

Education in Finland and the ISCED-97

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1 The Finnish education system over the past hundred years

Ensuring equal opportunities of education for the entire population has been an important part of the Finnish Education System since Finland gained independence in 1917. The Compulsory School Attendance Act entered into force in 1921, and made education compulsory for children aged 7 to 13 at the six-year folk school (*kansakoulu*). However, it took until the 1940s before the system was completely put into effect in rural areas.

After the fourth year of folk school, students could apply to secondary school (*opikoulu*). Entry into secondary schools was through entrance examinations, and generally a fee also had to be paid for secondary schools. Secondary schools were divided into a five-year lower secondary school (*keskikoulu*) and a three-year upper secondary school (*lukio*), which ended in the matriculation examination (*ylioppilastutkinto*). Although all secondary schools had to have some free places for those who could not pay the fees, secondary school students tended to come from middle class families, where the children were not required to enter the work force at an early age.

For those who stayed on in folk school, different further education possibilities were open albeit not very widely until the 1950s. Two years of civic school (*kansalaiskoulu*) were available and were made compulsory by regulations that came into force in 1958. After civic school, it was possible to go on to vocational school (*ammattikoulu*).

The comprehensive school (*peruskoulu*) was established in the 1970s after the law on the basis of the education system was enacted in 1968. The nine grades of comprehensive school replaced the folk school, civic school and lower secondary school. Upper secondary school became distinct from the lower secondary school at the same time. The transition to the comprehensive school was realised region by region during the 1970s. Ability groups remained a part of the comprehensive school until the mid-1980s. However, they were felt to be a factor in maintaining regional, social and gender inequalities and were thus abolished in order to further equal schooling for all (Aho et al., 2006).

Statutory school age now covers the age groups 7 to 16, so that a person is obliged to cover the nine-year school curriculum and can only be freed from this if ten years have lapsed since entering the education system. Entry into the school system is flexible, so that parents can request that their children be taken into school

at the age of six, or postpone it until the age of eight. In both cases psychological tests are used to determine whether this is appropriate.

Reform of vocational education was started in the 1970s and was implemented across different disciplines over the 1980s. The relatively disparate nature of both secondary and tertiary vocational education was reformed in order to provide higher quality vocational education. The reform of the tertiary sector also meant that there were more places for students in higher education, which was a source of relief for the ever-growing numbers of matriculating students. In 1988, there was a vocationally oriented study place at vocational school, vocational college, or university for practically all school leavers from both comprehensive and general upper secondary school (Aho et al., 2006). The Ministry of Education also wanted to reform the upper secondary sector into a unified 'youth school' that would include both the general and vocational upper secondary schools. However, this reform was not introduced and therefore general and vocational education continue to be separate at the upper secondary level (Lampinen, 2001).

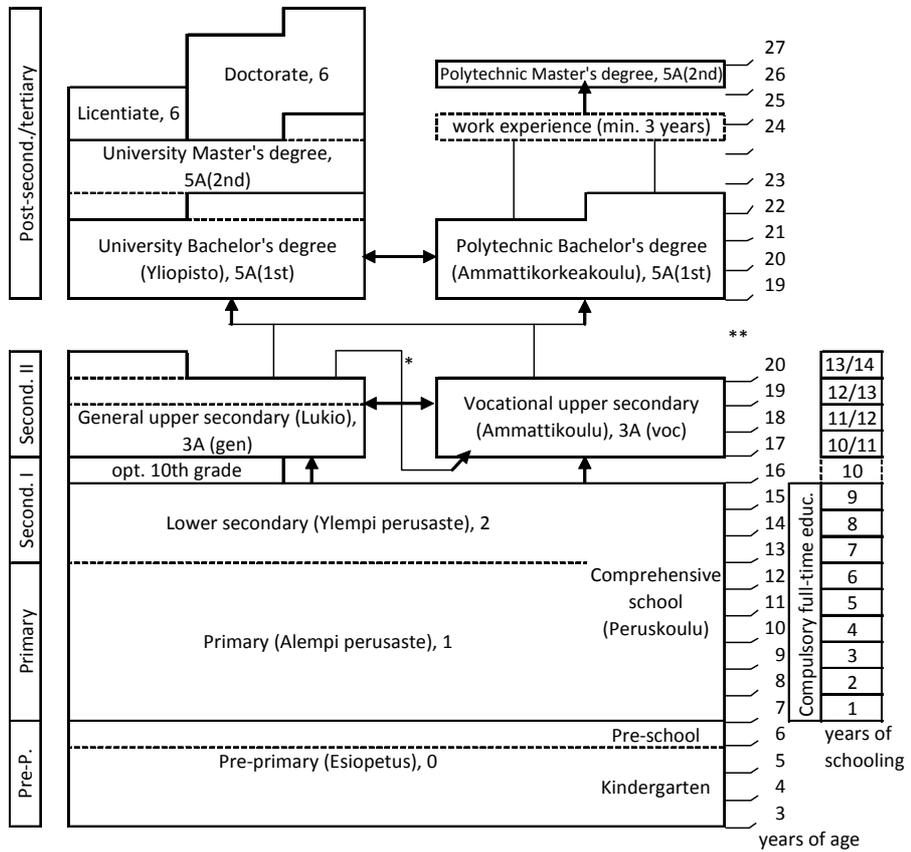
The general level of education of the population has risen rapidly over this period. The number passing the matriculation examination every year has risen from 2,000 per year in the 1930s, to over 10,000 in the 1960s, and was nearly 33,000 in 2006. The proportion of 25–34 year-olds that have completed a post-secondary qualification was already fifty percent in 1975, and has grown to 85 percent by 2005 (Statistics Finland, 2007a).

