83,214	75,897	73,512	60,889	66,613	64,646	66,201	57,578	56,899
20	67,534	58,020	86,220	75,670	73,824	63,161	65,212	64,142	66,456	57,962	56,887
21	66,238	67,920	88,725	75,624	75,654	64,764	62,183	64,231	64,303	58,485	56,865
22	66,059	65,858	90,551	73,357	76,575	69,928	56,793	64,627	64,282	59,204	56,913
23	63,623	61,574	90,562	77,049	75,671	72,519	59,116	65,886	61,058	60,066	57,022
24	63,785	59,279	89,041	79,671	75,544	73,236	61,496	66,762	62,075	60,984	57,164
25	64,086	59,638	80,221	79,284	75,463	73,525	63,902	65,553	64,059	62,743	57,354
26	61,759	57,106	64,991	80,032	75,642	75,418	65,686	62,772	66,433	64,522	57,588
27	62,728	54,403	62,241	79,786	73,617	76,499	70,895	57,599	68,237	66,288	57,863
28	59,312	58,159	50,234	83,277	77,492	75,714	73,491	59,914	67,808	67,980	58,185
29	60,508	60,041	73,344	81,145	80,119	75,665	74,250	62,275	65,511	66,947	58,587
30	61,722	62,900	52,781	84,828	79,804	75,635	74,477	64,621	65,173	67,336	59,093
31	45,997	62,272	61,960	88,112	80,516	75,894	76,245	66,342	65,407	65,417	59,731
32	54,365	62,419	60,707	90,550	80,299	73,802	77,249	71,408	65,834	65,448	60,466
33	53,679	60,191	57,259	90,789	83,757	77,681	76,504	73,910	67,043	62,340	61,290
34	52,046	60,753	55,262	89,443	81,540	80,314	76,329	74,596	67,857	63,286	62,143
35	54,359	60,853	56,064	80,482	85,283	79,921	76,204	74,740	66,599	65,112	63,753
36	57,126	58,946	54,107	65,162	88,459	80,452	76,295	76,411	63,816	67,310	65,378
37	57,096	59,968	51,835	62,364	90,721	80,181	74,200	77,327	58,681	68,930	66,966
38	59,813	56,770	55,198	50,215	90,764	83,529	77,917	76,487	60,763	68,361	68,456
39	59,409	57,897	57,321	73,331	89,348	81,285	80,326	76,215	62,892	65,981	67,304
40	59,582	59,057	59,854	52,470	80,269	84,796	79,854	75,998	64,989	65,484	67,513
41	59,928	43,956	59,590	61,701	64,848	87,881	80,261	75,956	66,458	65,525	65,471
42	57,561	52,137	59,553	60,198	62,022	90,017	79,921	73,785	71,184	65,758	65,330
43	57,414	51,129	57,339	56,621	49,900	90,028	83,099	77,354	73,421	66,751	62,151
44	55,156	49,802	57,933	54,478	72,753	88,451	80,791	79,612	73,885	67,341	62,877
45	51,552	51,635	57,909	55,074	51,950	79,367	84,074	79,025	73,812	65,920	64,447
46	51,974	54,535	55,969	52,912	61,000	64,089	86,965	79,303	75,168	63,007	66,334
47	48,251	54,045	56,866	50,557	59,360	61,154	88,867	78,802	75,792	57,815	67,652
48	47,655	56,940	53,614	53,596	55,745	49,157	88,729	81,743	74,750	59,610	66,885
49	46,945	56,065	54,611	55,525	53,544	71,515	86,982	79,344	74,274	61,470	64,403

Continue

Age	1950	1960	1970	1980	1985	1990	1995	2000	2010	2020	2030
50	44,610	56,275	55,367	57,667	54,044	51,053	77,920	82,441	73,869	63,301	63,747
51	43,929	56,307	41,118	57,164	51,875	59,749	62,945	85,160	73,654	64,545	63,636
52	42,940	53,723	48,369	56,724	49,396	57,928	59,933	86,922	71,382	68,900	63,683
53	38,817	53,160	47,709	54,477	52,235	54,441	48,197	86,728	74,632	70,897	64,499
54	37,714	51,061	45,934	54,656	53,986	52,094	69,897	84,917	76,612	71,191	64,919
55	37,681	47,359	47,530	54,436	55,768	52,505	49,837	75,981	75,895	70,991	63,439
56	34,078	47,320	49,652	52,296	55,159	50,266	58,129	61,297	75,992	72,141	60,541
57	31,477	43,465	49,098	52,800	54,491	47,687	56,306	58,270	75,363	72,633	55,500
58	31,305	42,844	50,910	49,399	52,144	50,305	52,767	46,763	77,964	71,498	57,092
59	32,207	41,829	50,123	49,888	52,092	51,671	50,236	67,522	75,435	70,851	58,702
60	29,141	39,298	49,498	50,199	51,670	53,149	50,459	48,024	78,058	70,227	60,227
61	28,337	37,866	49,252	36,921	49,456	52,388	48,082	55,783	80,219	69,720	61,127
62	28,868	36,885	46,300	42,952	49,696	51,535	45,381	53,739	81,409	67,223	64,889
63	28,150	32,745	45,533	42,060	46,190	48,903	47,638	50,120	80,666	69,822	66,340
64	26,224	31,391	42,873	40,093	46,332	48,675	48,620	47,475	78,432	71,199	66,185
65	24,124	30,731	39,064	40,815	46,399	47,925	49,733	47,407	69,617	70,001	65,498
66	23,757	27,447	38,438	42,134	33,783	45,652	48,668	44,905	55,712	69,516	65,974
67	22,209	24,798	34,668	40,796	39,074	45,483	47,578	42,105	52,395	68,212	65,749
68	20,875	24,324	33,334	41,811	37,877	41,891	44,805	43,854	41,601	69,736	63,970
69	18,213	24,123	31,959	40,354	35,736	41,650	44,127	44,349	59,211	66,659	62,639
70	18,010	21,253	29,124	38,778	35,916	41,207	43,012	44,956	41,597	68,037	61,249
71	17,118	19,972	27,488	37,626	36,689	29,743	40,637	43,551	47,573	68,883	59,926
72	15,283	19,913	25,649	34,547	34,987	33,912	39,974	42,041	45,039	68,805	56,854
73	14,927	18,344	22,190	32,926	35,303	32,352	36,391	39,127	41,280	66,987	58,008
74	13,119	16,467	20,257	30,065	33,428	30,082	35,598	38,006	38,304	63,865	57,982
75	11,807	14,565	18,872	26,473	31,456	29,714	34,684	36,517	37,376	55,447	55,766
76	11,204	13,517	16,279	24,942	29,948	29,821	24,602	33,957	34,566	43,376	54,122
77	9,550	11,944	13,889	21,665	26,908	27,747	27,542	32,841	31,522	39,727	51,672
78	8,591	10,771	12,608	19,989	24,787	27,172	25,620	29,262	31,805	30,618	51,190
79	7,544	8,417	11,738	17,981	22,103	25,078	23,201	27,972	31,043	42,131	47,335
80	6,989	7,845	9,487	15,459	18,874	22,817	22,188	26,501	30,285	28,509	46,458
81	5,422	6,687	8,105	13,800	16,980	21,015	21,589	18,200	28,063	31,202	44,960
82	3,010	5,457	7,161	11,959	14,218	18,185	19,344	19,658	25,669	28,038	42,689
83	2,974	4,926	6,323	9,540	12,649	15,985	18,157	17,547	22,440	24,176	39,038
84	2,461	3,871	5,073	7,985	10,921	13,591	15,942	15,075	20,206	20,808	34,523
85	2,219	3,143	3,970	6,668	8,830	11,046	13,752	13,588	17,765	18,550	27,364
86	2,095	2,479	3,251	5,256	7,451	9,415	11,933	12,409	14,960	15,529	19,372
87	1,499	1,912	2,528	3,931	6,115	7,424	9,665	10,337	12,911	12,582	15,760
88	1,026	1,522	1,829	3,166	4,579	6,027	7,865	9,007	10,231	11,241	10,755
89	816	1,057	1,198	2,609	3,583	4,977	6,245	7,350	8,592	9,601	12,962
90–	1,808	2,316	3,006	6,107	9,140	13,054	17,505	22,480	25,565	32,856	34,087
Total	**4,029,803**	**4,446,222**	**4,598,336**	**4,787,778**	**4,910,664**	**4,998,478**	**5,108,545**	**5,164,621**	**5,228,828**	**5,223,406**	**5,098,185**

Source: Statistics Finland, Population Statistics and Population Projections 1993–2000

2 The Finnish education system

The regular education system in Finland is composed of the comprehensive school *(peruskoulu)*, the senior secondary school *(lukio)*, vocational and professional education institutions *(ammatilliset oppilaitokset)*, and the universities *(korkeakoulut)*. There are no actual pre-primary schools in Finland, but instruction of this kind is provided at day-care centres (kindergartens), which are under the jurisdiction of the social welfare administration, and in connection with the comprehensive schools. Although pre-school programmes are not in themselves a part of the regular education system, they are nevertheless included in Figure 2.1.

In addition to the regular education system, formal education is given in music schools and colleges and sports institutes, which provide training for both professionals and amateurs. Adult education is provided by folk high schools, adult education centres and summer universities. The military academies and military vocational institutes are not classified as belonging to the education system proper.

The regular education system

The comprehensive school is compulsory and consists of nine grades, i.e. the primary school (grades 1–6) and the lower secondary school (grades 7–9). There are also a few pre-school classes and a voluntary 10th grade which attract a small number of pupils.

The comprehensive school is compulsory for the whole age group aged 7–16 years, including the disabled, while special facilities are provided for pupils who are so seriously handicapped that they cannot cope with ordinary instruction. This also applies to children who have adjustment problems caused by emotional disorders or some other factor and who thus require special education.

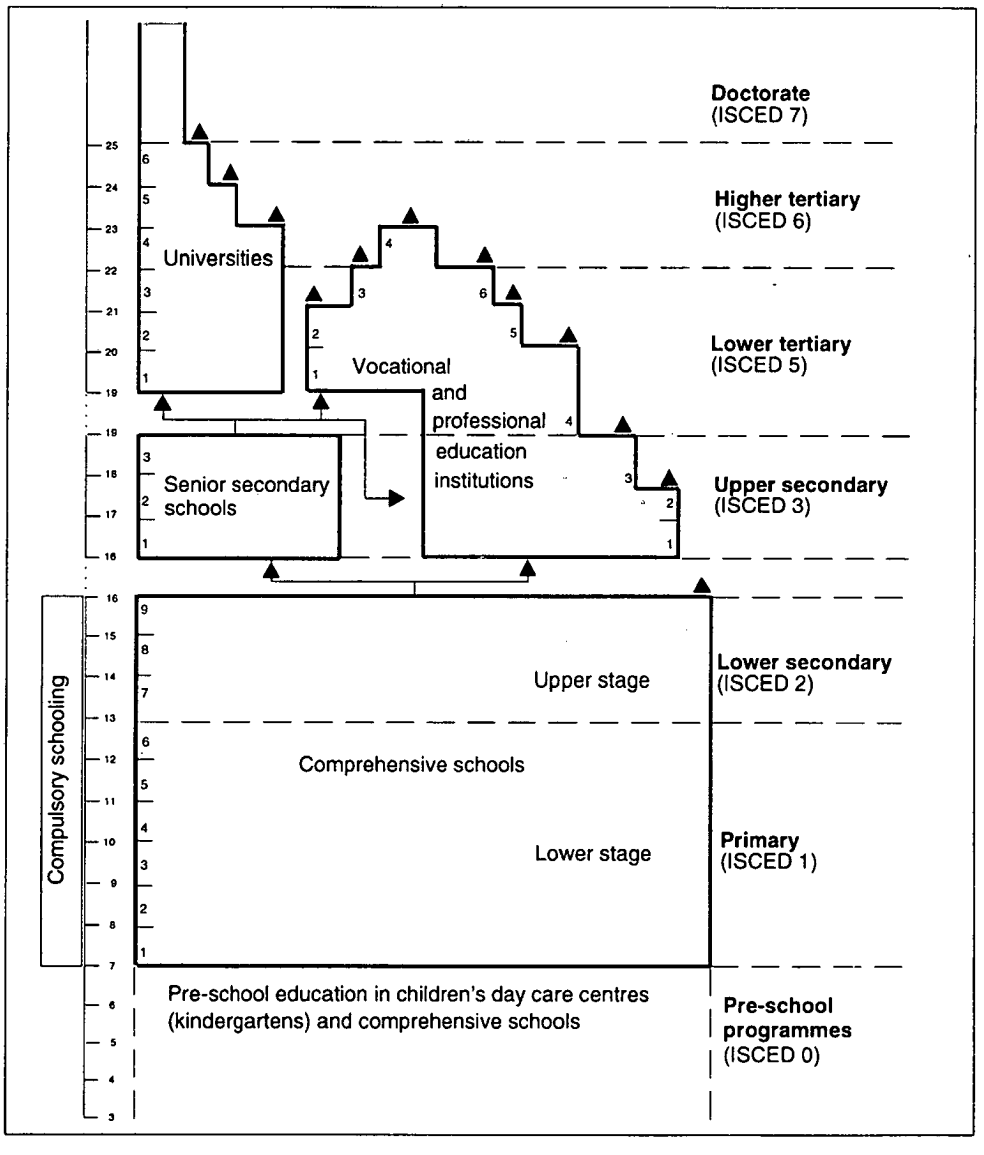
The subjects taught in the comprehensive school and the senior secondary school are defined by law, time allocation and optional subjects being decided by the government. The syllabus is essentially the same for all pupils, including those in private schools falling within the education system. All pupils completing the comprehensive school have the same eligibility for further education.

Post-compulsory education is divided into general education given in the senior secondary schools and vocational education provided in the vocational and professional institutions.

The senior secondary school is a three-year education institution providing post-comprehensive general education. The subjects in the curriculum are defined by law. The senior secondary schools have a very uniform curriculum and cover the entire country. In the next few years the choice of subjects will increase, and individual schools will begin to specialise within the confines of the law. Senior secondary schools also provide evening courses for adults.

The senior secondary school concludes with the matriculation examination consisting of centrally administered tests which are identical for all senior secondary schools in the country, and tests administered by the schools themselves. The matriculation examination provides the pupils with a general qualification for higher education and other forms of education which require the completion of such an examination. The senior secondary school has traditionally constituted the main channel to the universities.

2.1
The regular education system in Finland



Unesco: International Standard Classification of Education (ISCED)

Pre-school programmes	= 0	Education preceding the first level
Primary	= 1	First level
Lower secondary	= 2	Second level, first stage
Upper secondary	= 3	Second level, second stage
Lower tertiary	= 5	Third level, first stage not equivalent to the first university degree of equivalent
Higher tertiary	= 6	Third level, first stage, university degree of equivalent
Doctorate	= 7	Third level, postgraduate university degree of equivalent

2.2
Nomenclature of types of education institutions within the formal education system in 1993

1 General education institutions
- Lower comprehensive schools
- Upper comprehensive schools
- Private comprehensive schools
- Special comprehensive schools
- Senior secondary schools
- Senior secondary evening schools
- Teacher training schools
- Other comprehensive and senior secondary schools
- Music schools and colleges
- Sports institutes
- Folk high schools
- Adult education centress

2 Vocational and professional education institutions
- Agricultural institutes
- Forestry institutes
- Technical institutes
- Vocational institutes
- Specialised vocational institutes
- Special vocational institutes
- Vocational adult education centres
- Crafts and industrial arts institutes
- Art and communication institutes
- Commercial institutes
- Maritime institutes
- Nursing institutes
- Social service institutes
- Kindergarten teacher institutes
- Home and institutional economics institutes
- Hotel and catering institutes
- Fire, police and security service institutes
- Other vocational and professional education institutions

3 Universities and university-level institutions
- Universities
- Military academies

9 Other educational institutions within the formal education system
- Military vocational institutes
- Summer universities
- Study circle centres
- Other educational institutions within the formal education system

Classification of education

The statistics in the tables and figures in this book observe the UNESCO International Standard Classification of Education (ISCED) as follows:

Pre-school programmes (ISCED level 0)
Children aged 3-6 years in day-care centres and in pre-primary education

Primary (ISCED level 1)
Grades 1–6 of the comprehensive school

Lower secondary (ISCED level 2)
Grades 7–9 of the comprehensive school and the voluntary 10th grade

Upper secondary (ISCED level 3)
The 1-3 year post-comprehensive school general and vocational education

Lower tertiary (ISCED level 5)
The 4-5 year post-comprehensive vocational education and the 2–3 year education after a general or vocational upper secondary level qualification

Higher tertiary (ISCED levels 6 and 7)
Bachelor degrees taking at least 3 years at a university, master degrees taking at least 5 years, and doctorate degrees. 3–4 year bachelor-level qualifications from vocational colleges

Vocational, technical and professional education is mainly provided in specialised institutions covering 26 basic branches and more than 200 lines of specialisation.

An apprenticeship scheme exists, but the numbers pursuing this have been very small: only about 3–4% of those studying in vocational and professional education institutions. Apprenticeship is regarded in Finland as belonging to adult education. In accordance with international practice, the student and qualification data are, however, included here in the figures for the regular education system (at the upper secondary level).

The vocational and professional education institutions provide education at three levels.

1) Students entering from comprehensive school can obtain an upper secondary-level diploma (school level) after 2–3 years' study.

2) Studies for a lower tertiary-level diploma (college level) take 4–5 years for students entering from comprehensive school or 1–2 years less for matriculated students.

3) Instruction (in e.g. engineering) is also provided at higher tertiary (bachelor) level at vocational colleges. It takes 3–4 years of study after upper secondary education to complete a higher vocational diploma.

The range of vocational and professional education provided is laid down by law, and the numbers of students admitted in each field, region and level are confirmed by the government. The vocational and professional education institutions also provide adult education.

