

Chapter 10

Finland: Excellent Basics, Selective Continuation

10.1 Education System

The general downturn in learning outcomes shows that we must take strong action to develop Finnish education. (Krista Kiuru, Minister of Education and Science, December 2013, quoted in Finnbay 2013)

For a decade, Finland was the dream destination for educational policy makers around the globe. The country's schools were flooded with foreign visitors, wishing to find the secrets of Finland's educational successes.¹ But after the publication of the 2012 PISA report, things changed. Finland dropped to the twelfth place in the overall table, which started a nationwide discussion (Box 10.1).

The aims of the Finnish education system are focused on the growth of the individual as a whole, which means extensive socio-ethical and esthetic education is offered alongside the usual learning of facts (Tirri and Kuusisto 2013, p. 85). More evidence of the priority the place on education comes from the high level of formal education teachers receive. Indeed, all teachers hold a master-level university degree (Ministry of Education and Culture 2014). Another important principle is the focus on equality: 'all people must have equal access to high-quality education and training. The key words in Finnish education policy are quality, efficiency, equity and internationalisation' (ibid, see also Ministry of Education and Culture [Finland] et al. 2014). The comprehensive school promotes social and regional equality by providing teaching, study materials and school meals free of charge for any pupil (Tirri and Kuusisto 2013²).

The Finnish Parliament determines general education policy, which is implemented by the Ministry of Education and Culture.³ The running of all schools

¹ In the 2003 and 2006 PISA reports, Finland placed first overall and in 2009 it was still near the top, scoring second overall among OECD countries (Korea was first).

² They refer to the Basic Education Act 628/1998, Section 2, Section 31.

³ In local languages: Opetus- ja kulttuurijaministeriö/Undervisnings- och kultursministeriet.

Box 10.1: Finland – The Basics

- 5.4 million inhabitants
- Capital: Helsinki
- Republic
- 19 regions
- Bilingual: Finnish and Swedish
- Social-democratic/centre-right coalition in power

up to the level of universities of applied sciences rests in the hands of municipalities. Municipalities can take autonomous decisions on the content and structure of education (Hornyak 2011, p. 52). However, individual schools have great autonomy. Universities are governed at the national level (Box 10.2).

Box 10.2: Education in Finland

- Free at all levels
- Nine years compulsory from age seven
- Integrated primary and lower secondary school in comprehensive school
- Two types of upper secondary school
- Two types of higher education institutions
- Highly selective university entrance exam, strict quota on student numbers
- Ministry of Education and Culture responsible for all levels of education; municipalities run all schools up to the level of universities of applied sciences

Compulsory education in Finland lasts for 9 years (with an optional tenth year, see Nuffic 2012 and Hornyak 2011)⁴ and is organized in comprehensive schools (see Fig. 10.1).

At the lower level, grades one to six, education is uniform for all and delivered by a class teacher, except for foreign languages, which are taught by a language specialist. The teachers at the higher level, grades seven to ten, are specialized subject teachers.

Finland has invested much effort in educating teachers and Finnish teachers enjoy high social prestige. This is demonstrated by a fivefold over-application

⁴After completion of the 9th form, students can complete a 10th form as well, on a facultative basis, where their marks can only be corrected upward, not downward.

rate to teaching programs (Hornyak 2011, p. 54). It should be noted that high over-application rates apply to most study programs in Finland (IBE (International Bureau of Education) 2012).

At the end of comprehensive school, pupils move on to one of two types of upper secondary education. The first, the general upper secondary school (*lukio/gymnasium*), represents the academic path. The second path, vocational education, is varied in its forms. Both qualify students for entrance to higher education. Around 50 % of students go to gymnasium and over 40 % to vocational education, with the rest not following qualification-oriented studies (Eurydice 2014, chapter 6).

The general upper secondary school is designed to last 3 years, ‘but students may complete it in 2–4 years. Instruction is organized in modular form not tied to year classes and students can decide on their individual study schedules rather freely’ (Ministry of Education and Culture [Finland] et al. 2014, p. 18).