2 Description of the current education system

The Finnish education system is shown schematically in figure 1. The general features of the education system are the nine-year comprehensive (and compulsory) school with an optional 10th grade for improving one's chances of applying to upper secondary education; and a two-sector system of education at both the upper secondary and the tertiary levels. Despite the duality of the system, changing from one part to the other is possible at and between all stages, although it is slightly more complicated at the tertiary level, as will be described below.

Pre-school education was reformed in the early 2000s. All six-year-old children are entitled to receive free pre-school education the year before they start their compulsory education. Over 90% of the age group attend voluntary pre-schools. Most pre-school classes are in day care centres and around 15% in comprehensive schools either as separate pre-school classes or as combined classes with the first years of primary education (FNBE). Day care and pre-school education for children under the age of 6 is also widely available. However, there are fees but they vary according to parental income and the lowest earning groups are exempted.

Figure 1. The Finnish education system



* Instead of doing general upper secondary and vocational upper secondary one after the other, it is possible to do both at the same time, in a specific 4-year programme. This is rare though.
 ** Occupational and specialist occupational degrees are not included here. They both require prior work experience.

Adapted from FNBE.

The comprehensive school used to be divided into a primary school (*ala-aste*) and a lower secondary school (*yläaste*) until 1999, when this division was abolished. Nevertheless many schools tend to be either lower schools (*alakoulu*), which last six years and where class teachers teach all or most subjects, or upper schools (*yläkoulu*), which last three years and where subject teachers teach separate subjects. Curricula are municipality-specific or school-specific but based on the guidelines for the national core curriculum and legislation.

Teacher training was upgraded in the late 1970s, so that teaching jobs at all school levels nowadays require a Master's degree. Class teachers have education as their

major subject at university whereas subject teachers have the subject they teach, with education/pedagogic studies as their minor subject. Pre-school teachers have a Bachelor's degrees in early education. Entrance into teacher training is extremely competitive with only around 10% of candidates chosen each year (Aho et al., 2006).

Only about 5% of those who complete compulsory education do not continue their studies immediately. Over half of the age group continues into general upper secondary schools (*lukio*) whereas around 40% go on to vocational schools (*ammattikoulu*). In most years, around 3% continue in the voluntary 10th grade (Statistics Finland, 2007b). In order to ensure that as large a part of the age group as possible continue after compulsory education, the number of places available at this level has been around 120–130% of the age group since the 1980s (Kivinen and Rinne, 1996). Students are chosen into general upper secondary schools according to their school leaving average grade; some specialist general upper secondary schools and vocational schools use aptitude tests in addition to this.

All general upper secondary schools are now non-graded. This means that year classes have been abolished and students are free to progress according to their own choice of courses, taking between two and four years to complete upper secondary school. There are, however, requirements as to what subjects and courses all students have to complete. The matriculation examination, which is the final examination at the end of upper secondary school, is drawn up nationally. All students must take the examination in their mother tongue (Finnish, Swedish or Sámi) and three other examinations. They also have the option of taking more than the four obligatory examinations. Examinations can be sat in spring and autumn, and the matriculation examination can be taken over a maximum of three consecutive examination sittings.