In the early 1990s an educational experiment was introduced aimed at setting up a distinct non-university sector of higher education: **polytechnics**. Polytechnic degrees are defined as higher education (bachelor level) degrees, study for which takes 3–4 years after completion of the upper secondary education. The polytechnic degrees have a more pronounced occupational bias than the academic degrees.

The Finnish university system consists (in 1994) of 21 institutions, 10 of which are multi-faculty universities, 7 specialised institutions and 4 art academies at university level. All are state institutions and the university degrees are governed by specific legislation. A development programme for higher education is being enacted by the government.

Each university is governed by a separate Act of Parliament, while the general aims and scope of the basic degree programmes and outlines for postgraduate studies are defined by separate decrees. One of the principles underlying university education in Finland is the close link between teaching and research. All the universities provide undergraduate and postgraduate education, confer doctorates, and are required to carry out research. In addition, the universities provide supplementary professional education and open university instruction.

Students must as a rule have matriculated before they can enter a university, although completion of an upper secondary or a lower tertiary-level qualification at a vocational and professional institution makes them eligible to enter a university. There are nevertheless only a few students who enter university via the latter route.

The Finnish university degree system consists of lower academic degrees (bachelor level), higher academic degrees (master level), and the researcher degrees of licentiate and doctorate. Professional specialist's degrees are offered in medicine, dentistry and veterinary medicine. The higher academic degrees have since the 1980s been the first university degrees. In theory they take 5–6 years to complete but in between 6 and 8 years on average.

The researcher training is in most fields two-tiered: a licentiate degree followed by a doctorate. They both take a number of years after the higher academic degree to obtain.

It takes 3–4 years of study to complete a lower academic degree. There are only a few such degrees. In the mid-1990s the two-tiered degree structure is to be re-introduced, at least in some fields: first a lower degree and then a higher one.

3 Educational institutions and enrolment

Pre-school programmes

There are no actual pre-primary schools in the Finnish education system, but pre-school instruction is provided in children's day-care centres (kindergartens) and comprehensive schools. The following figures are based on statistics compiled by the National Research and Development Centre for Welfare and Health and Statistics Finland.

Local authority day-care centres – a social service for which a fee is charged – are also responsible for providing children with preliminary instruction. Thus all children aged 3–6 years who receive at least 20 hours of day care and syllabus-based instruction a week in local authority or private kindergartens are here regarded as being in pre-primary education.

Some comprehensive schools arrange pre-primary teaching in pre-school classes. This is voluntary for the children and free of charge. Systematic 2-year pre-primary education is provided for severely handicapped children, for whom the 11 years of compulsory education begins at the age of 6, i.e. one year earlier than for normal children.

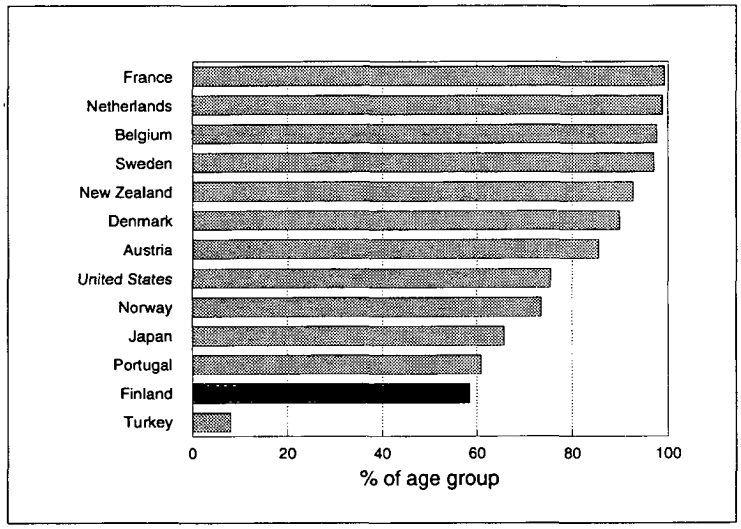
Approximately 7% of the children receiving pre-school education were attending private schools or day-care centres.

Participation in pre-school programmes has increased considerably. Whereas in the early 1980s one fourth of children aged 3–6 years were taking part in pre-school programmes, the corresponding figure for 1992 was over one third (Table 3.1). In 1992, 60% of children of 6 years of age were in involved pre-school programmes.

Figure 3.2 compares the participation in pre-school programmes during the final pre-school year in Finland and in certain OECD countries. Although international comparisons of pre-school programmes must be viewed with extreme caution, it is nevertheless clear that the number of children in pre-school programmes in proportion to the population of the same age was in Finland among the lowest of the OECD countries in 1991 (Figure 3.2).

3.1
The number of children in pre-school programmes 1981–1992

	Day-care centres (kindergarten)	Pre-school classes in comprehensive school	Total	Participation rate (proportion of population aged 3–6 years)
	Children			%
1981	65,300	800	66,100	25.5
1983	69,700	900	70,600	27.5
1985	74,900	1,200	76,100	29.5
1988	81,800	1,800	83,600	32.0
1990	84,200	2,200	86,400	34.7
1992	87,300	2,400	89,700	36.3



3.2
Participation in pre-school programmes in the final pre-school year in Finland and certain OECD countries in 1991

Source: OECD, Education at a Glance 1993.

The regular education system

In autumn 1993 there were 5,600 educational institutions in the regular education system and a good million pupils. In other words, one Finn in five was studying at an educational institution. Women were in the majority in all forms of education beyond the compulsory comprehensive school level. The figures given in this chapter are based on the statistics on education compiled by Statistics Finland.

3.3
Educational institutions and students in the regular education system by type of institution in 1993

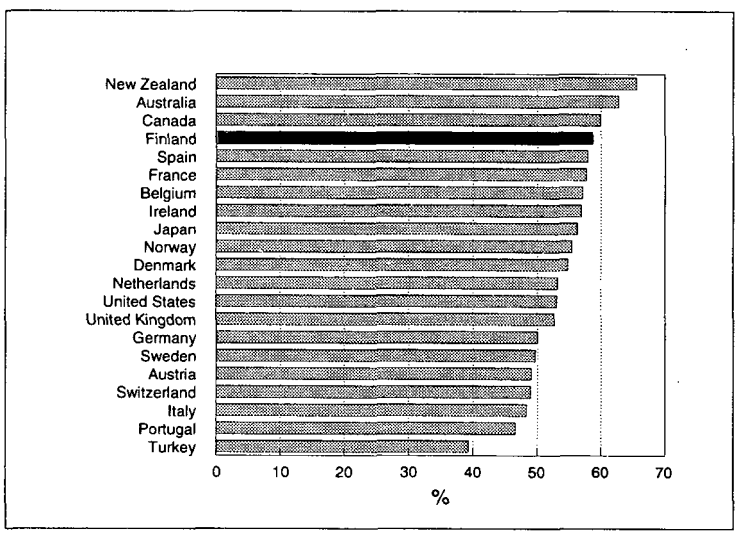
Type of institution	Establish-ments	Pupils/students		
		Total	Females	In private institutions[1]
			%	%
Comprehensive schools	4,586	580,800	48.8	1.2
Senior secondary schools	466	127,700	59.3	7.7
Other comprehensive and senior secondary schools	24	12,500	52.3	26.9
Vocational and professional education institutions	529	211,200[2]	53.4	10.9
Universities	21	124,000	51.6	–
Total	**5,626**	**1,056,200**	**51.1**	**4.0**

1) Government dependent
2) Including apprenticeship students 6,400

About 4% of the pupils were in private schools. These schools receive most of their financing from the state and the local authorities and observe the national curricula. 5.6% of pupils were in Swedish-speaking schools, which roughly corresponds to the percentage of Swedish speakers in the Finnish population.

The number of pupils in proportion to the population is one way of assessing a country's investment in education and of making country comparisons. In 1993 69% of persons aged 7–29 were in the regular education system. The proportion has risen steadily from 55% in 1980. In terms of the number of pupils, Finland clearly invests more in education than the OECD countries on average (Figure 3.4).

The various institutions in the regular education system are located evenly throughout the country, but because Finland is sparsely populated and the population density is much higher in the south than elsewhere, the units vary considerably in size. For example, the smallest primary comprehensive school in 1922 had only 5 pupils and the largest 815, while the average was 100. Schools in rural and urban areas differ greatly in size (Table 3.5).



3.4
The number of students in the regular education system in proportion to the population (aged 5–29 years) in Finland and certain OECD countries in 1991

Source: OECD, Education at a Glance 1993.

3.5
The average size of institutions in the regular education system by type of institution measured by the number of students and the degree of urbanisation in 1992

Type of institution	Urban	Semi-urban	Rural	Total
Primary comprehensive schools	214	92	55	102
Lower secondary comprehensive schools	345	401	206	298
Senior secondary schools	323	222	127	240
Other comprehensive and senior secondary schools	131	33	18	74
Vocational and professional education institutions	512	215	156	408
Universities	5,933	–	–	5,933

The universities (20 in 1992) are also distributed evenly throughout the country; the largest is the University of Helsinki, with 28,000 students, and the smallest is the Theatre Academy, with 274 in 1992.

The average size of educational institutions has begun to grow at a brisk pace in the 1990s. Schools have been closed or combined to form bigger units. Between 1990 and 1993 the total number of schools fell 4.7% while the number of pupils rose 7.3%. There was an increase of 12.6% in the average size of schools. Small units in particular have, for economic reasons, been closed or combined most.

The number of pupils in the comprehensive school, i.e. at primary and lower secondary level, observes the trend in the population, since the comprehensive school is compulsory for all children aged 7–15 years. In 1992 the number of pupils in primary and lower secondary level education was 14% less than in 1975. The number of pupils has correspondingly changed in structure so that in 1992 these levels accounted for 58% of students in the entire regular education system, as against 71% in 1975 (Table 3.7).

The number of students at the tertiary level doubled between 1975 and 1992. Whereas in 1975 there were 90,000 students at this level, the corresponding figure for 1992 was already 188,000. The percentage of students at tertiary level as a proportion of the total increased from 9 to 18. The proportion at this level will continue to increase rapidly with the full-scale implementation of the education at present being provided experimentally at the polytechnics.

Two thirds of the students in vocational education were studying at the upper secondary level and one third at the tertiary level in 1992. The numbers of pupils in upper secondary vocational education also include apprenticeship students, who in 1992 accounted for 3.5% of the total number of students at this level. Apprenticeship training is regarded in Finland as adult education but has been added to this chapter on regular education in accordance with the international practice.

3.6
Students in the regular education system by type of institution and educational level in 1992

Type of institution	Pupils / Students	Level of education					
		Pre-primary (ISCED 0)	Primary (ISCED 1)	Secondary		Tertiary	
				Lower (ISCED 2)	Upper (ISCED 3)	Lower (ISCED 5)	Higher (ISCED 6,7)
Comprehensive schools	584,750	2,060	386,820	195,870			
Senior secondary schools	121,520			5,630	115,890		
Other comprehensive and senior secondary schools	12,410	310	5,720	3,440	2,930		
Vocational and professional education institutions	201,050				134,630[1]	44,490	21,930
Universities	121,730					760	120,980
Total	**1,041,460**	**2,370**	**392,540**	**204,940**	**253,450**	**45,250**	**142,910**
Females %	51.1	45.7	48.8	49.6	56.7	66.9	48.7

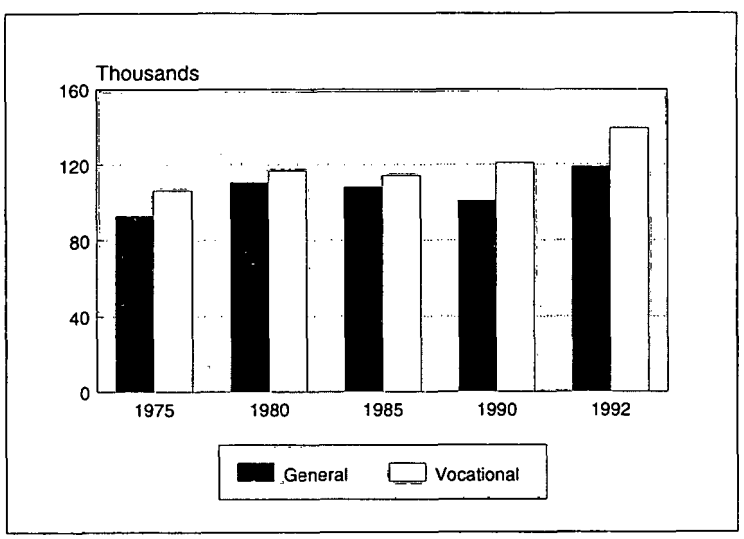
[1] Including apprenticeship students 4,730.

In Finland about half the students in upper secondary education are in general education and about half in vocational. The number of students in both categories has begun to rise since 1990, showing an increase of 18% in general education between 1990 and 1992 and of 15% in vocational education (Figure 3.8).

3.7
Students in the regular education system by educational level in 1975–1992

	Total	Primary[1] (ISCED 1)	Secondary			Tertiary		
			Total	Lower (ISCED 2)	Upper (ISCED 3)	Total	Lower (ISCED 5)	Higher (ISCED 6,7)
	Thousands							
1975	**988**	**454**	**444**	245	199	**90**	14	76
1980	**944**	**373**	**458**	231	227	**113**	23	90
1985	**924**	**381**	**415**	193	222	**128**	28	100
1990	**984**	**391**	**427**	205	222	**166**	39	127
1992	**1,041**	**395**	**458**	205	253	**188**	45	143
	%							
1975	**100.0**	**46.0**	**44.9**	24.8	20.1	**9.1**	1.4	7.7
1980	**100.0**	**39.5**	**48.5**	24.5	24.0	**12.0**	2.4	9.5
1985	**100.0**	**41.2**	**44.9**	20.9	24.0	**13.9**	3.0	10.8
1990	**100.0**	**39.7**	**43.4**	20.8	22.6	**16.9**	4.0	12.9
1992	**100.0**	**37.9**	**44.0**	19.7	24.3	**18.1**	4.3	13.7

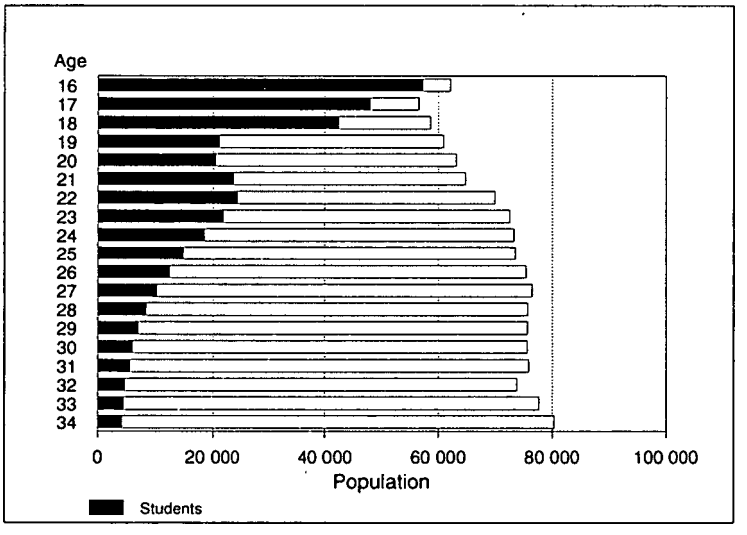
[1] Including pupils in pre-school classes.



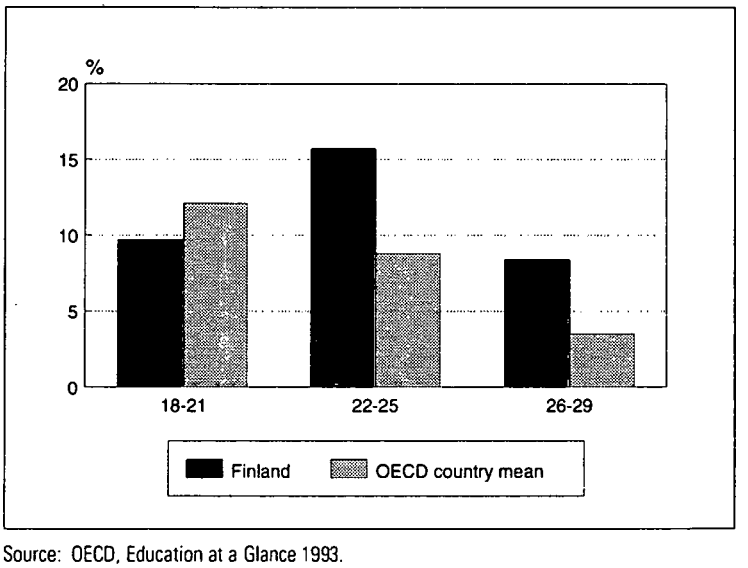
3.8
Students in general and vocational upper secondary education in 1975–1992

The enrolment rates for education are high in Finland. The OECD country mean for 17-year-olds enrolled in secondary level education was about 70%. Finland had one of the highest rates, with 85% or more in 1991. In the enrolment for higher tertiary education Finland falls in the middle category for the OECD countries.

The students in Finland are among the oldest in the OECD countries. In 1991 the median age of students at upper secondary level was 17.8 years, making them some of the oldest in the OECD countries. The pupils at higher tertiary level were the oldest in the OECD countries, the median being 24.9 years. The reasons for this high age are that Finnish children do not start school until they are 7, the times spent in education are long, students tend to take years out, many acquire several qualifications, etc.



3.9
Students in the regular education system and the population aged 16–34 in 1990



3.10
Enrolment rates for higher tertiary education (ISCED 6,7) in Finland and the OECD country mean in the 18–29 age groups in 1991

Source: OECD, Education at a Glance 1993.

In 1992 Finland had 570 vocational education institutions. This was eight less than in the previous year. Education aiming at a vocational qualification is also provided by the institutions mainly engaging in general adult education.