The Finnish approach to equality means pupils with learning- or other disabilities are well taken care of. Legislation guarantees their right to receive special education.⁵ This kind of caring constitutes one of the factors behind Finland’s success in the PISA studies (Niemi 2012).

At the end of general upper secondary education, nearly all students take the national matriculation examination (*ylioppilastutkinto*). Students who pass this exam have a general qualification to continue in higher education, either universities (*yliopisto* in Finnish), which are more focused on research; or polytechnics (*ammattikorkeakoulu* or *AMK*), which are more focused on vocational education⁶ (see Box 10.3). Since 2005, the higher education sector has been reformed.⁷ Both in polytechnics and universities bachelor, master and Ph.D. degrees can be obtained.⁸ University students are admitted to study for the master degree and it is unusual to stop after taking a bachelor degree (Ministry of Education and Culture [Finland] et al. 2014, p. 23).

⁵There are two types of special education teachers in Finnish compulsory education: special education teachers who teach small group of pupils with learning disabilities and other problems; and special education teachers who support class teachers and subject teachers with children who need special support in some subjects like math or mother tongue (personal communication from Elina Kuusisto, University of Helsinki researcher, May 2014).

⁶Some refer to themselves internationally as universities of applied sciences.

⁷Universities can now have the form of a public corporation or a foundation university. Of the fourteen universities, two are foundations under private law. Polytechnics can be managed by joint municipal authorities (three out of 24) or by limited companies. For more information, see Ministry of Education and Culture 2014 and Eurydice, chapter 7.

⁸The new polytechnic degree system is comprised of the following degrees: *Kandidaatin tutkinto* (first-cycle, bachelor-level degree – it takes three to three and a half years to complete); *Maisterin tutkinto* (second-cycle, master-level degree - in order to be allowed for the second-cycle polytechnic degree a relevant bachelor’s degree and at least 3 years of relevant working experience are required. It takes one to one and a half years of full-time study); *Lisensiaatin tutkinto* (third-cycle, licentiate degree (pre-doctorate degree) – another 2 years); *Tohtorin tutkinto* (third-cycle, doctor’s degree – 4 years). More info in Eurydice 2014, chapter 7.

Box 10.3: Higher Education Landscape*14* universities*24* polytechnics*University access in Finland is very selective, in 2009:*

- *188,000 applications were made*
- *94,000 students took entrance exam*
- *32,000 students were admitted*

Entrance to higher education is highly selective and all study paths are subject to quota. The amount of seats for each study path at each HEI is determined in negotiations with the ministry of Education and Culture.

Universities and polytechnics select their students independently. Institutions apply different selection criteria, but the most common procedure includes the grades attained in the matriculation examination together with the results of an entrance examination.⁹ On average, about one third of those taking the exam gain access to university. For the most sought-after studies, such as theatre, dance or psychology, this is less than 10 % (Eurydice 2014, chapter 7.2.1).¹⁰ The Finnish HEIs operate a joint system of online application.¹¹

Finnish universities generally have a good reputation internationally. In international rankings, the University of Helsinki scores highest with a constant place in the top-100 of world universities.¹²

10.2 Culture and Policy Towards Excellence

Since the 1970s the official education policy strongly emphasized educational equality, as in the other Nordic countries. But from the 1980s, the trend shifted towards decentralization, individualization and more diverse education. The resulting changes make the education system more suited for gifted and talented pupils

⁹In some cases admittance is based on entrance examination only or matriculation examination grades only. In addition, some fields may place additional emphasis on work experience, studies, practical training, etc. There may also be interviews or material-based examinations, and students may be required to demonstrate their skills or aptitude. See Eurydice 2014, chapter 7.2.1.

¹⁰Numbers are from 2009 (KOTA database). Unfortunately, later numbers have not been published in English.