Vocational education at the upper secondary level currently takes three years to complete and can be done either in a vocational school or as apprenticeship training (*oppisopimuskoulutus*). The syllabus includes both general and vocational courses, as well as an on-the-job training period. The three-year qualification, the vocational basic degree (*ammattillinen perustutkinto*), gives general eligibility for higher education in both polytechnics (*ammattikorkeakoulu*) and universities (*yliopisto* and *korkeakoulu*). There is also a possibility to study for the matriculation examination and a vocational degree at the same time (*kaksoistutkinto* or *yhdistelmätutkinto*). This generally takes four years and has not been very popular. However, some students from general upper secondary schools apply to vocational schools after their matriculation examinations, and thus complete both forms of upper secondary education.

Vocational education has been broadened in recent years by more apprenticeship training and the possibility to gain a vocational qualification through competence-based skills examinations (*näyttötutkinto*). Currently nearly half of vocational quali-

fications are completed as competence-based skills examinations (Statistics Finland, 2007a). However, those who complete competence-based qualifications are usually adults, and at the level of basic vocational qualifications only 17% are completed with competence-based skills examinations (Statistics Finland, 2007b). Competence-based skills examinations come at three levels: the vocational basic degree, occupational degree (*ammattitutkinto*), and specialist occupational degree (*erikoisammattitutkinto*). The latter two are reached mainly via previous work experience, and can only be completed as competence-based skills examinations. Neither requires specific previous educational qualifications, and both have limitations on the eligibility that they give for higher education.

Dropping out of school is extremely rare during compulsory school, and relatively rare in general upper secondary education. Over the period 2000–2006, approximately 0.3% of every school-leaving cohort left school without gaining the comprehensive school leaving certificate (*peruskoulun päättötodistus*) after they had surpassed the statutory school age. In addition to this, around 70 children each year do not take part in any kind of education. During the school year 2003/2004, fewer than 4% of general upper secondary students and almost 11% of vocational upper secondary students dropped out of the type of school they were in, although some of them continued in another type of school then (Statistics Finland, 2007b).

Finland's language situation should also be mentioned with regard to its effect on the education system. The largest language minority in Finland are the Swedish speakers, and there are parallel schools for the two language groups. The majority language in the municipality determines the language of the schools. In most cases, however, the minority also has the right to establish public schools in its own language. Moreover, officially bilingual municipalities will have schools in both languages. In terms of upper secondary and tertiary education, there tend to be proportionately more places for Swedish than for Finnish speakers (Saarela and Finnäs, 2003).

The indigenous population living in the North of Finland, the Sámi, can also now be educated in their own language in the areas regarded as their homeland. This has only been possible since the 1970s. Most Sámi students have Sámi as a subject at school rather than as their medium of instruction. Since the 1990s, Roma children also have a right to education in the Romani language. However, since municipalities are not obliged to provide this, in contrast to the situation of the Sámi, Romani is only taught as a subject rather than being the medium of instruction. Even then approximately only 15% of students entitled to Romani language teaching receive it (for more information on the situation of different language groups in Finland, see Latomaa and Nuolijärvi, 2002).

3 Private education

There are very few private schools left in Finland. Private secondary schools were very common up until the 1960s and 70s when legislation made most of them change into municipality-run schools. In 2005, out of a total of 3,579 schools allowed to issue comprehensive school leaving certificates, 59 (1.6%) were privately owned and 30 (0.8%) by the state (Statistics Finland, 2007b). Private schools tend to be either foreign-language based, or offer Waldorf-Steiner education, or are religious schools. State-owned schools, on the other hand, tend to be either linked to university teacher-training departments, or schools for people with hearing, visual or motor impairments. A few foreign-language schools are also state-owned. Only very few international private schools are allowed to charge fees, and the majority of private schools use the national curriculum and receive the statutory government transfer (FNBE).

Approximately 8% of upper secondary schools, 40% of vocational schools, and 29% of polytechnics are privately owned (Statistics Finland, 2007b). All universities in Finland are maintained by the State and enjoy extensive autonomy. Degree instruction at these institutions is free-of-charge, although there has been discussion of introducing fees for non-EU university students. However, students have to pay for materials and textbooks.

4 Higher education

Finland's first university, the Academy of Turku, was founded in 1640. It was transferred to the new capital, Helsinki, in 1827 and remained the country's only university for a long time. New universities were founded in the early 20th century, both before and after independence. However, the main growth in the sector was in the 1960s. The 1970s saw the nationalisation of private higher education institutions as well as the regional expansion of the system (Statistics Finland, 2007a).