There were 200,000 students, i.e. 9% more than the previous year. The numbers were highest in vocational institutions, where training is provided for industrial jobs at upper secondary level in particular. Next in terms of student numbers were commercial institutes, and in third place nursing institutes. About 17% of the students were in adult education courses.

In 1992 the vocational institutes had a new intake of 83,000 students, of whom 56% were women. The number of new students was 7% up on the previous year. One new student in three had matriculated. 64,000 students were granted leaving certificates, i.e. 10% more than the previous year.

3.11
Vocational and professional education institutions by type of institution in 1992

Type of institution	Establish-ment	Students	Females %	New students	Graduations
Agricultural	53	5 ,549	48.8	3,290	2,751
Forestry	24	3,690	10.7	1,645	1,177
Technical	32	24,880	9.9	8,326	4,960
Vocational	107	53,727	31.7	21,626	16,461
Specialised vocational	17	1,483	30.7	517	486
Special vocational	15	2,191	37.8	1,061	805
Vocational adult education centres	37	2,651	46.4	1,184	454
Crafts and industrial arts	44	7,092	72.4	2,450	1,452
Fine arts	12	688	64.4	231	126
Commercial	69	36,331	68.1	15,041	12,800
Maritime	5	904	24.0	388	296
Nursing	48	31,736	90.6	12,442	9,827
Social services	27	11,270	93.5	5,130	3,838
Kindergarten teacher institutes	5	1,699	96.4	537	526
Home and institutional economics	46	8,292	96.8	4,814	4,404
Hotel and catering	16	4,422	63.7	2,242	2,003
Fire, police and security services	4	692	8.2	650	701
Other vocational and professional education institutions	9	597	25.3	549	498
Vocational and professional studies in general education institutions		3,159	65.8	1,122	742
Total	**570**	**201,053**	**54.6**	**83,245**	**64,307**

Finland had 20 universities in 1992, 10 of them multi-faculty institutions. Seven of them were specialised: three universities of technology, three schools of economics and a veterinary college. There were three arts academies in 1992, in the fields of music, industrial arts, and theatre. The Academy of Fine Arts acquired university status in 1993.

The universities had a total of 122,000 students in 1992. The five biggest fields of study in terms of the number of students were engineering (20%), the humanities (17%), natural sciences (14%), social sciences (10%) and economics (10%). 17,000 new students were admitted, 55% of them women. This marked an increase of 3% on the previous year. 11,4000 degrees were obtained, i.e. 2% more than in 1991.

3.12
Universities by type of institution in 1992

Type of institution	Establish-ments	Students	Females %	New students	Degrees
Multi-faculty universiti	10	90,802	59.8	13,123	8,953
Specialised universities	7	28,150	25.9	3,570	2,226
Art academies	3	2,784	59.7	430	235
Total	**20**	**121,736**	**51.9**	**17,123**	**11,414**

4 Student progression and qualification obtained

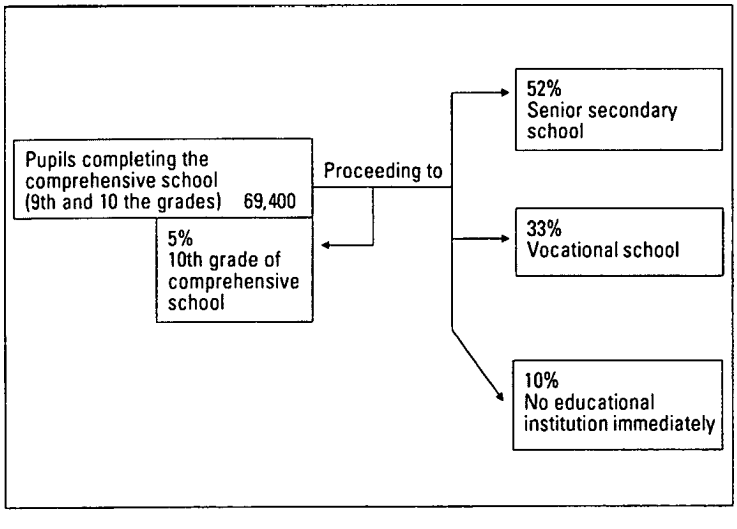
Application and admission

85% of pupils completing the final grade of the comprehensive school in spring 1992 proceeded immediately to the upper secondary level in the autumn, i.e. 3% more than the previous year. The brisk increase can to a great extent be explained by the larger number of boys progressing to vocational education. The recession has made boys in particular more eager to continue their education.

It can be estimated that 5–10% begin studying in some subsequent year and that over 90% of each age group completing their compulsory education proceed to the upper secondary level.

The data are based on the registers of the nationwide scheme for joint selection to secondary schooling maintained by the National Board of Education, while the figures for university entrance were compiled by Statistics Finland.

52% of the age group completing the comprehensive school in spring 1992 entered the upper secondary general school in the following autumn (Figure 4.1). The girls entering the senior secondary school clearly outnumbered the boys. Of the boys completing the comprehensive school, 42% proceeded immediately to the upper secondary general school, as against 61% of the girls. The proportion of those proceeding to the upper secondary school has increased in recent years, while that of those proceeding to vocational schools has remained at around one third.



4.1
The proportion of pupils completing the comprehensive school in 1992 and entering the upper secondary level in autumn 1992

33% of the age group completing the comprehensive school in spring 1992 entered vocational schools: 43% of the boys and 23% of the girls. Girls tend more to proceed to a vocational or professional education institution after the senior secondary school.

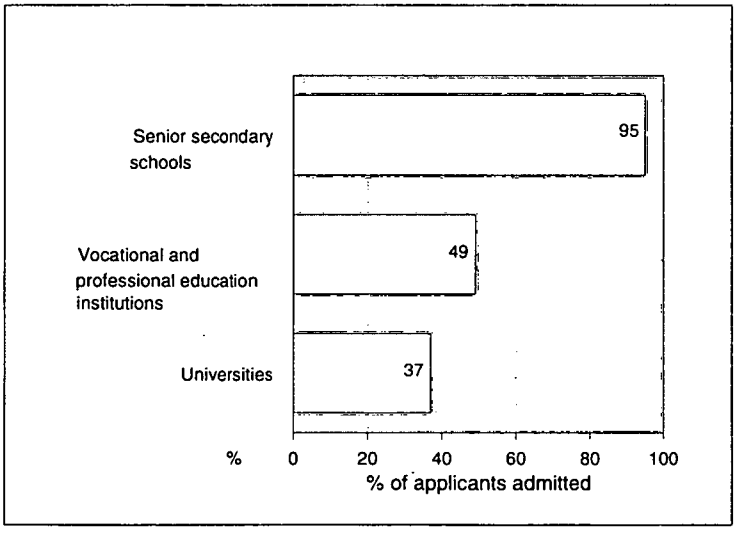
Of the pupils matriculating in spring 1992, 40% continued their studies immediately in the autumn of the same year. 22% entered a university and 18% a vocational or professional education institution.

The percentage of pupils continuing immediately has grown in recent years. Even so, over half the matriculated students still cannot begin their further studies until a year or two later. It may be estimated that about 90% of all matriculated students gain some vocational or tertiary-level qualification.

The quantification of vocational, professional and university education is governed by law, the government confirming the number of persons admitted to a given educational level, field and branch, primarily on the basis of employment needs. The aspirations of young people do not necessarily coincide with the anticipated requirements of the various employment sectors, however, and the number of applicants for some popular fields and levels of education may thus be considerably higher than the quotas allowed, whereas some other fields and levels may accommodate all applicants.

As of the autumn semester 1994, the government will no longer control the number of students entering the senior secondary school. There will also be less control over the precise number of places in vocational and professional education intitutions. The universities will themselves decide the number of students accepted for each field of study according to estimates agreed with the Ministry of Education in order to achieve an agreed number of degrees.

About 95% of the applicants for the upper secondary general school have in recent years been accepted. Some 50% of the applicants for vocational and professional education institutions were on average accepted in 1992, and less than 40% of those for the universities (Figure 4.2). The applicants include both pupils completing the comprehensive and upper secondary school in the same year and those who either did not apply or were not accepted in previous years. About 20% of the applicants already possessed some vocational qualification.



4.2
Admittance for education in 1992

Admission to vocational and professional education institutions varies considerably from one field of study to another. It has been most difficult to gain admission to the health and social services institutions, which have traditionally been popular among women. It has been most easy to gain admission to the male-dominated schools leading to employment in metal and engineering, wood-processing and other similar industries, to which almost all applicants were admitted.

All branches of university education have a fixed intake per year. In 1993 entrance was most difficult for theatre and dance (3% of applicants) and visual art (7%). It was easiest for engineering, in which over half the applicants taking the entrance exams were accepted.

In 1992, 94,000 new students embarked on courses leading to a general or vocational qualification at the upper secondary level – one third more than the size of the theoretical intake (62,000 16-year-olds).

56,700 began upper secondary vocational studies in 1992. The student intake at this level remained stable in the latter half of the 1980s and began to rise in the early 1990s.

37,300 pupils began upper secondary general studies in 1992. The intake began to rise in the late 1980s already, the rise being due to the low level of increase in the size of the age groups and the growing desire for education.

The intake in tertiary education totalled 43,000 new students: 17,000 at the lower level and 26,000 at the higher level. Of the new students at the higher level, 16,300 entered universities and 9,700 vocational and professional education institutions. The intake at the tertiary level is rising steadily. The sudden increase at the higher tertiary level in 1992 and the drop at the lower tertiary level is a result of the expansion of the polytechnic experiment.

Equality of the sexes has been a prime concern in Finland for several decades. In 1992, 56% of the new vocational and professional education students were women, and 55% of the new university students. There are, however, considerable differences between the fields of study, and changes are slow.

4.3
New students by level of education in 1987–1992

Year	Primary (ISCED 1)	Upper secondary		Tertiary	
		General (ISCED 3)	Vocational	Lower (ISCED 5)	Higher (ISCED 6,7)
1985	64,582	33,893	58,549	12,518	15,196
1986	64,306	33,423	44,649	13,800	15,788
1987	63,900	32,874	53,899	13,438	17,266
1988	64,471	32,242	49,745	14,932	18,084
1989	66,977	30,891	49,682	15,535	19,227
1990	67,427	33,388	49,883	16,646	20,162
1991	66,320	35,443	53,505	18,158	21,375
1992	63,837	37,292	56,687	17,144	25,969

Of all the students entering vocational and professional education institutions, less than 5% were in mixed fields with 41–60% men and women (Table 4.4). Examples of male-dominated fields (91–100% men) are HEVAC, mechanical engineering, vehicles and transportation. The women's fields include the clothing industry, home and institutional economics and the social services.

4.4
New students entering vocational and professional education institutions in 1992 by sex and field of study

Field of study	New students	Male %	Female %
Male-dominated (61–90% men)			
Heat, water and ventilation	1,170	99	1
Vehicles and transportation	3,456	95	5
Mechanical engineering	4,972	95	5
Electrical engineering	6,503	95	5
Forestry	1,537	93	7
Fishing	104	92	8
Seafaring	275	92	8
Woodworking	1,105	91	9
Construction industry	4,220	91	9
Surface treatment	363	71	29
Surveying	193	68	32
Agriculture	2,336	66	34
Mixed (41–60% men and women)			
Printing industry	472	60	40
Chemical engineering	1,145	55	45
Media studies	62	55	45
Dairying	75	40	60
Food processing	932	40	60
Female-dominated (61–90% women)			
Other fields	7,817	35	65
Commerce and administration	13,692	33	67
Hotel and catering services	5,642	31	69
Crafts and design	2,311	30	70
Horticulture	803	27	73
Health care	12,053	11	89
Women's fields (91–100% women)			
Textiles industry	36	8	92
Social services	5,876	5	95
Home and institutional economics	5,080	2	98
Clothing industry	1,015	1	99
All fields of study	**83,245**	**44**	**56**

There is less differentiation by sex in the university fields of study than at the lower levels of education. Of the new students entering the universities, close on 40% were in mixed fields (Table 4.5), and there is no field of study at this level in which over 90% of the students are men. Engineering is the only male-dominated field (82% men). The majority of the new students are in fields in which 61–90% of the students are women.

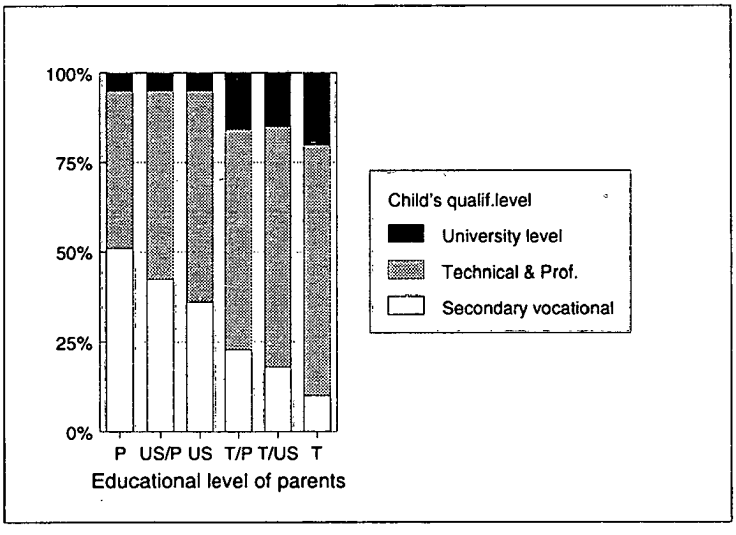
4.5
New students entering universities in 1992 by sex and field of study

Field of study	New students		
	Total	Males	Females
		%	%
Male-dominated (61–90% men)			
Engineering	2,928	82	18
Mixed (41–60% men and women)			
Natural sciences	3,080	56	44
Economics	1,712	56	45
Agriculture and forestry	365	51	49
Theology	227	49	51
Music	220	48	52
Theatre and dance	52	46	54
Sport sciences	90	46	54
Law	502	43	57
Industrial art	199	41	59
Female-dominated (61–90% women)			
Medicine	537	40	61
Social sciences	1,498	39	62
Dentistry	105	22	78
Humanities	2,851	23	77
Education	2,058	21	79
Psychology	150	19	81
Veterinary medicine	53	19	81
Pharmacy	356	12	89
Women's fields			
Health care	410	3	97
All fields of study	**17,123**	**45**	**55**

There are considerable educational differences attributable to family background. The expansion of education has not eliminated the effect of background on a young person's selection of his future educational field. It is more common for children from highly educated, upper class families to enter the senior secondary school and to go on to university than it is for children of families with a poorer educational background. Young people whose parents have a low educational level are more likely to choose a vocational school.

These considerable educational differences attributable to family background showed little or no signs of diminishing over the first half of the 1980s, although the regional differences have diminished.

A rise in the parents' educational level will increase the probability of the child entering the senior secondary school and later attending either a professional education institution or a university. The accumulation of education is likely to continue in the future. The more highly educated the parents are, the more they hope for their children to attain a high-level educational qualification.



4.6
The educational level of students with qualifications completed in 1985 by parents' educational level

Educational level of parents:
P = both parents have a primary or lower secondary education
US/P = one parent has an upper secondary education and the other a primary or lower secondary education
US = both parents have an upper secondary education
T/P = one parent has a university or other tertiary education and the other a primary or lower secondary education
T/S = one parent has a university or other tertiary education and the other an upper secondary education
T = both parents have a university or other tertiary education

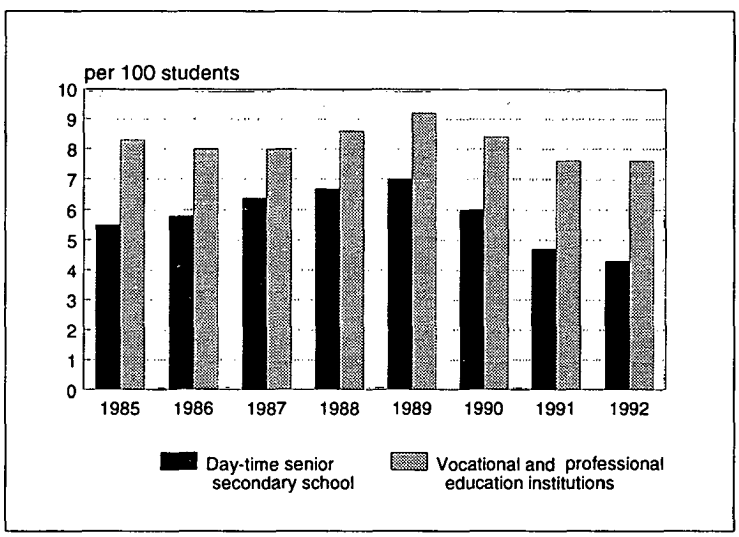
Drop-outs

The incidence of incompleted studies is here examined via the number of drop-outs per year. The figures do not reveal the proportion of the intake not completing their studies. The number of drop-outs also includes students who transfer from one field of study to another. The real number is thus smaller than the figure would suggest. The figures do, however, indicate the trend in the drop-out rate and permit comparison of different fields of study and levels of education.

The number of drop-outs in senior secondary schools and in vocational and professional education institutions increased in the late 1980s but has decreased since the beginning of the 1990s (Figure 4.7). The number of university drop-outs has also fallen. In 1991 there were 5.5 drop-outs per 100 students, as against 6.7 the previous year. One of the factors influencing the trend was obviously the economic boom in the second half of the 1980s and the recession beginning in the 1990s and the growing unemployment.

Most of the drop-outs from the senior secondary school terminate their studies in the second of the three-year course, those in vocational education at the beginning of their studies. The drop-out figures for boys and girls are the same in the upper secondary school, but in the vocational schools there are more drop-out boys than girls.

The differences between the vocational fields of study are considerable: there are few drop-outs in the popular fields of study and many drop-outs or students changing fields in the less popular fields of study. In universities, it is rare for e.g. medical and teacher training students to drop out or change fields, but many transfer from the natural sciences to e.g. medicine or engineering. The number of both drop-outs and transfers is high in the humanities.