¹¹This can be accessed on the website <https://www.yliopistohaku.fi/yshjHakija/>

¹²University of Helsinki is at place 76 in the 2013 Academic Ranking of World Universities Top-500. Four other Finnish universities feature on this list: Oulu, Turku, Eastern Finland and Jyväskylä, all scoring in the 300–500 range.

than the systems in the other Nordic countries. Also, the tradition of school contests and very selective entry to university presents greater room for excellence initiatives for children and youngsters. The concepts of giftedness and talent have been covered quite intensively by Finnish media, although discussions are not always focused. University of Helsinki researcher Sonja Laine (2010) concluded that in Finnish society certain misconceptions exist about the specific meaning and implications of giftedness.¹³

This has led to a situation where gifted children in primary and secondary education are generally taken care of to some extent, while there is still little development in higher education. This could be connected to the very selective admission procedures by the universities. It may also be that information was not found because of the language barrier.¹⁴ However, local researchers confirmed that ‘in general there are no gifted or honors programs in higher education in Finland’.¹⁵ There are some small exceptions, as we will see below (Box 10.4).

Box 10.4: Local Terminology

The following local terms are used to refer to (participants in) honors programs:

- *Lahjakas* (means both gifted and talent)
- *erityislahjakas* (especially gifted and talented)
- *huippuyksikkö* (center of excellence)

In recent years the focus on giftedness and talent in general has also taken shape in policies and legislation. In 2007 the fostering of talent and creativity became a national educational goal. The ministry’s program “Education and Research 2011–2016” defined equality of education as entitling every person, including the gifted, to develop his or her different kinds of talent (Tirri and Kuusisto 2013, p. 91. See also Ministry of Education and Culture [Finland] 2011). The Basic Education Act allows flexible decisions with respect to acceleration (Tirri and Kuusisto 2013, p. 88).¹⁶ There are also programs specially designed for gifted and talented pupils

¹³In a review of the public discussion of giftedness between 2000 and 2007, Laine concluded that ‘giftedness is seen as multidimensional, and both intrapersonal and environmental contributions are recognized as essential in talent development’. However, common misunderstandings were that ‘every child is gifted’, that ‘gifted children can succeed on their own’ and that they were perceived as having problems in their social life.

¹⁴None of the researchers for this book knew any Finnish. Gathering information and communicating with the universities proved quite difficult, sometimes due to lack of information available in English.

¹⁵Personal communication from University of Helsinki researcher Elina Kuusisto, January 2014.

¹⁶Parents can decide that their children start school at the age of six instead of seven. Another possibility for acceleration is the ungraded school, where pupils are allowed to advance within a flexible schedule. These ungraded schools have been in use in the upper secondary schools since 1994. The same is experimented for elementary schools.

with optional enrichment alternatives. These include intensive courses, competitions and summer camps in mathematics and physics (ibid). In Helsinki there are also bilingual elementary schools, where children receive teaching in both Finnish and another language (e.g., English, French, German or Russian). These schools select their pupils according to their own criteria.

Although no special legislation regarding gifted and talented children exists, the focus on individualization means they are – in principle – taken care of by teachers.¹⁷ However, usually teachers are more concerned about weaker pupils and pupils with learning disabilities, which reflects Finnish ethos and interpretation of equality (Tirri and Kuusisto 2013; Laine 2010) (Box 10.5).

Box 10.5: Key Players in Excellence

The following institutions are the most important players in the field of talent and excellence in education:

- Ministry of Education and Culture – sets principles and guidelines for education
- Finnish National Board of Education
- Academy of Finland – awards centre of excellence status in research
- Individual researchers, most notably professor Kirsi Tirri
- The Nordic Talent Network – Nordic network for improving education for talented students

The upper secondary level has witnessed an increase in the number of ‘special schools’, focusing on the education of talented youngsters in arts, sports, sciences and languages. According to Finnish researchers Kirsi Tirri and Elina Kuusisto, ‘these special schools can just as well be called schools for the gifted and talented as it is very difficult to be accepted into them’. Selection is based on the marks of the student, while most places organize their own admission exam as well. There are also several enrichment alternatives available to talented high school pupils. For example, groups have met at the University of Tampere on evenings and weekends to be more challenged in mathematics and physics (Tirri and Kuusisto 2013, p. 90. See also Hornyak 2011).