The 1990s saw the creation of the polytechnics, first on a temporary, experimental basis, and then on a permanent basis from 1996. Polytechnics were made up of various existing vocational colleges (*ammattiopisto*), and during the reforms, the qualifications they provided were upgraded and standardised. All polytechnics have operated on a permanent basis since August 2000. There are currently 30 polytechnics and 20 universities in Finland, although the number of polytechnics in particular is likely to drop in coming years, as institutions within the two sectors merge with each other.

Access to universities and to most programmes in polytechnics is through entrance examinations, although examination results from upper secondary education may also play a part. Approximately 20% of students leaving general upper secondary

school are able to continue their studies in university the following year and slightly fewer in polytechnics (Statistics Finland, 2007b). Most students have to take one or several gap years before they can continue in tertiary education, and some decide to study for a vocational basic degree instead.

In 2005, 60% of the 20–24 age group was in education: 20% in universities, 24% in polytechnics, and 16% in upper secondary education, mostly taking the vocational basic degree. Although vocational upper secondary qualifications now give a right to enter higher education, relatively few students do so. Among the new students starting at a polytechnic in 2005, 16% had only a vocational upper secondary qualification, and of those starting university, only 1% had one (Statistics Finland, 2007b).

Both universities and polytechnics now have a two-staged system of degrees. This structure was introduced into universities in August 2005 as part of the Bologna process of harmonisation of education systems across the European Union. There is now a separation of the three- to four-year Bachelor's degree (*kandidaatintutkinto*) from the one- to two-year Master's degree (*maisterintutkinto*). Prior to 1994, Bachelor's degrees could also refer to what are Master's degrees today.

Polytechnics mainly offer Bachelor's degrees that take 3.5 to 4.5 years to complete. Polytechnic Bachelor's degrees, also referred to as lower polytechnic degrees (*alempi ammattikorkeakoulututkinto*), are not considered legally equivalent to the university Bachelor's degrees, and do not automatically give the right to enter university Master's programmes. In most cases students will have to take additional courses before they may apply. Outside of Finland, however, polytechnic degrees are generally accepted as first university degrees. Higher polytechnic degrees (*ylempi ammattikorkeakoulututkinto*), which have only been introduced since 2005 (from 2002 on a trial basis) are working-life oriented qualifications. The entrance requirement is a minimum of three years of relevant work experience after the first degree. A Master's degree from a polytechnic is considered equivalent to a university Master's degree in a related field. However, they do not qualify for graduate studies at the doctoral level.

The highest level of education is the Doctorate (*tohtorintutkinto*), which generally takes four years of full-time study. The lower research degree of Licentiate (*lisen-siaatintutkinto*) is also available, which requires the same course work but for which the thesis requirements are lower. These two research degrees are only available in universities. Many people who obtain the Licentiate later go on to complete the Doctorate, too.

The correct English translation for polytechnics is a source of on-going discussion. The education authorities in Finland use the term 'polytechnic', but many polytechnics use the term 'University of Applied Sciences', which is also used by the German Fachhochschulen, which can be regarded as equivalent to the Finnish 'polytechnics'. The government objects to this, as they believe using the term 'uni-

iversity' gives the wrong impression of the possibilities for graduates to continue in universities, and using the term 'sciences' gives the wrong impression as polytechnics are not scientific institutions in the Finnish education system. ARENE (Rectors' Conference of Finnish Universities of Applied Sciences), on the other hand, argue that the current official term hinders international co-operation as it does not illustrate the nature or the level of the education provided.

5 The ISCED-97 in the Finnish education system

Relating the ISCED-97 to the current Finnish education system is relatively straightforward, although there are some distinctions that are not normally taken into account. Moreover, as both compulsory and vocational education have seen relatively substantial changes over the past fifty years, there are some problems of comparability between cohorts with the same level of education.

Level 0 of the ISCED-97 refers to pre-primary education and in the Finnish system to all education in day care centres, including the pre-school classes for six-year-olds. Level 1 refers to primary education, which in Finland encompasses grades 1 to 6 of the comprehensive school. Level 2 refers to lower secondary education, which in Finland encompasses grades 7 to 9 of the comprehensive school, as well as the voluntary tenth grade. Up to this level, all education in Finland is general and gives access to all education at levels 3 and 4.

National data often do not differentiate education at or below ISCED level 2. In other words, a person with a level 2 qualification may have nine years of education in comprehensive school, nine years in folk school and the old lower secondary school, seven or eight years in folk school and civic school, six years in folk school, or something else. Moreover, when level 1 is distinguished from level 2, both folk school and civic school are classified at level 1. As those who have completed civic school should have eight years of education, it would be more appropriate to classify this at ISCED level 2.