4.7
Drop-outs per 100 students in senior secondary schools and vocational and professional education institutions in 1985–1992

Leaving certificates and degrees

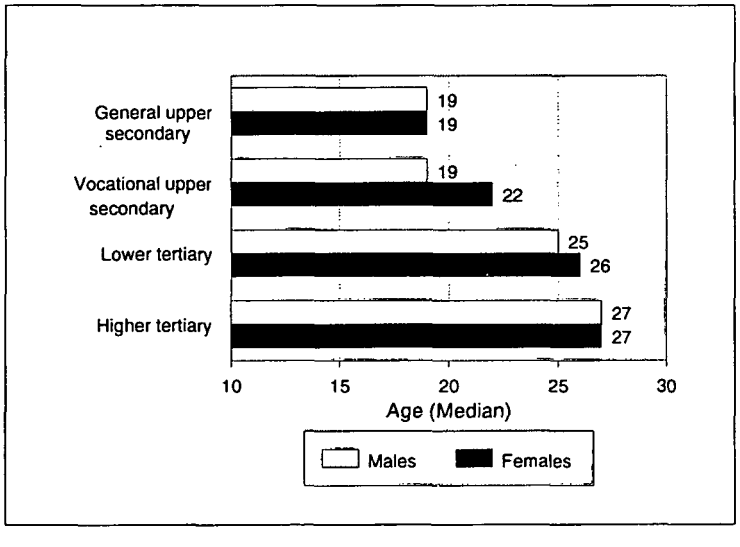
The number of leaving certificates issued and final examinations approved in the regular education system in 1992 totalled 170,000, more than a third of which were at the compulsory lower secondary level, 45% at the upper secondary level and 17% at the tertiary level (Table 4.10). More than 55% of the students obtaining a leaving certificate or passing a final examination in non-compulsory education were female (Table 4.8). The data are based on the register of Completed Education and Degrees compiled by Statistics Finland.

The upper secondary vocational qualifications also include those completing apprenticeship training, accounting for 5% of those completing this level of education in 1992.

At the upper general secondary level the mean age of those completing a qualification was 19 years. At the upper vocational secondary level the median age of men (19 years) was three years lower than that of women. One of the reasons for the difference is that more women than men first complete the upper secondary school before entering vocational education. Furthermore, women apply for fields of study for which only a relatively small proportion of the applicants are accepted when applying for admission for the first time. The median age of those completing a higher tertiary-level degree was 27 years (Figure 4.9).

4.8
Leaving certificates and degrees in the regular education system by type of institution in 1992

Type of institution	Qualifications	Change on previous year, %	Women, %
Comprehensive	66, 100	2.3	49.0
Senior secondary	26 ,200	–2.1	59.5
Vocational and professional	66, 400	10.9	59.1
Universities	11, 500	1.9	55.0
Total	**170, 300**	**4.7**	**54.9**



4.9
The mean (median) age of persons completing a qualification at the upper secondary or tertiary level by sex in 1992

Practically the entire age group completes the lower secondary level qualification (only approximately 1% fail to receive a leaving certificate), i.e. the compulsory schooling. These leaving certificates correspond to the size and sex distribution of the 16-year-old age group.

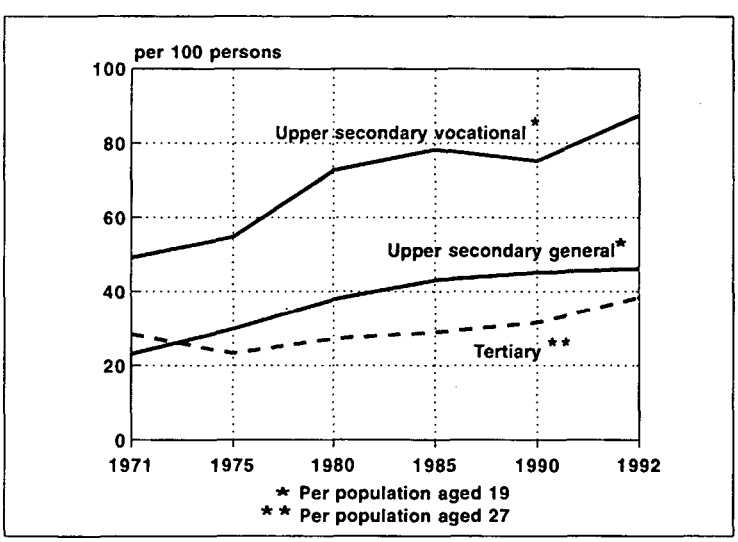
The number of lower tertiary-level qualifications has increased most quickly, by 3.4% a year on average from 1971 to 1992. The educational level of all those receiving degrees has risen 22% since 1971, calculated by the educational level indicator based on the Finnish educational classification.

The number of upper secondary vocational qualifications has begun to rise sharply in the 1990s, following a halt in growth in the latter half of the 1980s, as shown in Figure 4.11. The number of qualifications in proportion to the size of the age group does not indicate what proportion of the age group completes a qualification (see the ACGR-indicator below).

4.10
Leaving certificates and degrees in the regular education system by level of education in 1971–1992

	Primary (ISCED 1)	Lower secondary (ISCED 2)	Upper secondary		Tertiary		Total
			General (ISCED 3)	Vocational[1)]	Lower (ISCED 5)	Higher (ISCED 6,7)	
1971	35,500	42,000	19,900	42,400	6,800	11,800	158,400
1975	18,100	51,300	24,800	45,500	7,900	13,600	161,200
1980	5,100	70,700	28,700	55,100	9,400	13,300	182,300
1985	–	65,000	31,600	57,500	9,600	11,700	175,400
1990	–	61,600	27,500	45,800	10,200	14,000	159,100
1992	–	66,100	26,200	49,600	13,800	14,600	170,300

1) Including those completing apprenticeship training



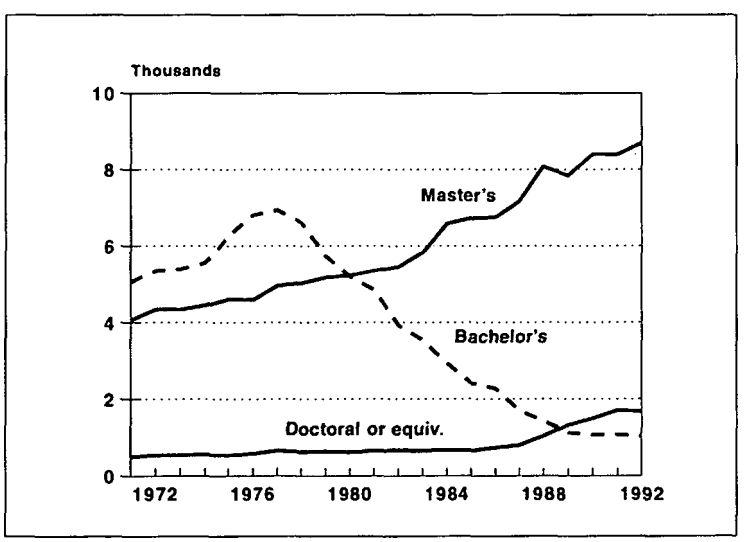
4.11
Qualifications per 100 persons by level of education in 1971–1992

Judging from the numbers of qualifications relative to an age group in the OECD countries, Finland ranks among the highest for upper secondary level qualifications and among the middle group for tertiary-level degrees. Finland has the highest rate of tertiary-level degrees in science and engineering (bachelor's and master's degrees) of all the OECD countries (OECD, Education at a Glance 1993).

The declining trend in the number of university degrees from the late 1970s onwards has been due to the longer duration of study caused by the reform of the degree system, as the first degrees of Candidate in the Humanities and Candidate in the Natural Sciences were abolished and that of Candidate in Economics and the class teacher qualification were raised to master's level. Consequently, all first degrees are now the equivalent of a master's and take an average of 6–8 years to complete. Lower university degrees will be re-introduced in the mid-1990s.

A total of 1,670 doctoral and equivalent degrees were received in 1992 (Figure 4.12). They also include the specialist's degrees in medicine and dentistry taken at universities since 1988 (480 in 1992). Work for a doctoral degree can set out either from a licentiate degree or directly from a first degree. The number of doctoral and other equivalent degrees began to rise rapidly after the mid-1980s: close on 80% between 1985 and 1992. 670 licentiate degrees and 520 doctorates were received in 1992.

The median age of persons taking a licentiate degree was 34 years and that of persons publishing a doctoral dissertation 36 years. The proportion of women has steadily increased, from 13% in 1971 to 30% in 1992.



4.12
University degrees by level of qualification in 1971–1992

Age-cohort graduation rate (ACGR) indicator

The following data are based on an educational indicator developed at Statistics Finland and designated as the age-cohort graduation rate (ACGR) indicator. The indicator shows the percentage of those in an age group attaining a given level of education in a given year before the age of forty[1]. It should be noted that, in the following discussion, the age cohort graduation rates by level of education cannot be combined into a single aggregate.

The data required to calculate the indicator are taken from the individuals in the database on Register of completed Education and Degrees compiled by Statistics Finland including all post-comprehensive school qualifications taken by all the Finns. The demographic data are from the Central Population Register's database on individuals.

The ACGR-indicator shows the extent to which the quantitative goals for the education of each age group are being achieved, the level of education of young people by region, and any regional differences. The indicator also aims to permit comparison of the ACGRs of males and females, as well as observation of any changes from one year to another.

The percentage of those in an age group receiving some post-comprehensive school qualification was 87 in 1992: 82% for men and 93% for women (Table 4.13)

The ACGR of women grew throughout the period under study, whereas that of men fell between 1980 and 1990. The period of strong economic growth in the latter half of the 1980s was one reason why persons with only a lower secondary qualification were able to find work. The incentive for boys in particular to continue in upper secondary vocational education was low. With the recession setting in by the 1990s, there was more incentive for further study and a lower drop-out tendency.

In 1992, the ACGR for qualifications at the upper secondary level was 84% and for qualifications at the tertiary level 31%. The tendency to complete a further qualification at the secondary level remained stable in the 1980s but has taken an upward turn in the 1990s. By contrast, the percentage of the age group taking a tertiary-level degree increased rapidly between 1980 and 1992 (Figure 4.14). The growth was fastest at the lower tertiary level.

1) One reason for developing the indicator was that it is impossible to calculate the percentage of an age group completing a qualification by comparing the number of qualifications received in a given year with one age group of the population, because the graduates are of many different ages and some of them take more than one qualification. Using the Register of Completed Education and Degrees compiled by Statistics Finland it is possible to calculate the net figures per age group and to aggregate examinations by type of qualification.

The percentage of persons receiving a qualification in one age group (synthetic cohort) is calculated as follows:

$$\text{Age-cohort graduation rate} = \sum_{17}^{40} \frac{T_i}{V_i} * 100$$

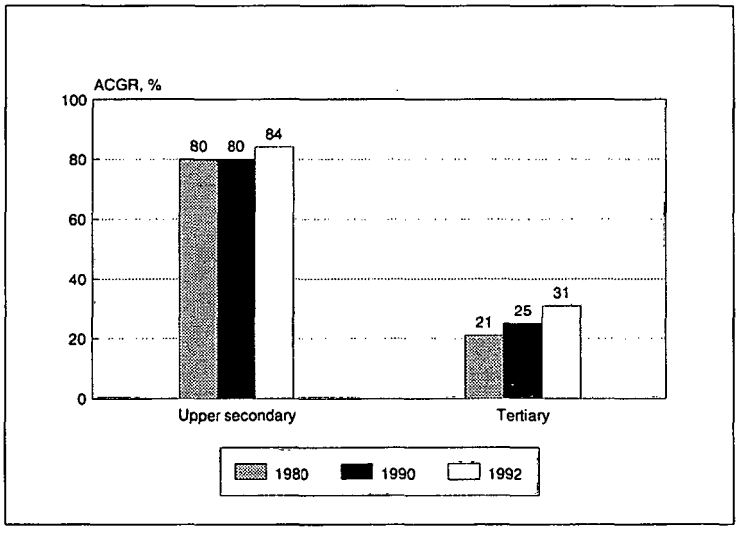
i = age

T_i = graduates of age i

V_i = population of age i

4.13
Post-comprehensive school age-cohort graduation rates by level of educational qualification, sex and type of district in 1980–1992 (ACGR-indicator)

	Some post-comprehensive school qualification	Upper secondary level			Tertiary level		
		General or vocational (ISCED 3)	General	Vocational	Lower or higher	Lower (ISCED 5)	Higher (ISCED 6,7)
ACGR, %							
1980	81.8	80.2	37.2	55.0	21.1	10.4	11.5
1990	81.6	80.2	44.1	51.7	25.2	11.1	14.8
1992	87.1	84.1	45.0	55.7	31.2	16.2	15.9
Males %							
1980	79.3	76.7	27.6	55.0	22.3	10.1	13.0
1990	78.3	76.6	35.3	49.8	25.6	10.7	15.4
1992	82.0	79.6	35.8	52.6	27.1	12.0	16.1
Females %							
1980	84.3	83.8	47.2	55.1	19.9	10.7	10.0
1990	84.9	83.7	53.2	53.7	24.8	11.5	14.2
1992	92.6	88.9	54.8	59.0	35.3	20.7	15.7
Urban districts %							
1980	78.2	76.4	41.7	46.6	22.2	10.3	12.9
1990	79.6	78.3	47.5	46.2	26.3	10.3	16.9
1992	85.3	82.4	48.4	51.3	34.0	16.2	18.9
Rural districts %							
1980	86.5	85.2	31.9	65.2	19.4	10.4	9.6
1990	84.2	82.5	39.5	58.9	23.6	12.5	11.6
1992	88.7	85.6	39.8	61.2	26.4	16.3	10.9



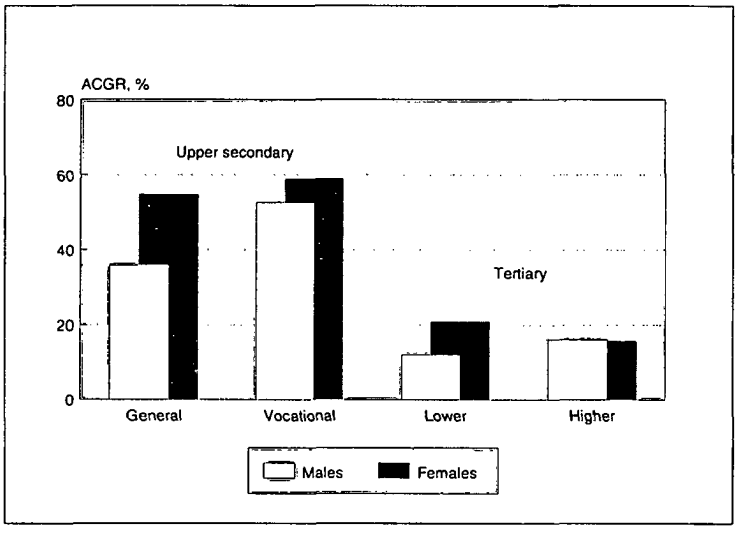
4.14
Post-comprehensive school age-cohort graduation rates by level of educational qualification in 1980–1992 (ACGR-indicator)

At the upper secondary level of education in 1992 the ACGR of those taking a general qualification (the matriculation examination) was 45% and of those taking a vocational qualification 56%. At the tertiary level, the ACGRs were the same – 16% – at the lower and higher levels. The ACGRs of women have grown faster than those of men at all levels of education apart from the upper secondary general level.

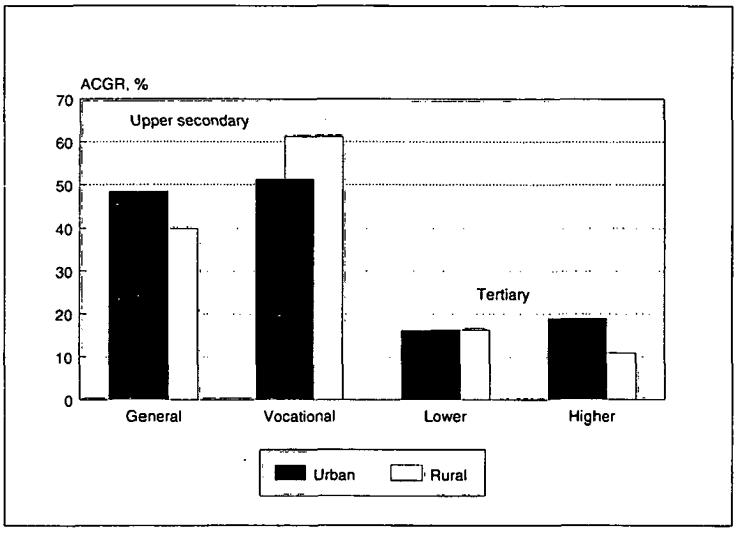
There is a big difference between the sexes in general education at the upper secondary level. The ACGR was 36% for men and 55% for women in 1992 (Figure 4.15).

The ACGR for vocational qualifications at the upper secondary level was 53% for men and 59% for women.

At the lower tertiary level, too, the differences between the sexes were great: 12% for men and 21% for women. At the higher tertiary level, the ACGRs were the same – 16% – for men and women in 1992.



4.15
Post-comprehensive school age-cohort graduation rates by level of educational qualification and sex in 1992 (ACGR-indicator)



4.16
Post-comprehensive school age-cohort graduation rates by level of educational qualification and degree of urbanisation in 1992 (ACGR-indicator)

The differences between different areas are considerable. In the urban areas, where the educational level of the population is high, the young people receive a higher level of education than in the rural areas with a low level of education. There is a clear statistical correlation between the ACGR and the educational level of the population. The higher the educational level of the population is, the higher the level of education the young people receive.

As can be seen from Figure 4.16, the ACGR for upper secondary general and higher tertiary qualifications are much higher in the urban areas than in the rural ones. For young people in 1992, the ACGR was 48% for the upper secondary general qualification in urban areas and 40% in rural areas.