Two internationally famous examples of provisions for talented youngsters are Päivölä boarding school and the Millennium Youth Camp. Founded in 1994, Päivölä, a private independent boarding school, emphasizes mathematics and natural science and is sponsored by phone company Nokia. There are 20 students between the ages of 15 and 18, who get selected in a weekend of testing. The students participate in both domestic and international competitions and graduate from upper secondary school in 2 years instead of 3 years.¹⁸

¹⁷In addition: ‘to promote teachers abilities to better recognize and support gifted pupils, the Finnish National Board of Education implemented the Project for the Development of Gifted and Talent’s Education in Finland during 2009 to 2011’ (Tirri and Kuusisto 2013, p. 89). See also <http://www.lahjakkuus.fi/page41.php> for more details.

¹⁸This brief description is based on Tirri and Kuusisto 2013. The program is described also in Hornyak 2011.

The National LUMA Centre¹⁹ organized the first Millennium Youth Camp in 2010. The camp is geared towards 16- to 19-year-olds, who are gifted in science. Thirty students participate free of charge and are selected in a two-stage application process. In 2012 there were more than 1,400 applicants from 100 countries. During the 1-week camp, students meet researchers and scientists, go to presentations and workshops, and carry out projects in teams. They get the possibility to network with like-minded people and enjoy a feeling of togetherness.²⁰

On the research side, focus on excellence has been common for many years. Focus, as in Norway, prioritizes the institutional side of excellence. Since 1997, the Academy of Finland has been sponsoring a ‘Centres of excellence’ program, providing extra funding to excellent and innovative research groups (Academy of Finland 2014). Funding is provided for 6 years and in the latest round (the period 2014–2019), 14 Centres received awards.

10.3 New Developments

Finland was surprised by the disappointing 2012 PISA results. This has led to a discussion about education policy (see for example Finnbay 2013) and some worries in the government (see Ministry of Education and Culture 2013).

One major change, beginning in 2016, involves the national matriculation exam which will be held electronically. This change can have a large impact on school pedagogy and increase developments of new technology supported pedagogies in Finnish schools.²¹

However, in the latest Education and Research Development Plan (published in 2012), the promotion of equality was the top focus point. This means that a sudden development of programs for talented and gifted pupils in basic education or honors programs in higher education is not to be expected.

10.4 Honors Programs per University

The search for honors programs in Finnish higher education was limited to the 14 universities in the country. A number of universities takes part in international cooperative programs, such as CEMS-MIM (Aalto University) and Erasmus Mundus (Helsinki). Institutions organize special events for motivated students, such as summer schools.²² However, development of honors programs is limited. Three disciplinary honors programs were identified. They are shown on Map 10.1.

All universities are shown in Table 10.1.

¹⁹LU stands for “luonnontieteet,” or natural science in Finnish, and MA for mathematics.

²⁰For more information, see Tirri and Kuusisto 2013 and Hornyak 2011.

²¹Personal communication from University of Helsinki researcher Elina Kuusisto, May 2014.

²²An example is the 3-week Helsinki Summer School, organized by University of Helsinki, Aalto University and Hanken School of Economics. For more information, see www.helsinki summerschool.fi/home/index

Map 10.1 Finnish universities with honors programs, 2014



Table 10.1 Honors programs at Finnish universities

University	Webpage	No. of students, 2013 ^a	Honors education offer
University of Helsinki	Helsinki.fi/university	35,189	No
Aalto University	Aalto.fi	19,386	Yes
University of Turku	Utu.fi	17,423	Yes
University of Tampere	Uta.fi	15,365	No
University of Eastern Finland	Uef.fi	15,353	No
University of Oulu	Oulu.fi	15,154	Yes
University of Jyväskylä	Jyu.fi	13,301	No
Tampere University of Technology	Tut.fi	9,826	No
Åbo Akademi University	Abo.fi	6,267	No
University of Vaasa	Uva.fi	5,251	No
Lappeenranta University of Technology	Lut.fi	4,811	No
University of Lapland	Ulapland.fi	4,578	No
Hanken School of Economics	Hanken.fi	2,385	No
University of the Arts Helsinki	Uniarts.fi	2,039	No
Total		166,328	