Upper secondary education is classified as ISCED level 3. This is the level where general education diverges from vocational education in Finland. However, most qualifications at this level at least theoretically give access to higher education. Therefore, all qualifications tend to be classified as ISCED 3A at this level. However, vocational upper secondary education, 3A (voc), should be separated more clearly from general upper secondary education, 3A (gen), as most students from vocational upper secondary education enter the labour market directly whereas only a minority of those from general upper secondary education do so. However, the programme orientation (vocational or general) is hardly ever reflected in comparative statistics.

ISCED level 3 also incorporates occupational degrees, which are based on labour market experience, tend to take less time to complete, and only give access to higher education in polytechnics and in the same field. They tend to be grouped with all the vocational basic degrees but would probably be more suited to being 3C. In addition to this are the specialist occupational degrees, which are based on more labour market experience, tend to take relatively little time to complete, and give access to higher education in polytechnics, though not in universities. In theory, these degrees are classified as 4C (voc) by the OECD,¹ although they do not require a level 3 qualification for entry, only suitable labour market experience and thus skills equivalent to a level 3 qualification. In practice, however, they are coded at level 3, together with 3A-qualifications, because they are at the national level a level 3 qualification. There are no other qualifications at level 4 in the Finnish system.

It could be argued that vocational qualifications taken after the matriculation examination should be classified at ISCED level 4. Although they do not differ in content from the same degrees at level 3, except that they can be completed in slightly less time, the total amount of education of someone who has completed the two different upper secondary qualifications is certainly going to be a higher than of someone who only has a vocational upper secondary qualification. Consequently their labour market chances, and other attributes related to education, are also likely to differ. However, with the current national data this cannot be tested. I shall come back to this point in the conclusion.

The vocational upper secondary qualifications that were completed before the current upgrading took place have also been classified as 3A. Currently they only give access to polytechnic education in the same field. It is questionable to what extent the former qualifications are equivalent to the current ones, the main difference coming from the increased number of general courses in the current ones. This should therefore be kept in mind when using the data.

The first stage of tertiary education, level 5 in the ISCED-97, has changed a lot in Finland in the last two decades. Most of the programmes that used to take around two or three years in vocational colleges used to be classified as 5B (*alin korkeaste*). These programmes no longer exist and upgraded ones are now in polytechnics, as polytechnic Bachelor's degrees, and classified 5A (1st/medium). Some of the longer and more advanced old vocational degrees (*ammattillinen korkeaste*) have also now been classified as 5A (1st/medium). Not all of the vocational degrees actually required upper secondary education for entry, and they gave general eligibility for entrance into higher education. The only 5B qualification that one can still

¹ As the UNESCO distinguishes only A and B rather than A, B and C at ISCED level 4, it would be 4B (voc) in UNESCO terms.

study for is in the police academy (*poliisiammattikorkeakoulu*), but this tends to be grouped with the other polytechnic degrees.

In addition to the former advanced vocational degrees and polytechnic Bachelor's degrees, the university Bachelor's degree is the third type of 5A (1st/medium) qualification in Finland. The qualifications classified as 5A (2nd/long) are Master's degrees at university and polytechnic Master's degrees. The specialist training of doctors is classified as 5A (3rd/very long).

The three stages of higher education degrees – medium, long, very long – are also reflected in the classification of the Finnish National Board of Education (FNBE), although the classification of Statistics Finland only recognises lower and higher degrees (1st and 2nd in essence). It could be argued that university and polytechnic degrees should be separated from each other, as they are in the FNBE classification. Although the two sets of degrees are at the same level, there are major qualitative differences in the content of the programmes. The main problem comes from the fact that ISCED 5A includes both theoretically based programmes that give access to advanced research qualifications (ISCED level 6) and those that provide access to professions with high skills requirements. The latter of these two conditions means that polytechnic degrees are classified as 5A programmes. The programmes also include a research component. One possibility, therefore, could be to extend the general/vocational distinction to level 5.

The second stage of tertiary education, level 6, incorporates the two research degrees in Finland: the Licentiate and the Doctorate.