The ACGR for higher tertiary degrees was 19% in urban areas and 11% in rural ones. The difference grew, because the ACGR of urban young people increased much faster than that of rural young people.

The ACGR for upper secondary vocational qualifications was higher in rural areas (61%) than in urban ones (51%) in 1992. The ACGR for lower tertiary-level degrees was the same in both types of area.

5 Educational achievement

Achievement in the comprehensive school

The standard of achievement in the Finnish comprehensive school was last assessed by the Institute for Educational Research of the University of Jyväskylä in a study entitled "Assessment of the Comprehensive School 90" in 1990–1993 (Linnakylä & Saari 1993; Brunell & Kupari 1993). Covering various subjects taught in the comprehensive school, the study was based on educational assessment tests presented to on a representative sample of pupils. The results for the different subjects were then compared with the previous national results and the results of assessments coordinated by the international IEA organisation.

Examination of educational achievement reveals that Finland is on the whole a remarkably homogeneous country. There are, however, some slight regional differences. Generally speaking, the educational achievements are higher in the southern parts of the country than in Northern Finland. The differences are likewise small between rural and urban areas, unlike in many other countries.

In particular the between school variance is small in Finland. According to the data in the IEA Reading Literacy Study and the international study of educational achievement in the natural sciences, the Finnish between school variance was the smallest (5–7%). In the understanding of the vernacular (in this case Swedish) and the natural sciences even smaller differences were observed in the 1990 national assessment than in the international comparisons. The efforts to make the availability of education and the standard of the comprehensive school the same throughout the country have thus been quite succesful. Differences do, however, remain between individual students and they are, as in other countries, great.

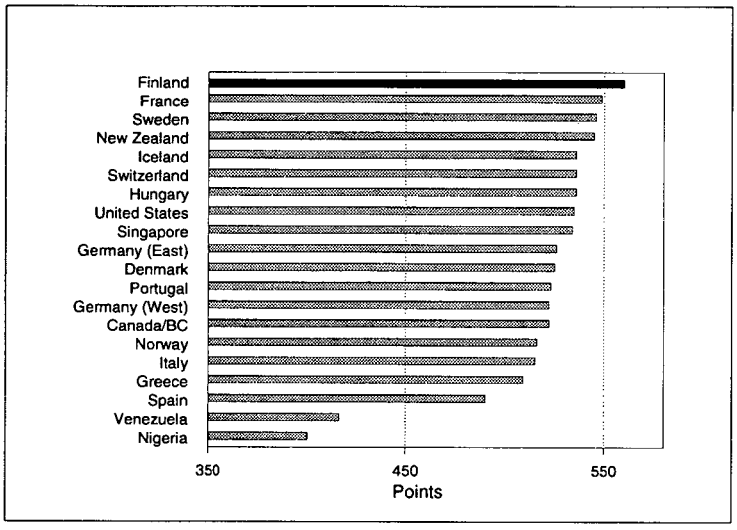
Performance in reading

Finnish 9-year-olds and 14-year-olds achieved the best results in the IEA Reading Literacy Study in the academic year 1990/1991 (Figure 5.1). The 9-year-olds were best at reading and understanding narrative texts, factual texts and documents, the 14-year-olds at understanding narrative texts and documents. In the understanding of factual texts the Finnish 14-year-olds came third after their Icelandic and French peers.

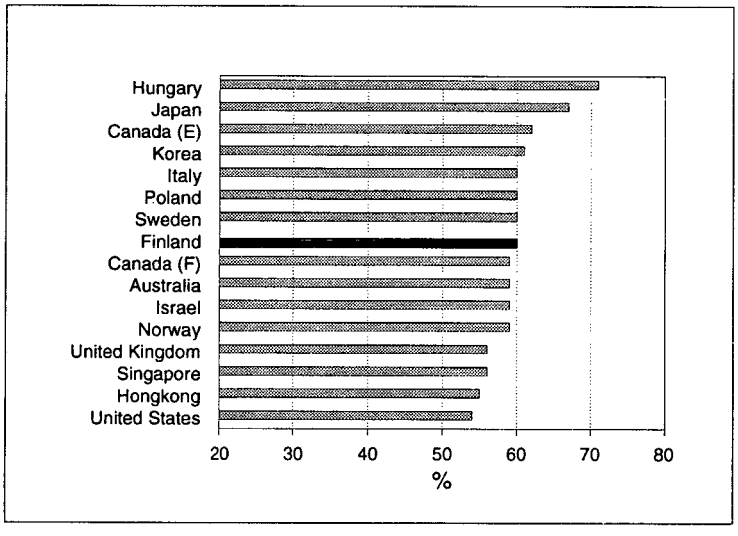
Performance in science

Achievement in the natural sciences has been assessed in 1970, 1984 and 1990 in five subjects: environmental studies, biology, geography, physics and chemistry.

The comparative international analyses showed that in 1984 Finnish 10-year-olds topped the list with Japan and Korea and that the 14-year-olds represented the average international standard (Figure 5.2). In the national assesment 1990 Finnish 10-year-olds were on approximately the same level as in 1984, but the 14-year-olds ranked a little higher than in 1984.



5.1
The mean results (14-year-olds) for certain countries taking part in the IEA Reading Literacy Study in the academic year 1990/1991



5.2
The percentages of correct answers given by 14-year-olds in the general science test in certain countries participating in the study (IEA/SISS) in 1983/1984

Performance in mathematics

The national assessments of achievement in mathematics made in 1979 and 1990 revealed that the 10-year-olds had improved their performance by 7 percentage points. The most favourable trend was revealed in three areas of mathematics: understanding of the concept of number, addition and subtraction, and applied mathematics. Little change was observed in multiplication and division, expressions and equations, and geometry.

The results for the 12-year-olds (6th grades) and the 15-year-olds (9th grades) were approximately the same in 1990 as they were in 1979. In the case of the applied test items it was observed that the poorest pupils had succeeded relatively better than the good pupils. One explanation for this is thought to be the abandoning of streamed instruction in mathematics in favour of non-differentiated instruction in the 1980s.

In the international comparison the performance in mathematics of 13-year-olds (7th grades) rated as average in the early 1980s (IEA Study of Mathematics II).

Performance in foreign languages

In order to assess performance in foreign languages 15-year-olds (9th grades) were tested for their understanding of spoken English. It has improved a great deal. The level of achievement, i.e. the percentage of correct answers to the test items, rose almost one third, from 66% to 87% between 1979 and 1990. In 1990 the ability of 15-year-olds (in the final year of the lower secondary level) to understand English was equal to that of pupils in their final year of the upper secondary level in 1971.

6 Resources

Teachers

There was in 1991 a total of 130,000 teachers and other staff employed in the formal education system, representing 5.9% of the total labour force (Table 6.1).

In 1991 the regular education system employed a total of 72,000 teachers, 58% of them women. 66% of all teachers were women teaching in the comprehensive school. The proportion of women teachers in comprehensive schools has grown by five percentage points since 1981.

The number of teachers in the regular education system increased by 19% between 1981 and 1991. The increase was greatest in vocational and professional education institutions, 47%. In the universities the growth was 22%.

The data are based on the register of teachers maintained by the National Board of Education, the KOTA database of the Ministry of Education, and the Regional Employment Statistics compiled by Statistics Finland.

6.1
Total staff employed in the formal education system in 1991

Type of institution	Staff	Females %
General regular and adult education	78,900	72
Vocational and professional	31,600	60
Universities	18,200	49
Total	**128,700**	**66**

6.2
Teachers employed in the regular education system in 1991

Type of institution	Teachers	Change from 1981 (1981=100)	Females %
Comprehensive	38,000	109	66
Senior secondary	5,700	108	60
Vocational and professional	20,100	147	52
Universties	7,800	122	34
Total	**71,600**	**119**	**58**

Expenditure

The total expenditure on the formal education system was FIM 36,700 million (USD 5,700 million) in 1992, the per capita expenditure FIM 7,300 (USD 1,100). The expenditure in equivalent USD is converted using purchasing power parity (PPP).

The expenditure includes the personnel and other current expenditure of institutions in the regular school system, student welfare expenditure, student grants (FIM 2,800 million) and capital expenditure. The expenditure on formal education also includes the estimated expenditure (about FIM 2,000 million) on pre-school programmes for 3–6 year olds, expenditure on adult education and the central education administration.

The data are based on the register of expenditure on regular education compiled by the National Board of Education, the Financial Statement and the statistics of the National Centre for Student Financial Aid.

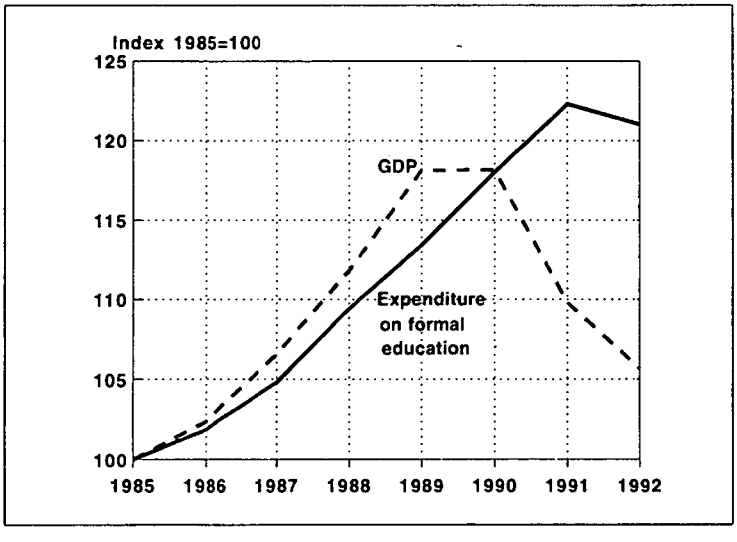
In 1992 the expenditure on formal education was 1.2% down on the previous year. The expenditure fell in all types of institutions except for the universities and adult education (Table 6.3).

1992 proved to be a turning point (Figure 6.4). Never before in the past few decades has expenditure on formal education fallen.

6.3
Expenditure on the formal education system in 1992

Type of institution	Current[1]	Capital	Total		Real change from previous year
	FIM million			%	%
Pre-school programmes[2]	1,953	..	1,953	5.3	–4.2
Comprehensive	13,016	609	13,625	37.1	–6.0
Senior secondary	2,125	46	2,171	5.9	–2.6
Vocational and professional	8,865	287	9,152	25.0	–0.1
Universities	6,527	332	6,859	18.7	+7.1
Adult education	2,618	80	2,698	7.4	+4.8
Other	220		220	0.6	–0.9
Total	**35,324**	**1,354**	**36,678**	**100.0**	**–1.2**

1) Including student grants
2) Expenditure on pre-school programmes for 3-6 year-olds is estimated according to the expenditure on comprehensive schools



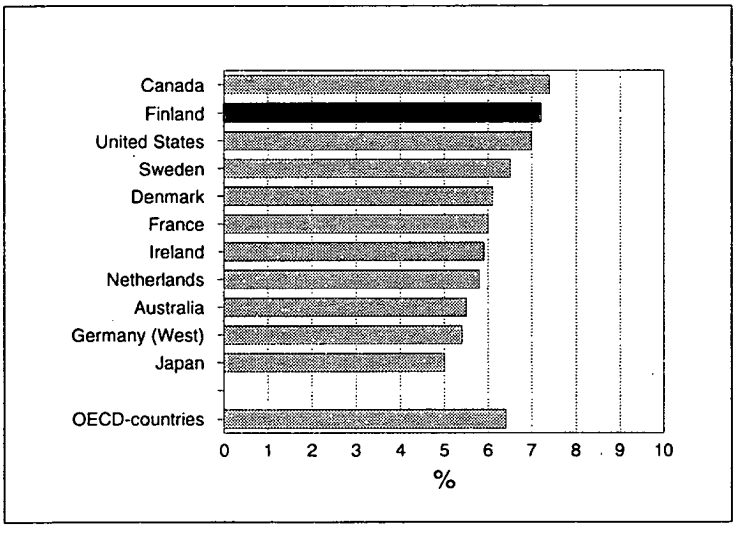
6.4
The trend in expenditure on formal education and in the gross domestic product in 1985–1992
(Pre-school programmes excluded)

In the latter half of the 1980s the expenditure on formal education increased every year slightly less than the gross domestic product (GDP). In 1989 the growth in the GDP came to a halt, but the expenditure on formal education continued to rise until 1991.

As a result of the rapid drop in the GDP, the expenditure on formal education as a percentage of the GDP rose to 7.7% in 1992, having been slightly over 6% in the latter half of the 1980s.

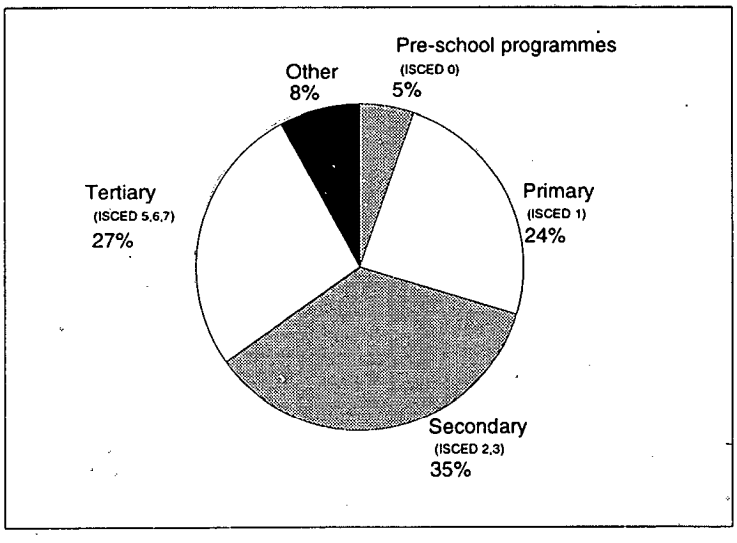
The OECD countries on average spent 6.4% of their GDP on formal education in 1991, the expenditure varying from 5% to 7.4%. Finland's expenditure on formal education accounted for 7.2% of the GDP, placing it near the top of the list of OECD countries in 1991 (Figure 6.5).

In Figure 6.6. the expenditure is broken down according to level of education. About one third consisted of secondary-level expenditure, one fourth of the primary and one fourth of the tertiary level.



6.5
Expenditure on education as a percentage of the GDP in some OECD countries in 1991

Source: OECD, Education at a Glance 1993



6.6
Expenditure on the formal education system in 1992 by level of education

The current expenditure on the regular education system in 1992 amounted to FIM 30,500 million (Table 6.7). This represented a real decrease of 0.4% on the previous year. The expenditure fell at all levels of education apart from the higher tertiary, where it grew by 10%. This increase was due to the rising number of students and the extra expenditure occasioned by the reform of the student financial aid scheme. For example, the real increase in the current expenditure on the universities was only 1.3% in 1992, excluding state grants to students.

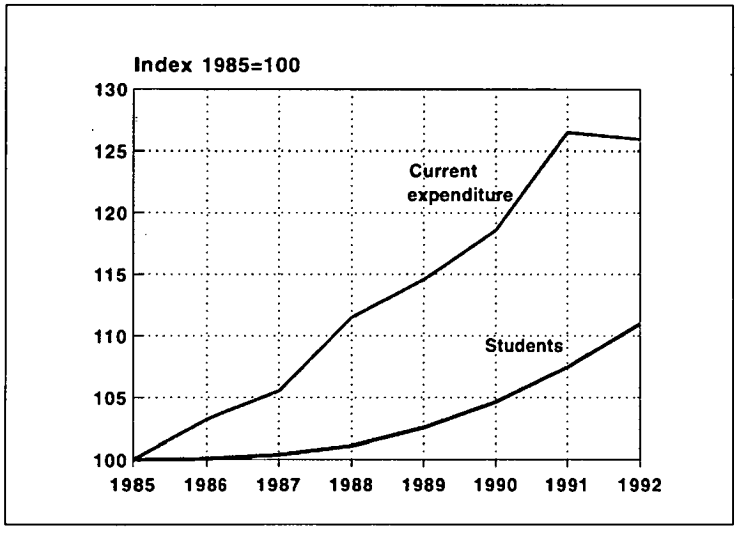
The current expenditure per student varied according to the level of education from FIM 21,700 at the primary and lower secondary level to FIM 53,300 at the higher tertiary level in 1992 (Table 6.7).

The current expenditure on the regular education system grew more in real terms between 1985 and 1991 than the number of students. Whereas the increase in current expenditure in 1985–1991 was on average 4% a year, the corresponding rise in the number of students was 1.2%. The increase in expenditure ceased in 1992, but the number of students continued to grow.

6.7
Current expenditure on the regular education system by level of education in 1992

Level	Current expenditure[1]	Real change from previous year	Students[2]	Current expenditure per student
	FIM million	%		FIM
Primary and lower secondary (ISCED 1,2)	13,016	–4.8	599,000	21,700
Upper secondary (ISCED 3)	8,085	–1.3	243,000	33,300
Lower tertiary (ISCED 5)	1,975	–3.3	42,000	47,000
Higher tertiary (ISCED 6,7)	7,457	+10.3	140,000	53,300
Total	**30,533**	**–0.4**	**1,042,000**	**29,800**

1) Including student grants
2) The average number of students in the school years 1991/92 and 1992/93



6.8
The trend in current expenditure and the number of students in the regular education system in 1985–1992

Public expenditure on education

Approximately at least 90% of the costs of Finland's educational institutions are met by the state and local authorities and less than 10% by the private sector. In 1991 public financing accounted for about 80% of the consumption expenditure in the OECD countries. Private financing accounted for over 20% in Germany, Japan and the USA (OECD, *Education at a Glance 1993*).

The total public expenditure includes consumption expenditure, depreciation allowances for fixed capital, and social security funds. The data are based on the National Accounts prepared by Statistics Finland.