^aSource: Statistics Finland (2014)

To compile this table, first the websites of all universities were searched with keywords to find honors programs. Then they were all approached by e-mail and/or phone to ask if they had any special provisions for talented students, matching our working definition. All institutions eventually replied. Most of this work has been carried out by honors student Vincent Warnaar

10.4.1 Aalto University

At Aalto University's Information and Computer Science department, an honors program was started to identify research talents. Participants get the opportunity for an early start with research work, leading towards a research career (Table 10.2).

10.4.2 University of Turku

Beginning in 2013, the University of Turku offers talented students in physics a 'fast track' program that includes extra courses during the summer, enabling students to graduate faster. The program advertises the ability to attain a 'master's degree in three years'. Admission mandates passing qualifying exams (Table 10.3).²³

Table 10.2 Aalto University – Honours Programme in Information and Computer Science

<i>Organizing institution</i>	Aalto University, Department of Information and Computer Science
<i>Form</i>	Disciplinary program
<i>Target group</i>	Master students (participation for maximum of 2 years)
<i>Admission</i>	Based on grades and study progress, selection by steering committee
<i>Description</i>	Participating students get associated with a research group and are offered employment in research-related work, part-time during semester and full-time in summer
<i>Founded</i>	2009
<i>Participants</i>	Around ten students at the time
<i>Website</i>	http://ics.aalto.fi/en/studies/honours_programme/

Table 10.3 University of Turku – Physics fast track

<i>Organizing institution</i>	University of Turku, Faculty of Mathematics and Natural Sciences
<i>Form</i>	Disciplinary program
<i>Target group</i>	Bachelor students
<i>Admission</i>	Based on grades, program starts with summer course with examinations at the end
<i>Description</i>	Participating students skip some courses and work more hours year-round, in order to graduate faster. They start the program with an intensive summer course, followed by some examinations. If they pass, they can move straight to the second year. They will then continue to do courses faster
<i>Founded</i>	2013
<i>Participants</i>	3 in total
<i>Website</i>	www.utu.fi/fi/yksikot/sci/yksikot/fysiikka/opiskelu/fasttrack/Sivut/home.aspx

²³ More information (Finnish only) at www.utu.fi/fi/yksikot/sci/yksikot/fysiikka/opiskelu/fasttrack/Sivut/home.aspx

Table 10.4 Oulu University – Language honors program

<i>Organizing institution</i>	Oulu University, Languages and Communications extension school, in connection with Oulu business school
<i>Form</i>	Disciplinary program
<i>Target group</i>	Bachelor students
<i>Admission</i>	Based on grades
<i>Description</i>	Students in the business school who are good in a certain language can follow high-level courses in this language and if they get good marks, they receive an honors certificate
<i>Founded</i>	Around 2003
<i>Participants</i>	Unknown
<i>Website</i>	www oulu fi/kielikoulutus/node/10235 (Finnish only)

10.4.3 University of Oulu

The University of Oulu's Languages and Communications School provides possibilities to receive an honors certificate in different languages, including German and English. To receive the degree, students must choose a specific combination of high-level language courses spanning a minimum of 12 credits and study results must be excellent. The program, initiated by an overseas scholar in the Oulu Business School over 10 years ago, has existed ever since (Table 10.4).²⁴

We came across a few small-scale honors programs at Finnish universities. To conclude our discussion of the Nordic countries, we will now describe the situation in Iceland.

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Literature²⁵

Academy of Finland. (2014). *Centres of excellence – Spearheading science*. Retrieved from: www.aka.fi/en-GB/A/Programmes-and-cooperation/Centres-of-Excellence/. 6 Mar 2014.