6 Distribution of education

Table 1 shows the distribution of highest educational qualification classified according to the FNBE, Statistics Finland and the ISCED-97. The data is for the whole 25–64 year-old population from the national registers (Statistics Finland, 2007b) and the EU-LFS. The national register data is classified according to three different classification schemes: Statistics Finland's educational classification 2006, the Finnish National Board of Education's classification and the ISCED-97. The FNBE classification is the most detailed one, although as mentioned above, neither of the two Finnish classifications actually distinguishes ISCED level 4 qualifications from those at level 3. Moreover, the data used for this table did not differentiate education below level 2. Overall, however, the distributions from the national data and the EU-LFS are rather close. The discrepancy at levels 5B and 5A may be due to the advanced vocational degrees being misclassified as level 5B instead of 5A as they should be. As was described above the advanced vocational degrees were offered in vocational colleges the same way as those at level 5B, and thus it is likely that they are mixed up with the other degrees from those institutions.

Overall, just under a quarter of the population does not have more than what is now compulsory education, and according to the EU-LFS, over half of those only have primary education. At the other end, around one sixth of the population has the lowest level of tertiary education (5B) and another one sixth has gained tertiary education at degree level (5A and 6). The largest group in the population is the one with upper secondary education, who make up over 40% of the population.

Within these broad categorizations there are important variations that are not picked up by the Statistics Finland classification or the ISCED-97 as applied in the EU-LFS. By this I mean the differentiation between general and vocational programmes at ISCED level 3, and between university and polytechnic programmes at level 5A. Moreover, the data does not separate out those who have gained both sets of degrees at level 3 as they are classified with those who have had just the vocational upper secondary education. However the EU-LFS also picks up differentiations not reflected in the national data, namely below ISCED level 2 and ISCED 4C. Whereas the former distinction shows to be relatively important, the latter is only a very minor category.

In conclusion, in order to better reflect the distribution of educational qualifications in Finland, I would argue that the distinction between general and vocational that is already part of the ISCED-97 should be used in the EU-LFS at level 3. This distinction could possibly also be extended to level 5A.

As far as measurement at the national level goes, given that a substantial proportion of students with general upper secondary education go on to complete vocational upper secondary education too, they should be separated from those who only complete vocational upper secondary education. In sociological surveys carried out in Finland, this is often done by asking people for their basic (i.e. general) education separately from their vocational/professional education (similar to the procedure in the German Microcensus). These surveys often also have better measures of education before and after the various reforms. They tend to distinguish folk school from civic school, and civic school from lower secondary school. At the vocational level, they tend to specify the length of vocational education as well as its level, which is important particularly for education before the reforms at level 3.

Table 1. Education level of the 25–64 year-old population in Finland (in per cent)

Statistics Finland: Educational classification 2006	FNBE classification	ISCED-97	Register data (31/12/2005)			EU-LFS (2004) ISCED-97
			FNBE	Stat. Fin. 2006	ISCED- 97	
0 Pre-primary education (<i>Esiaste</i>)		0				11.2
1 Primary education (<i>Alempi perusaste</i>)		1	23.6	23.6	23.6	10.8
2 Lower secondary education (<i>Ylempi perusaste</i>)		2				46.9
3 Upper secondary education (<i>Keskiaste</i>)		3A		42.2	42.2	
General upper secondary education (<i>Lukio</i>)	(3A (gen))		5.5			
Vocational upper secondary education (<i>Keskiasteen ammatillinen koulutus</i>)	(3A (voc)) 4C (voc)		36.7			0.2
5 Lowest level tertiary education (<i>Alin korkea-aste/Opistoaste</i>)		5B	15.5	15.5	15.5	15.4
6 Lower degree level tertiary education (<i>Alempi korkeakouluaste</i>)		5A (1 st)		8.8	17.7	14.9
Advanced vocational degree (<i>Ammatillinen korkea-aste</i>)			2.1			
Lower polytechnic degree (<i>Alempi ammattikorkeakou- lututkinto</i>)			4.4			
Bachelor's degree (<i>Alempi korkeakoulutut- kinto</i>)			2.3			
7 Higher degree level tertiary education (<i>Ylempi korkeakouluaste</i>)		5A (2 nd)		8.9		
Higher polytechnic degree (<i>Ylempi ammattikorkeakou- lututkinto</i>)			0.0			
Master's degree (<i>Ylempi korkeakoulutut- kinto</i>)			8.7			
Specialist training of doctors (<i>Lääkärien erikoistumiskou- lutus</i>)			0.2			
8 Doctorate or equivalent level (<i>Tutkijankoulutusaste</i>)		6		0.9	0.9	0.7
Licentiate (<i>Lisensiaatintutkinto</i>)			0.3			
Doctorate (<i>Tohtorintutkinto</i>)			0.6			

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