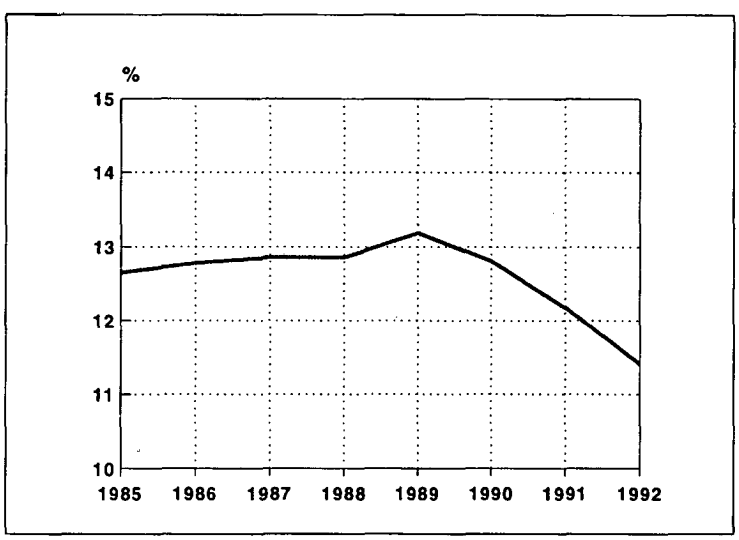
The public sector spent FIM 32,500 million on education in 1992. This was 3.2% less than in the previous year (Table 6.9). Public sector spending as a proportion of the GNP was 6.8% in 1992.

Public educational expenditure as a proportion of all public expenditure in 1992 was 11.4%. The proportion rose between 1985 and 1989 before taking a downward turn in the early 1990s (Figure 6.10). The reason for the decreasing proportion was that total public expenditure grew by 8.7% a year on average in 1990–1992 and that public educational expenditure dimished by 3.2% in 1992.

6.9
Public expenditure on education in 1992

Source	Consumption and fixed capital formation[1]		
		Real change from previous year	
	FIM million	%	%
State	9,344	–0.9	28.7
Local authorities	23,177	–4.1	71.3
Total	**32,521**	**–3.2**	**100.0**

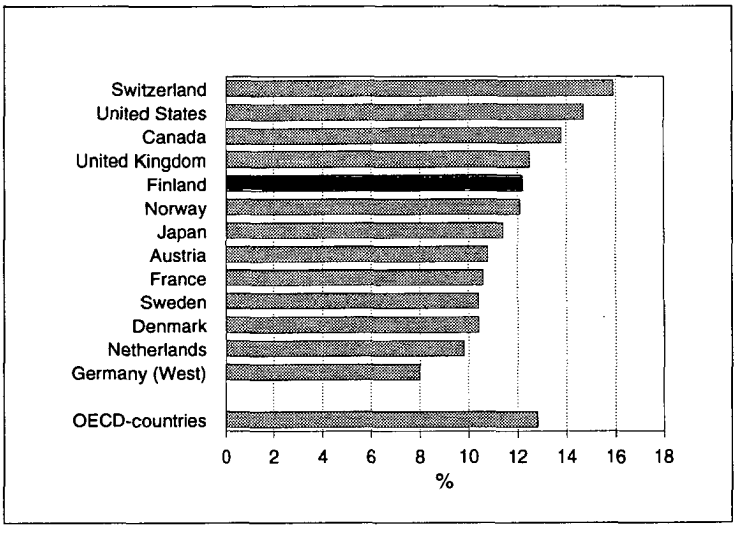
[1] Excluding student grants and pre-school expenditure



6.10
Public expenditure on education as a proportion of total public expenditure in 1985–1992

The state's share of the expenditure was 29% and that of the local authorities 71%. Because expenditure is entered by end user, the subsidies and aid paid by the state to the local authorities are included in the local authorities' expenditure (Table 6.9).

The OECD countries as a whole spent 12.8% of all public expenditure on education in 1991. The proportion varied between 8% and 16% in the different countries. Finland, with 12.2%, was about average.



6.11
Public educational expenditure as a percentage of total public expenditure in some OECD countries in 1991

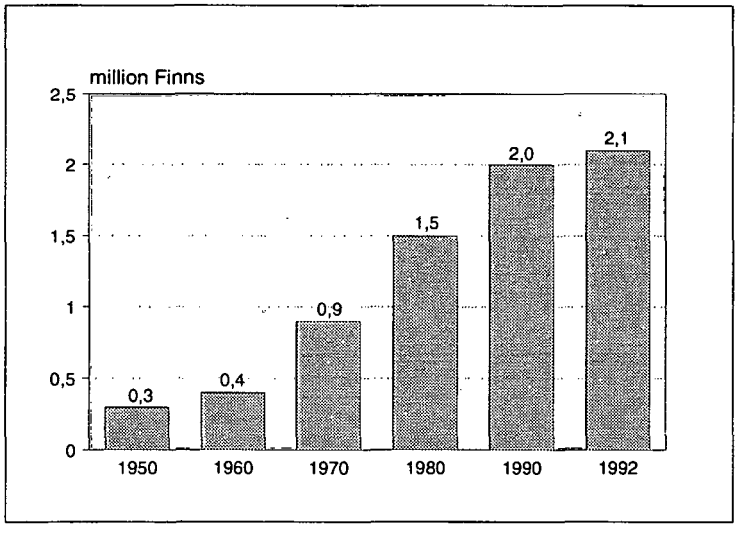
Source: OECD, Education at a Glance 1993

7 Educational attainment in Finland

The population by level of educational qualification

In 1992 2.1 million Finns, i.e. over half the population aged 15 and over, held an upper secondary or tertiary educational qualification. The number of such persons doubled between 1960 and 1970 and again by the end of the 1980s (Figure 7.1). The data are from the Register of Completed Education and Degrees maintained by Statistics Finland.

The number of Finns with an upper secondary level qualification increased fastest of all and was in 1992 almost two-and-a-half times that in 1970. The number of Finns with a tertiary qualification increased almost as rapidly and more than doubled between 1970 and 1992. During the same period the number of persons completing the primary or lower secondary general compulsory education nevertheless fell 31%, while the number of persons aged 15 or over increased over 17% (Table 7.2).



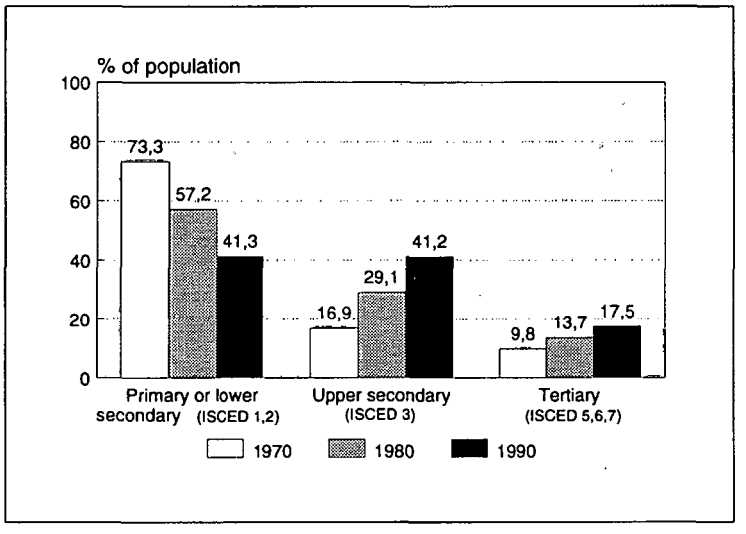
7.1
Finns with an upper secondary or tertiary educational qualification in 1970–1992

7.2
Finns aged 15 years and over according to their highest educational qualification in 1970–1992

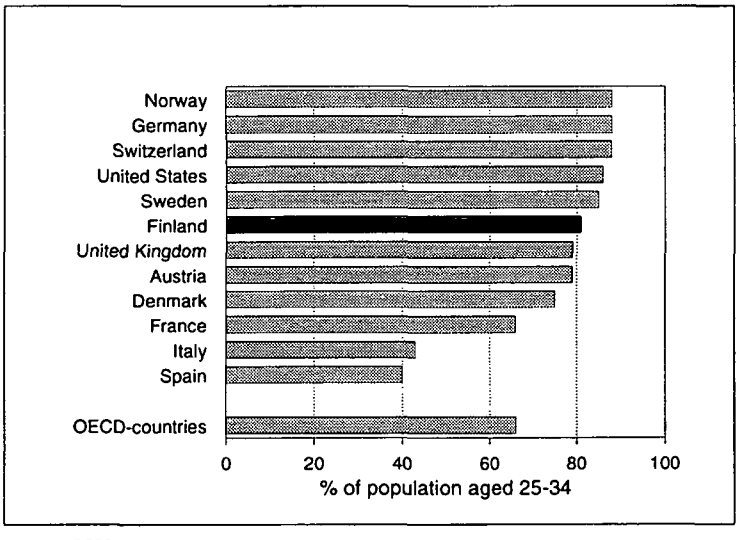
Year	Primary and lower secondary (ISCED 1,2)		Upper secondary (ISCED 3)		Tertiary (ISCED 5,6,7)		Total	
	Thousands	%	Thousands	%	Thousands	%	Thousands	%
1970	2,587	74	639	18	254	7	3,480	100
1980	2,337	61	1,093	29	392	10	3,823	100
1990	2,001	50	1,500	37	533	13	4,034	100
1992	1,970	48	1,546	38	571	14	4,087	100
Change on 1970 , %		–31		142		125		17

Among the population aged 25–64 years there were in 1990 41% who held an upper secondary level qualification and 17.5% a tertiary qualification (Figure 7.3). The proportion of those with an upper secondary level qualification grew from 17.6% to 41% between 1970 and 1990 and of those with a tertiary qualification from 9.8% to 17.5%. The proportion of those with a primary or lower secondary qualification fell from 73% to 41%.

The difference between the young and the older age groups tends to be very great in Finland – the biggest in the OECD countries in 1991. The percentage (30) of Finns aged 55–64 years with an upper secondary or tertiary qualification was below the average



7.3
Population aged 25–64 by level of educational qualification in 1970–1990

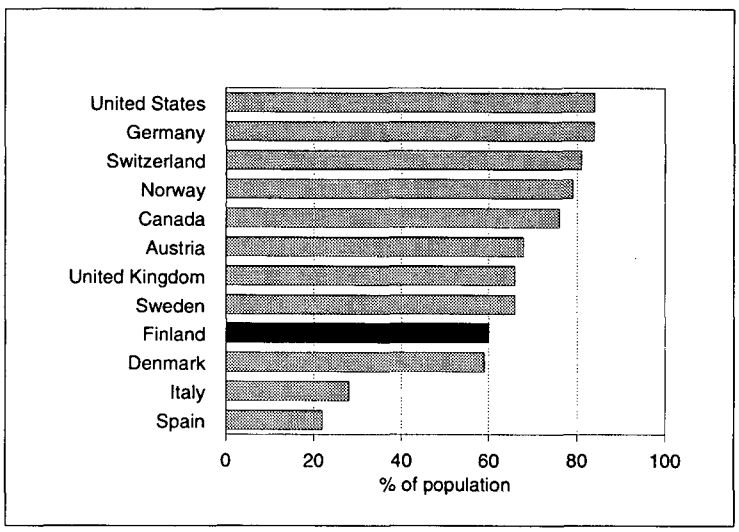


7.4
The proportion of the population (aged 25–34) with an upper secondary or tertiary educational qualification in Finland and certain OECD countries in 1991

Source: OECD, Education at a Glance 1993

for the OECD countries (38). The corresponding figure for young Finns aged 25–34 years was 80%, which is much higher than the OECD average (Figure 7.4). It may be estimated that education has spread faster in Finland over the past three decades than in most other OECD countries. The percentage of Finns aged 25–64 years with an upper secondary or tertiary qualification was average for the OECD countries in 1991 (Figure 7.5). The differences between the sexes are among the smallest in the OECD countries.

The rise in the level of education of young Finnish women has been particularly rapid. Finnish women under 50 have a higher level of education than Finnish men (Table 7.6); 48% of women aged 20–64 years had an upper secondary qualification and 44% of men. The percentages of women were higher in all the age groups than those of men. 18% of men had a a tertiary qualification and 16% of women. The percentage of women under the age of 35 with a tertiary qualification was, however, already higher than that of men.



7.5
The proportion of the population (aged 25–64) with an upper secondary or tertiary educational qualification in Finland and certain OECD countries in 1991

Source: OECD, Education at a Glance 1993

7.6
The population (aged 20–64) by level of educational qualification, age and sex in 1992

Age	Primary or lower secondary (ISCED 1,2)			Upper secondary (ISCED 3)			Tertiary (ISCED 5,6,7)				Population		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	%	Total	Males	Females
	%										Thousands		
20–24	22.2	24.8	19.4	73.5	72.0	75.0	4.3	3.2	5.6	100.0	320	163	157
25–29	18.4	21.4	15.2	63.6	61.6	65.6	18.0	17.0	19.2	100.0	374	191	183
30–34	20.0	22.6	17.3	57.9	55.5	60.5	22.1	21.9	22.2	100.0	379	194	185
35–39	26.3	27.8	24.8	51.6	49.5	53.7	22.1	22.7	21.5	100.0	399	203	196
40–44	35.5	36.3	34.8	45.3	42.7	48.0	19.2	21.0	17.2	100.0	427	219	208
45–49	43.1	43.3	42.9	37.2	34.8	39.7	19.7	21.9	17.4	100.0	381	194	187
50–54	53.2	53.0	53.4	30.1	27.8	32.4	16.7	19.2	14.2	100.0	287	143	144
55–59	64.2	63.4	65.0	22.7	21.0	24.3	13.1	15.6	10.7	100.0	254	124	130
60–64	72.7	71.8	73.4	16.8	15.6	17.9	10.5	12.6	8.7	100.0	253	118	135
Total	**37.0**	**37.7**	**36.2**	**46.2**	**44.4**	**48.0**	**16.8**	**17.9**	**15,8**	**100.0**	**3,074**	**1,549**	**1,525**

The educational level of the Finns (ELP-indicator)

In the early 1990s Statistics Finland developed a tool known as the ELP-indicator to measure the educational level of the population. This permits comparison of the educational level of various sectors of the population and changes in it by region. It also reveals the differences by sex and age. The data used in the calculations are taken from the Register of Completed Education and Degrees maintained by Statistics Finland and containing data on all the upper secondary and tertiary level qualifications taken by the Finns. The indicator is calculated according to a person's highest qualification using the level code for qualifications. The higher the figure of the three-digit indicator, the higher the level of education is.[1)]

The differences in the educational level of the young and the older age groups are great. For example, the educational level of those aged 25–34 years (347) was 54% higher than that of those aged 55–64 years (225) in 1991 (Table 7.7). Between 1981 and 1991 the educational level of the population of 20 years and over rose 21%. The educational level of young people rose 25%, of men 21% and of women 28%.

The educational level of young women (aged 25–34 years) was 8% higher than that of men of the same age in 1991. In the older age groups and the population as a whole the educational level of men was still higher than that of women. For example, the educational level of men aged 55–64 was over 6% higher than that of women of the same age in 1991.

There are marked regional differences in the educational level of the Finns (Table 7.7). The educational level of the population of the urban municipalities (304) was over 20% higher than that of the rural municipalities (251). The difference between the young (25–34) and older (55–64) age groups was also bigger in rural than in urban municipalities.

Although the rural municipalities have lost some of their educated population as a result of migration, the educational level of the rural population has nevertheless risen over the past ten years at approximately the same rate as that of the urban population.

There are striking differences between municipalities in the educational level of the population. The level in the municipality with the highest level of education was twice as high as that of the municipality with the lowest level in 1991.

The educational level of the population is highest in and around the capital, Helsinki, with only minor differences between the provinces elsewhere in the country (Figure 7.8).

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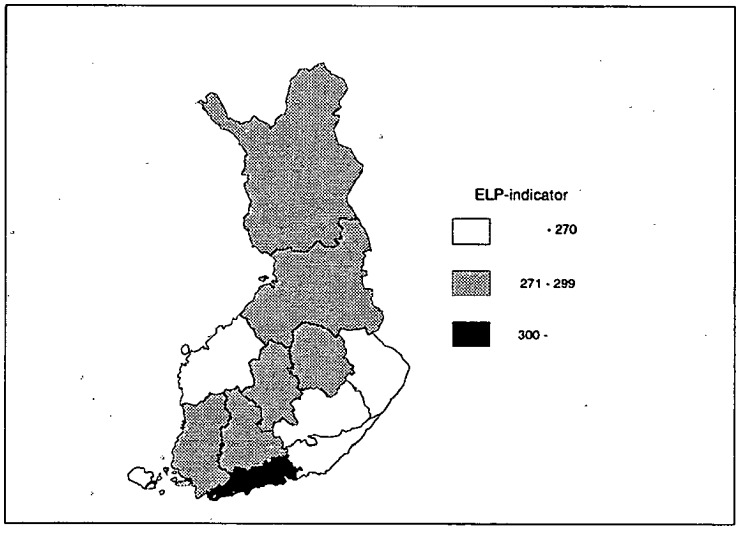
1) **The Educational Level of Population (ELP) indicator is calculated as follows:**

$$ELP = \left(\sum_{i=1.5}^{8} f_i x_i \Big/ \sum_{i=1.5}^{8} f_i \right) * 100$$

ELP = educational level of population
f_i = number of persons
x_i = level code of the Finnish Standard Classification of Education
1.5 = primary or lower secondary
3 = lower level of upper secondary
4 = upper level of upper secondary
5 = lowest level of tertiary education
6 = lower degree level of tertiary education
7 = higher degree level of tertiary education
8 = doctorate or equivalent level of tertiary education

7.7
The educational level of the population (ELP-indicator) aged 20 and over by degree of urbanisation, age and sex in 1991

Degree of urbanisation	All	Age group	
		25–34	55–64
Urban	304	362	245
Semi-urban	276	336	217
Rural	251	320	199
Total	**283**	**347**	**225**
Change on 1981, %	21.2	24.7	18.9
Males	287	334	233
Females	279	361	219



7.8
The educational level of the Finns (ELP-indicator) aged 20 and over by province in 1991

8 Adult education

Adult education is provided within the formal education system, at places of work and by various organisations.