Basic Education Act [Finland]. (1998/2010). *628/1998 – Amendments up to 1136/2010*. Retrieved from: www.finlex.fi/en/laki/kaannokset/1998/en19980628.pdf. 23 Jan 2014.

²⁴ Personal communication from Anne Viherkari, development manager at the Language and communication school, March 2014. More information (Finnish only) at www oulu fi/kielikoulutus/saksa/tatk

²⁵ **Note:** Literature used to prepare this book is included on this list. Some of the entries are in local languages and have not been read completely by the researchers. Instead, they have been searched with keywords to retrieve relevant information.

- Eurydice. (2014). *Eurydice – European Encyclopedia on national education systems*. Retrieved from: <https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php>. Data for different countries gathered November 2013–May 2014. Last checked 22 May 2014.
- Finnbay. (2013, December 3). *Golden days where Finland's education a success are over*. Retrieved from: www.finnbay.com/golden-days-where-acceptance-of-finlands-success-in-education-is-over/. 2 Mar 2014.
- Hornyak, B. (2011). Pillars of talent support in Finland: The Päivölä School Mathematics Programme. In J. G. Györi (Ed.), *International horizons of talent support I. Best practices within and without the European Union I* (pp. 51–72). Budapest: Magyar Tehetségsegítő Szervezetek Szövetsége/Geniusz Books. Retrieved from: https://www.pef.uni-lj.si/fileadmin/Datoteke/CRSN/branje/International_Horizons_of_Talent_Support_I_2011_.pdf. 19 Dec 2013.
- IBE (International Bureau of Education). (2012). *World data on education – Seventh edition 2010/2011 – Update 2012*. Finland. UNESCO document IBE/2012/CP/WDE/FI. Retrieved from: www.ibe.unesco.org/fileadmin/user_upload/Publications/WDE/2010/pdf-versions/Finland.pdf. 12 Mar 2014.
- Laine, S. (2010). The Finnish public discussion of giftedness and gifted children. *High Ability Studies*, 21(1), 63–76.
- Ministry of Education and Culture [Finland]. (2011). *Education and research 2011–2016: A development plan*. Retrieved from: www.minedu.fi/export/sites/default/OPM/Julkaisut/2012/liitteet/okm03.pdf. 12 Jan 2014.
- Ministry of Education and Culture [Finland]. (2013). *PISA12 – Still among the best in the OECD, but performance is declining*. Retrieved from: www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/PISA12_Leaflet.pdf?lang=en. 12 Mar 2014.
- Ministry of Education and Culture [Finland]. (2014). *Education*. Retrieved from: www.minedu.fi/OPM/Koulutus/?lang=en. 28 Feb 2014.
- Ministry of Education and Culture [Finland], National Board of Education, & CIMO. (2014). *Finnish education in a nutshell*. Retrieved from: www.oph.fi/download/146428_Finnish_Education_in_a_Nutshell.pdf. 4 Mar 2014.
- Niemi, H. (2012). The societal factors contributing to education and schooling in Finland. In H. Niemi, A. Toom, & A. Kallioniemi (Eds.), *Miracle of education* (pp. 19–38). Rotterdam: Sense Publishers.
- Nuffic. (2012). *Country modules. Evaluation of foreign degrees and qualifications in the Netherlands*. Finland. Version 2, October 2012. Retrieved from: www.nuffic.nl/en/diploma-recognition/country-modules. 21 Feb 2014.
- Statistics Finland. (2014). *Appendix table 3. New university students and total number of students by universities in 2013 (published 25/4/2014)*. Retrieved from: www.stat.fi/til/yop/2013/01/yop_2013_01_2014-04-25_tau_003_en.html. 20 May 2014.
- Tirri, K., & Kuusisto, E. (2013). How Finland serves gifted and talented pupils. *Journal for the Education of the Gifted*, 36(1), 84–96.