Participation in adult education

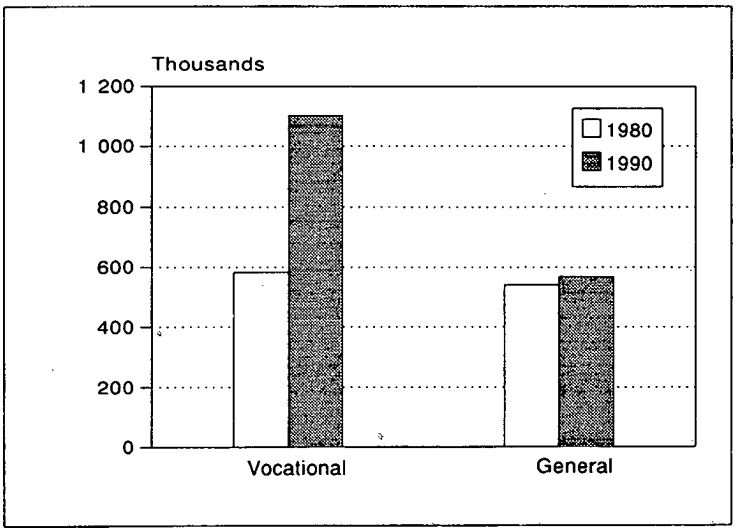
According to data from the Adult Education Survey[1] conducted by Statistics Finland, 1.6 million persons attended adult education in 1990, i.e. 44% of the population aged 18–73 years (41% of the men and 47% of the women). The survey was based on personal interviews with a sample of 3,990 persons.

Participation in adult education has increased rapidly since 1980, when approximately one million persons were attending, i.e. 30% of the population, 25% of the men and 34% of the women (Table 8.1).

8.1
Participation in adult education by sex in 1980 and 1990 (population aged 18–73)

	Population (aged 18 – 73)	Participants in adult education	
	Thousands		%
1980			
Males	1,622	407	25.1
Females	1,681	565	33.6
Total	**3,303**	**972**	**29.5**
1990			
Males	1,738	707	40.7
Females	1,817	861	47.4
Total	**3,555**	**1,568**	**44.1**

The increase in participation in adult education was due almost entirely to the growing attendance in vocational education (Figure 8.2.) In 1990 44% of the population aged 18–73 years, or 1.1. million persons, took



8.2
Participation in vocational and general adult education in 1980 and 1990 (population aged 18–73)

1) *Participation in Adult Education in Finland in 1990*, Matti Simpanen, Statistics Finland, Studies.

part in adult education connected with their profession or work, as against 24% in 1980. The concept of vocational education is in this survey based on the interviewee's view of whether the course was related to his profession or work, regardless of the contents of the course.

Studies of a general or social nature, and training related to a particular office or leisure pursuit were undertaken by 18% of the population aged 18–73, i.e. 0.6 million people. The corresponding percentage in 1980 was 17.

Most of the adult education is provided outside the regular education system. The most common form of adult education was clearly work-related education provided at workplaces or separate continuing education units (Table 8.3). Also popular were adult education centres mostly providing courses of a general, social or recreational nature. 'Other adult education' includes that provided in upper secondary evening schools, summer universities, folk high schools, music colleges, study circles, language schools, typing schools, etc.

The biggest group participating in adult education consisted of persons aged 35–44, accounting for 57% in 1990 (Table 8.4). Adult education is a form of additional study for the highly-educated. The most active participants were those with a tertiary-level degree (Figure 8.5). Persons with a high level of education were most active in seeking adult education. The differences in participation have not decreased since 1980.

Persons in the employed labour force participated far more in adult education in 1990 (54%) than persons outside the labour force (23%). White-collar workers on average participate more in adult education and agricultural entrepreneurs and employees on average less (Table 8.4) The difference in participation between white- and blue-collar workers has grown in ten years.

There are also clear regional differences. About half the people living in urban areas were adult students in 1990, as against a good third in rural areas. The differences are to a great extent explained by the difference in the level of education, which is lower in the rural than in the urban areas. On the other hand, the higher a person's level of education, the less significant is the area where he lives.

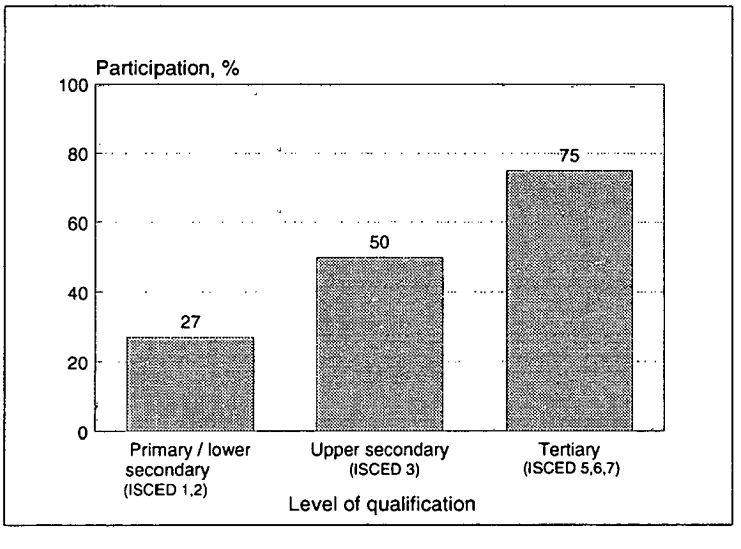
8.3
Participation in different forms of adult education in 1990 (population aged 18–73)

Type of form	Participants	
		% of 18–73 population
At work or in supplementary training unit	876,000	24.6
Adult education centres	469,000	13.2
Organisations	346,000	9.7
Vocational adult education centres	234,000	6.6
Universities	81,000	2.3
Other adult education	475,000	13.4

The sum of those participating in the various forms of education is not the same as the number of adult students in 1990 because the same person may participate in one or more forms of adult education.

8.4
Participation in adult education by age, level of education, socio-economic group, economic sector and degree of urbanisation of living area in 1990 (population aged 18–73)

	Participants	Non-participants	Population in thousands	
	%	%		%
Age group				
18–24	42.7	57.3	479	100.0
25–29	55.4	44.6	374	100.0
30–34	55.4	44.6	377	100.0
35–44	57.0	43.0	845	100.0
45–54	47.9	52.1	608	100.0
55–73	19.9	80.1	873	100.0
Level of education				
Primary or lower secondary (ISCED 1,2)	27.3	72.7	1,521	100.0
Upper secondary (ISCED 3)	49.8	50.2	1,482	100.0
Tertiary (ISCED 5,6,7)	74.7	25.3	553	100.0
Socio-economic group				
Agricultural enterpreneur	29.2	70.8	163	100.0
Other enterpreneur	39.6	60.4	192	100.0
Upper white-collar worker	82.7	17.3	404	100.0
Lower white-collar worker	68.1	31.9	843	100.0
Blue-collar worker	33.7	66.3	863	100.0
Student	44.8	55.2	246	100.0
Pensioner	14.9	85.1	736	100.0
Other / Unknown	23.5	76.5	109	100.0
Economic sector				
Not in labour force	22.5	77.5	1,087	100.0
Agriculture and forestry	36.1	63.9	223	100.0
Industry	42.7	57.3	782	100.0
Services	62.2	37.8	1,459	100.0
Unknown	14.1	85.9	5	100.0
Type of municipality				
Urban	48.0	52.0	1,954	100.0
Semi-urban	45.1	54.9	449	100.0
Rural	37.0	63.0	1,153	100.0
Total	**44.1**	**55.9**	**3,556**	**100.0**



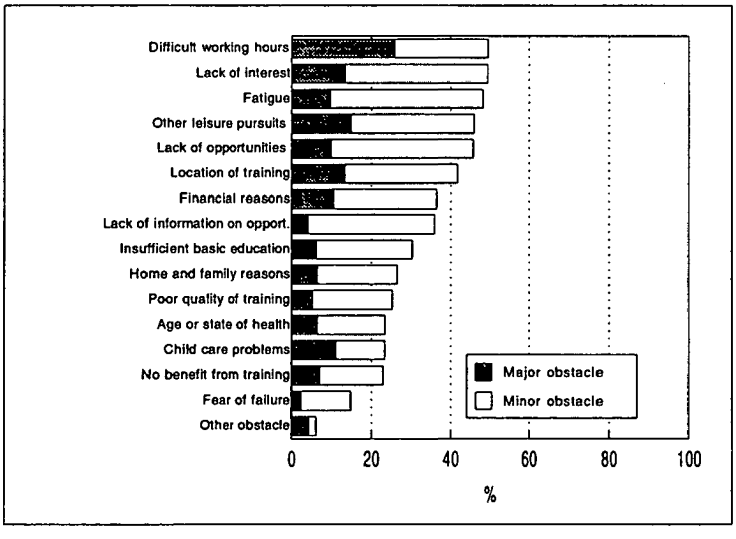
8.5
Participation in adult education by level of educational qualification in 1990

The survey of adult education conducted in 1990 also inquired into the concrete need for training. About half the people in the total employed labour force aged 18–64 stated that they needed more training to improve their vocational skills or to further their career. One of the main reasons for the need for training was that their jobs demanded further skills. The higher the level of education a person had achieved, the more likely he was to state that he needed further training. 73% of upper white-collar workers claimed that they needed further training (Table 8.6).

Despite the real desire and need for extra training, there may, however, be obstacles and difficulties in the way to obtaining it. The interviewees were asked to name the factors preventing them from seeking further training or making it more difficult. Lack of time and the pressure of work were the most common reasons given. These were closely followed by lack of interest and energy. Economic reasons were relatively insignificant as the prime obstacle (Figure 8.7). People were prepared to economise in order to study.

8.6
Need for further training expressed by interviewees by sosio-economic group in 1990 (labour force aged 18–64)

Socio-economic group	Need for further training			
	Yes	No	Don't know	Total
	%	%	%	%
Agricultural entrepreneurs	38.6	56.1	5.3	100.0
Other entrepreneurs	58.4	38.4	3.2	100.0
Blue-collar workers	36.5	59.2	4.3	100.0
Lower white-collar workers	63.6	33.2	3.2	100.0
Upper white-collar workers	73.0	24.7	2.3	100.0
Total labour force aged 18–64	**53.5**	**42.9**	**3.6**	**100.0**



8.7
Obstacles to participation in adult education in own time and at own expense in 1990 (labour force aged 18–64)

Other obstacles to training were the timing and location. Unbroken study at an institution was considered to be the worst alternative, whereas the most popular was the possibility of doing some of the study alone at home. The interviewees were also in favour of alternation between training and work and the possibility of gradually acquiring a qualification in stages.

In-service training

In-service training denotes any professional or trade union training provided in the form of a structured course, the costs of which are partly or entirely covered by the employer or for which the participant receives compensation for his loss of leisure time. The following data are based on the Labour Force Survey conducted by Statistics Finland and on the educational statistics derived from it. The figures include only employees aged 15–64 years.

Some 0.8 million employees aged 15–64 years attended in-service training in 1991, i.e. about 42% of all employees in the age group. Women attended in-service training more than men (44% vs. 39%).

The number and percentage of persons in the labour force receiving in-service training increased rapidly during the economic boom of the late 1980s. With the 90s came the recession, and employers began to provide less in-service training for their employees. The number of employees attending in-service training fell 13% on 1989, the corresponding decrease in the number of employees during the same period being 9% (Table 8.8).

The number of in-service training days was only 2% down on 1989. There was in 1991 a particularly marked decreased in short courses lasting 1–2 days. The number of training days per participant rose from 6.0 to 6.8. Men on average received longer training than women: 7.7 days as against 6.0.

8.8
Employees (aged 15–64) attending in-service training in 1982–1991

Year	Employees	Employees attending in-service training	% of all employees	Training days	Training days per participant	Training days per all employees
	Thousands	Thousands		Thousands		
1982	1,979	565	28.6	4,125	7.3	2.1
1983	1,997	569	28.5	4,324	7.6	2.2
1984	2,047	626	30.6	4,632	7.4	2.3
1985	2,067	652	31.5	4,629	7.1	2.2
1986	2,042	667	32.7	4,669	7.0	2.3
1987	2,102	693	34.4	4,505	6.5	2.2
1989	2,073	907	43.8	5,442	6.0	2.6
1991	1,890	788	41.7	5,358	6.8	2.8

Persons with a tertiary-level education attended in-service training most frequently, but their attendance fell more than that of persons with a lower level of education.

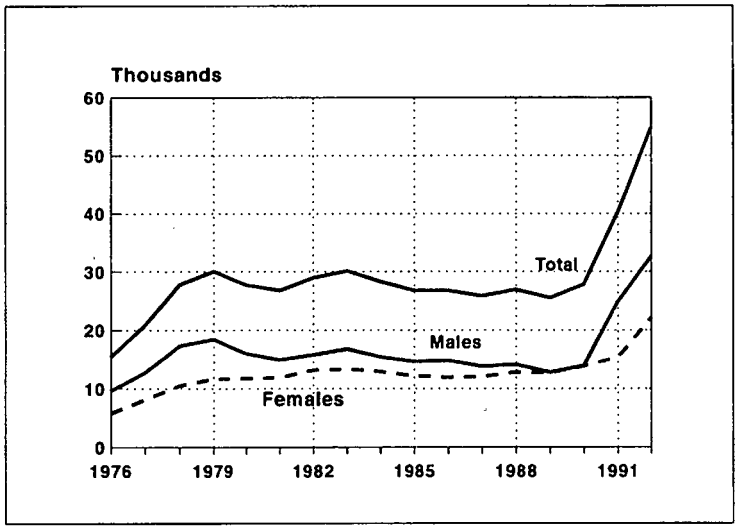
In autumn 1989 employers paid 92% of employees all the expenditure arising from training. Four out of five employees attended in-service training during normal working hours.

Employment training

Employment training is intended for the unemployed and those in danger of losing their jobs. It is financed primarily by the labour authorities, who buy training services from educational institutions and to some extent from commercial organisations. Employment (or labour market) training includes basic or further training and preparatory courses for people entering the labour market.

The number of persons receiving employment training has risen rapidly in the 1990s to 55,000 in 1992. This is 38% more than in the previous year. Men accounted for 60% (Figure 8.9).

The receivers of employment training represented about 1% of the total labour force (employed and unemployed persons aged 15–74 years) throughout the 1980s. In 1991 the figure rose to 1.6% and in 1992 to 2.2%.



8.9
Completions of employment training 1976–1992

Adult education in the formal education system

Adult courses within the formal education system are provided at schools, colleges and universities within the regular education system, which adapt their teaching to adult needs, leading to the same diplomas and qualifications as the corresponding courses for young people. Adult education is also provided in the form of short supplementary courses.

There were 19 senior secondary schools providing evening courses only in 1992. Such courses were also available in 31 ordinary senior secondary schools, the number of students being approximately 35,000. These courses provide education for employed persons who wish to complete their comprehensive school or senior secondary school education or take the matriculation examination. The number of students matriculating from them in 1992 was 1,800.

There were 558 vocational and professional education institutions providing adult education in 1992, including 42 centres for vocational courses, 43 specialised vocational institutes devoted entirely to adult education, and 219 vocational and professional education institutions with a separate adult education section. 458,000 persons were participating in adult education in 1992. Of them 9,000 were completing a 1–4-year course leading to either an upper secondary or tertiary-level qualification.

In addition to undergraduate and postgraduate courses, the universities provide supplementary professional education and open university courses. There is a separate division for supplementary education in every university, a total of 2,300 courses being provided for some 70,000 students in 1992. Supplementary education at university level is also provided by the summer universities, which attracted 33,000 students in 1992.

In addition to the ordinary and summer universities, open university-level courses are provided at adult education centres and folk high schools. The number of students attending open university courses in 1992 was 52,000.

Folk high schools, adult education centres and study circles constitute the system of liberal adult education in Finland. According to data for 1992 provided by the National Board of Education, the folk high schools numbered 93 and had about 7,800 students enrolled on their basic courses and 81,000 on various temporary courses. The folk high schools are mostly boarding schools focusing on providing a general cultural education or instruction in leisure pursuits or matters of topical interest.

The adult education centres constitute the largest providers of adult education with respect to the number of students involved. These institutions numbered 277 in 1992, 90% of them owned by local authorities and the rest privately. The number of students attending them totalled more than 0.6 million. Adult education centres provide an opportunity to study general and practical subjects, arts and crafts, and most of them also arrange comprehensive school, senior secondary school and open university courses.

Study circle centres are organisations maintained by various educational associations for the purpose of arranging study groups, courses and lectures. There were more than 190,000 participants in study groups and more than 0.5 million in various other courses and activities in 1992.

50–80% of the costs of liberal adult education and that provided by various organisations are covered by state subsidies, the remaining finance being provided by the local authorities, the maintaining organisations and students' fees. The tuition costs of adults studying in vocational and professional education institutions are shared by the state and the local authorities. Employment training is financed out of state funds and in-service training mainly by employers. Adult students are entitled to substantial financial subsidies during periods of full-time study.

9 Education and employment

The data presented in this chapter are based on the Population Census, the Regional Employment Statistics, the Labour Force Status of School Leavers, Labour Force Surveys and OECD statistics.

From school to work

The following data concern the labour force status of 1985 school leavers and the level of their educational qualification five years later. It should be pointed out that the latter half of the 1980s coincided with an economic boom. This gave way to an economic recession in the early 1990s, causing a rapid decline in the employment situation of young people in particular.

In 1990, five years after leaving school, about 80% of those with a general lower secondary qualification (compulsory education), 50% of those with a general upper secondary qualification, a good 20% of those with a vocational upper secondary qualification, 15% of those with a lower-tertiary qualification and a good 10% of those with a higher tertiary-level qualification had obtained some further degree or qualification (Table 9.1)

We shall now examine the 1985 school leavers whose qualification was still the same in 1990. Of these (89,600), 66% were employed, 13% were studying, and 10% were employed and studying. Those at home, doing their military service or otherwise outside the labour force accounted for 7% and the unemployed for 4.7%. The rate of unemployment of school leavers in 1985 almost trebled between 1990 and 1992.

Of the 13,800 with a lower secondary general education on leaving school, over 54% were employees or entrepreneurs and 13% students. 6% were studying while in employment. 15% were not in the labour force and 11.7% were unemployed in 1990. In two years the unemployment of school leavers with a lower secondary qualification rose to 26.8% (Table 9.1).

9.1
1985 school leavers: main type of activity in 1990 and unemployment in October 1992

	Qualified in 1985	Persons with same qualification in 1990 and 1985	Employed	Employed and studying	Studying	Not in labour force	Unemployed in 1990	Unemployed in October 1992
			%	%	%	%	%	%	%
Lower secondary (ISCED 2)	63,500	13,800	100.0	54.4	6.2	12.9	14.8	11.7	26.8
Upper secondary general (ISCED 3)	31,100	15,500	100.0	23.9	28.9	41.9	3.9	1.4	9.8
Upper secondary vocational (ISCED 3)	54,000	41,700	100.0	77.4	3.9	6.4	7.2	5.1	14.1
Lower tertiary (ISCED 5)	9,900	8,400	100.0	85.3	3.8	3.4	5.8	1.7	6.5
Higher tertiary (ISCED 6,7)	11,500	10,200	100.0	79.6	13.6	2.5	2.9	1.4	4.7
Total	**170,000**	**89,600**	**100.0**	**65.6**	**9.7**	**12.8**	**7.2**	**4.7**	**13.5**

Of the 15,000 school leavers with a general upper secondary qualification (matriculation) in 1985, 24% were employed five years later. 70% were studying, just under half of them being employed at the same time. 4% were not in the labour force and 1.4% were unemployed. The rate of unemployment had risen to 9.8% by 1992.

The situation of those with a vocational upper secondary or tertiary-level qualification naturally differed from that of persons with a general lower or upper secondary level education only. 77–80% were in employment, 4–14% studying and working, and 3–6% studying. It is interesting to note the high study rate of persons with a higher tertiary-level qualification. This is explained by the fact that the majority of those studying for a post graduate degree and continuing their studies in some other way were working while they studied. 3–7% were not in the labour force; the unemployment rate varied from 5.1–1.4% in 1990 and rose to 4.7–14.1% in 1992.

The employment and educational structure of the labour force

At the end of 1991 the Finnish labour force totalled 2.5 million (Table 9.2). The labour force is here taken to include the population aged 15–74, both employed and unemployed. Of those in employment, 1.9 million were employees, 0.3 million entrepreneurs and 0.3 million unemployed. Pensioners, students and other persons (aged 15 years and over) not in the labour force totalled over 1.5 million.

Of those in the labour force, 35% had completed the general compulsory education at the primary or lower secondary level, 47% at the upper secondary level, and 18% held a tertiary-level qualification. The level of educational qualification of the unemployed was much lower than that of the employed. Two thirds of those not in the labour force are pensioners and many of them are students; the level of educational qualification of this section of the population is about half that of persons in the labour force.

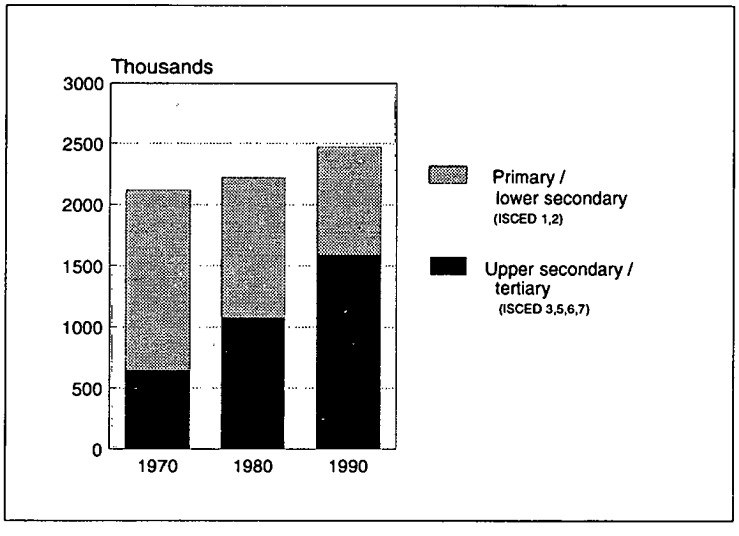
9.2
The labour force and the population not in the labour force aged 15 and over by level of educational qualification in 1991

	Total	Primary or lower secondary (ISCED 1,2)	Upper secondary (ISCED 3)	Tertiary (ISCED 5,6,7)
Labour force				
Thousands	2,470	858	1,163	449
%	100.0	34.7	47.1	18.2
Persons not in labour force				
Thousands	1,593	1,131	359	103
%	100.0	71.0	22.5	6.5
Total				
Thousands	**4,063**	**1,989**	**1,522**	**552**
%	**100.0**	**49.0**	**37.4**	**13.6**

The level of educational qualification of the labour force has risen rapidly over the past twenty years (Figure 9.3). Whereas in 1970 only one third of the labour force had an upper secondary or tertiary-level qualification, the corresponding proportion had risen to two thirds by 1990.

In 1990 66% of the Finns of working age belonged to the labour force, and 80% of those with an upper secondary or tertiary-level qualification. The corresponding percentage for those with a primary or upper secondary-level qualification was 50. 85.5% of men and 80.6% of women aged 15–64 with an upper secondary or tertiary-level qualification belonged to the labour force. The percentage of women in the labour force is among the highest in the OECD countries.

A very great change has taken place in the structure of the Finnish economy over the past four decades. In 1950 Finland was still a typical agrarian society. Of the economically active population, 46% made their living from agriculture and forestry, while industry & construction and the service sector both accounted for 27% (Table 9.4).



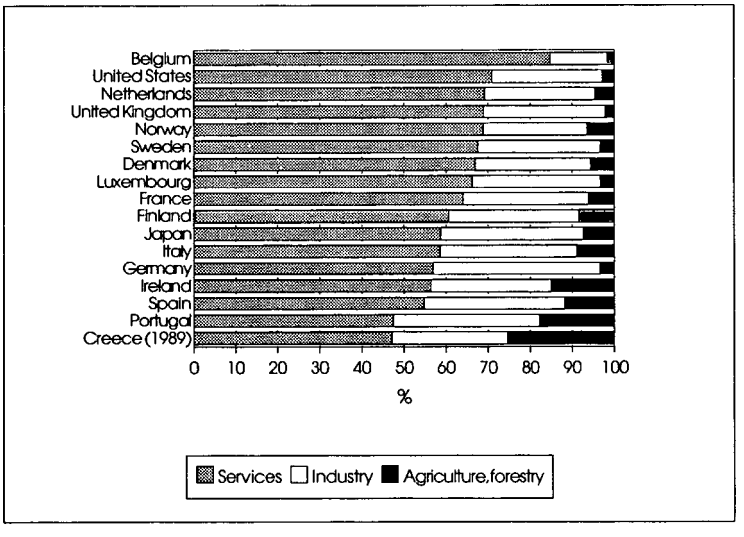
9.3
Persons in the labour force with a primary/lower secondary qualification and with an upper secondary/tertiary qualification in 1970–1990

9.4
The industrial structure of the employed labour force 1950–1990

	1950		1970		1990	
	Thousands	%	Thousands	%	Thousands	%
Agriculture and forestry	909	45.8	429	20.3	197	8.5
Industry and construction	538	27.1	727	34.3	677	29.1
Services	537	27.1	962	45.4	1,448	62.4
Total	**1,984**	**100.0**	**2,118**	**100.0**	**2,322**	**100.0**

The proportion of the labour force employed in agriculture and forestry decreased from 46% to 8.5% between 1950 and 1990, while the proportion of jobs in the service sector requiring a high educational level increased from 27% to 62%. The labour force employed in industry & construction grew in the 1950s–1970s, but the growth came to a halt in the 1980s and the proportion fell to 29% in 1990. The proportion of manufacturing jobs in the total labour force took a downward turn, as in most of the other highly developed OECD countries.

Figure 9.5. ranks certain OECD countries according to the size of their service sector. According to this classification, Finland's occupational structure is at about the middle level.



9.5
The industrial structure of the employed labour force in Finland and certain OECD countries in 1990

Source: OECD, Labour force statistics 1970–1990

9.6
The employed labour force by industry and level of educational qualification in 1991

Industry	Total		Primary or lower secondary (ISCED 1,2)		Upper secondary (ISCED 3)		Tertiary (ISCED 5,6,7)	
	Thousands	%	Thousands	%	Thousands	%	Thousands	%
Agriculture and forestry	191	100.0	93	48.7	83	43.5	15	7.9
Manufacturing	460	100.0	174	37.8	220	47.8	66	14.3
Construction	134	100.0	52	38.8	61	45.5	21	15.7
Trade, accommodation	339	100.0	134	39.5	173	51.0	32	9.4
Communications	158	100.0	74	46.8	73	46.2	11	7.0
Financing, insurance	236	100.0	71	30.1	113	47.9	52	22.0
Community services	651	100.0	131	20.1	289	44.4	231	35.5
Total	**2,169**	**100.0**	**729**	**33.6**	**1,012**	**46.7**	**428**	**19.7**

In 1991 a good third of those employed in community services (education, health care, the public administration, etc.) held a tertiary-level qualification, the corresponding proportion in the branches with the lowest level of education (agriculture and forestry, communications, trade and accommodation) being below 10% (Table 9.6).

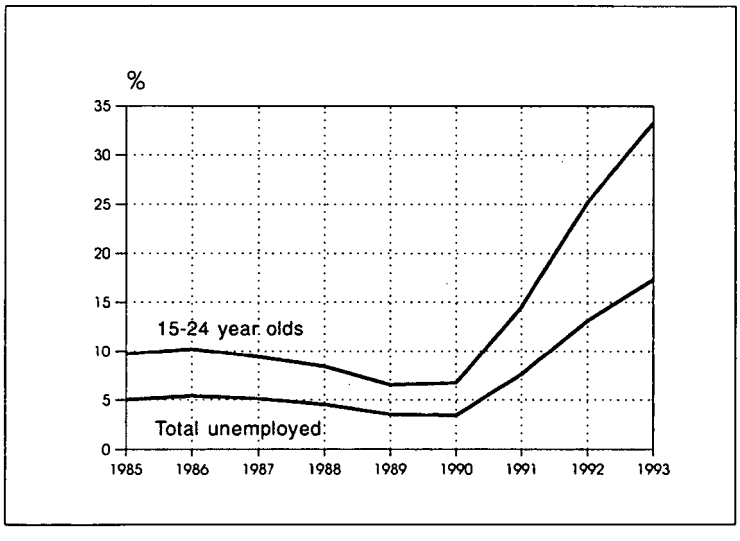
The labour force employed in the municipal sector has grown most of all over the past four decades, and is now nearly five times what it was in 1950. In 1990 the state and local authorities employed 34% of all employees, the private sector and state-owned companies 66%. The municipal sector employed the highest proportion of highly-educated members of the labour force, the private sector the lowest.

Unemployment by level of education

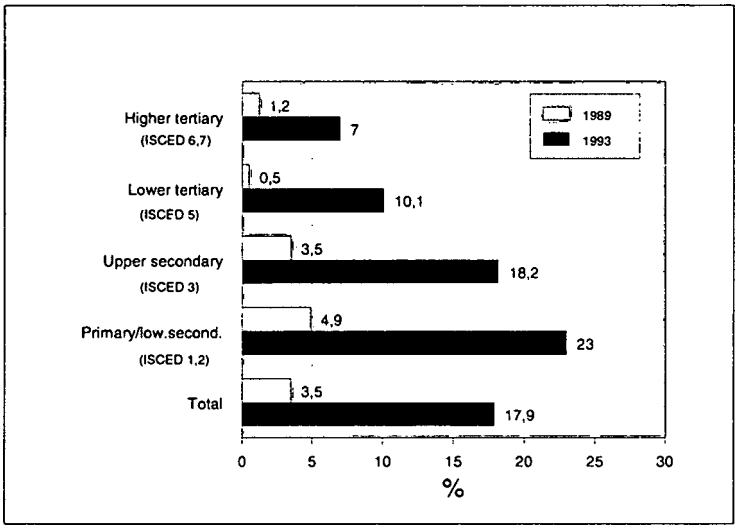
The rate of unemployment of the labour force (the unemployed as a percentage of the labour force) varied in the latter half of the 1980s between 3.5% and 5.5%. From 1990 onwards it took a dramatic upward turn. Whereas in 1990 the rate of unemployment was still only 3.4%, by 1993 it had risen to 17.9% (Figure 9.7).

The rise in the rate of unemployed of the young (aged 15–24 years) was even more marked. In the latter half of the 1980s the rate of unemployment for people in this age group varied between 6.5% and 10%, and from 6.7% in 1990 to 33.3% in 1993.

By international comparison, the rise in the rate of unemployment was extremely marked in Finland in 1993. Of the EU countries, for example, only the figures for Spain were higher than Finland's.



9.7
The rate of unemployment 1989–1993



9.8
The rate of unemployment (aged 15–64) by level of educational qualification in 1989 and 1993

As the rate of unemployment has risen, persons with a high level of educational qualification have increasingly been faced with unemployment. The rates of unemployment for them are, however, lower than for those with a lower level of educational qualification (Figure 9.8).

In 1993 the rate of unemployment (23%) of those with a primary or lower secondary qualification was over three times higher than that of those with a higher tertiary-level qualification (7%).

Annual income by level of education

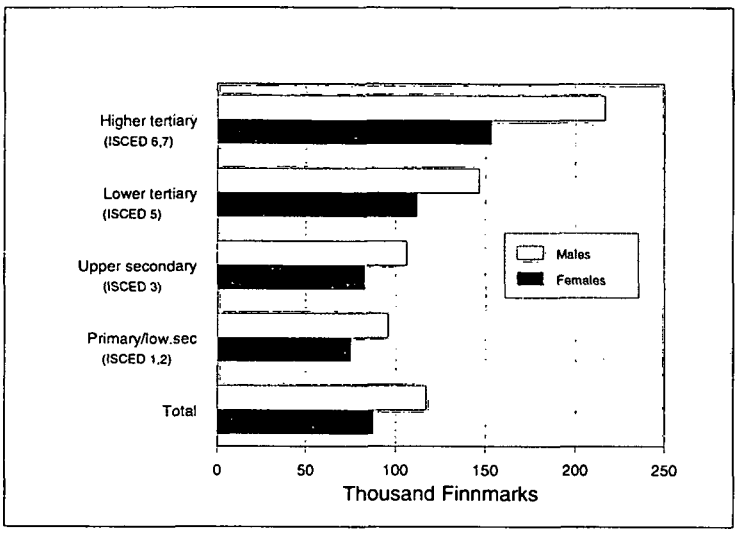
A person's earned annual income consists of entrepreneurial income, wage and salary earnings. Here we shall examine persons with an annual income of FIM 20,000 or more. The data are from the tax database of the National Board of Taxation.

The higher the level of education, the higher the per capita annual income is (Figure 9.9). For example, the annual incomes of persons with a higher tertiary-level qualification are on average twice those of persons with an upper secondary-level qualification.

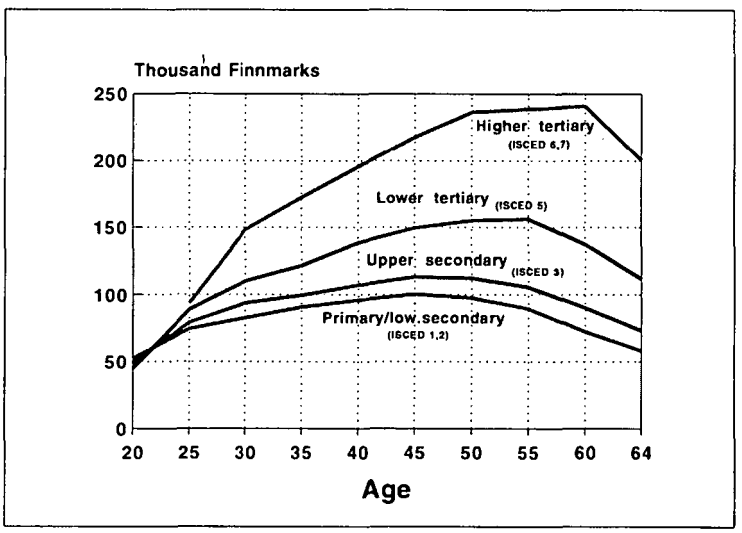
The average annual incomes of women are 70–80% those of men. The difference is biggest at the higher tertiary level, where in 1991 women's annual incomes were 70% of those of men.

The average income by age first rises up to a certain age, after which it falls off. The reduction is due to the drop in average income with age and the start of the transition to retirement. The higher the level of education is, the later the age at which the income begins to decrease.

In 1991 the annual per capita incomes of persons with a primary or lower secondary-level qualification increased up to the age of 46, those with an upper secondary-level qualification up to the age of 48, those with a lower tertiary-level qualification up to 55 and those with a higher tertiary-level qualification up to the age of 60.



9.9
The average annual per capita income of the population aged 20–64 by level of educational qualification and sex in 1991



9.10
The average annual per capita income of the population aged 20–64 by educational qualification and age in 1991

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FIM 85

ISSN 1236-4746
ISSN 0789-6735