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# Finland: Slow and Steady Reform for Consistently High Results


Finland is one of the world's leaders in the academic performance of its secondary school students, a position it has held for the past decade. This top performance is also remarkably consistent across schools. Finnish schools seem to serve all students well, regardless of family background, socio-economic status or ability. This chapter looks at the possible factors behind this success, which include political consensus to educate all children together in a common school system; an expectation that all children can achieve at high levels, regardless of family background or regional circumstance; single-minded pursuit of teaching excellence; collective school responsibility for learners who are struggling; modest financial resources that are tightly focused on the classroom and a climate of trust between educators and the community.

## INTRODUCTION

Since the publication of the first PISA results in 2001, Finland is now seen as a major international leader in education (Table 5.1; OECD, 2010). It has consistently ranked in the very top tier of countries in all PISA assessments over the past decade, and its performance has been especially notable for its remarkable consistency across schools. No other country has so little variation in outcomes between schools, and the gap within schools between the top and bottom-achieving students is extraordinarily modest as well. Finnish schools seem to serve all students well, regardless of family background or socio-economic status. For these reasons, Finnish schools have become a kind of tourist destination, with hundreds of educators and policy makers annually travelling to Helsinki to try to learn the secret of their success.

**Table 5.1 Finland's mean scores on reading, mathematics and science scales in PISA**

	PISA 2000	PISA 2003	PISA 2006	PISA 2009
	Mean score	Mean score	Mean score	Mean score
Reading	546	543	547	536
Mathematics		544	548	541
Science			563	554

Source: OECD (2010), *PISA 2009 Results: What Students Know and Can Do: Student Performance in Reading, Mathematics and Science (Volume I)*, OECD Publishing. StatLink  <http://dx.doi.org/10.1787/888932366693>

Prior to 2000 Finland rarely appeared on anyone's list of the world's most outstanding education systems. This is partly explained by the fact that while Finland has always done well on international tests of literacy, its performance in five different international mathematics or science assessments between 1962 and 1999 never rose above average. But it was also because Finland's path to education reform and improvement has been slow and steady, proceeding gradually over the past four decades. Its current success is due to this steady progress, rather than as a consequence of highly visible innovations launched by a particular political leader or party.

As described in this chapter, the evolution of Finland's education reform is closely intertwined with the country's economic and political development since the Second World War, and cultural factors are clearly an important part of the Finnish success story. However, they are by no means the whole story. There are Finnish education policies and practices from which others seeking to emulate Finland's success might learn.

Some international observers argue that the Finnish success story can be explained primarily by its specific national history and culture. They are unsure that other countries could learn anything from Finland that is applicable to them. For example, these sceptics point out that Finland is culturally homogenous. This is true, although there are now schools in Helsinki where nearly half the students are immigrants. They observe Finland's overall economic health, with its flourishing IT sector, but neglect to note that its average per pupil expenditure is well below that of the highest spending countries, including the United States. They note that primary school teaching is now the most popular profession among Finnish young people, attracting the top quartile of high school graduates into its highly competitive teacher training programmes, without asking whether this has always been so or whether the country took special steps to upgrade the status of teachers and teaching.

## HISTORY OF THE FINNISH EDUCATION SYSTEM<sup>1</sup>

Finland is a relatively young country, having only established its independence from the Soviet Union in 1917. Finland had to fight long and hard to preserve that independence through the Second World War. For a nation with a population of less than 4 million, the cost of the war was devastating: 90 000 dead; 60 000 permanently injured and 50 000 children orphaned. Additionally, as part of the 1944 peace treaty with the Soviet Union, Finland was forced to cede 12% of its land, requiring the relocation of 450 000 Finnish citizens. A Soviet military base was established on a peninsula near Helsinki, and the communist party was granted legal status.

The first post-war elections in 1945 produced a parliament in which the seats were almost evenly divided between three political parties: the Social Democrats, the Agrarian Centre Party, and the Communists. In the 1950s the Conservatives gained sufficient strength to also be included in major negotiations. Multi-party systems typically require the development of a political consensus in order to move any major policy agenda forward, and one priority around which such a consensus developed was the need to rebuild and modernise the Finnish education system.



The education system that the new post-war parliament inherited was still unequal and more reflective of the needs of a predominantly rural, agricultural society than of a modern industrial society. Although the country was still in fact 60% rural as late as 1960, the urbanisation process really began right after the war and over the next decades accelerated to the point where Finland is now two-thirds urban.

In 1950 most young Finns left school after six years of basic education; only those living in towns or larger municipalities had access to a middle grade education. There were two types of middle grade education: civic schools, run by some municipalities, which offered two or three additional years of schooling, and could lead to further vocational education for those fortunate enough to live in a town large enough to support such a school; and grammar schools,<sup>2</sup> which offered five additional years of schooling and typically led to the academic high school (*gymnasium*) and then to university. Only about a quarter of young Finns in 1950 had access to the grammar school path, and two-thirds of the grammar schools were privately governed.

Over the next decade there was explosive growth in grammar school enrolments, which grew from 34 000 to 270 000. Most of this growth took place in the private schools, which in the 1950s began to receive government subsidies and come more under public control. This growth reflected the aspirations of ordinary Finns for greater educational opportunity for their children, a message that the country's political leaders heard as well. In the post-war decade, parliament created three successive reform commissions, each of which made recommendations that helped build public support and political will to create an education system that would be more responsive to the growing demand for more equitable educational opportunities for all young people in Finland.

The first of these commissions, launched in 1945, focused on the primary school curriculum, and offered a compelling vision of a more humanistic, child-centred school, in contrast to the Germanic, syllabus-driven model of schooling that characterised most Finnish schools. This commission also conducted field studies in 300 schools as part of its work, offering an example of how research might guide the development of policy.

The second commission, launched in 1946, focused on the organisation of the system, and advocated for the creation of a common school (covering grades 1-8) that would serve all students. However, this report produced such opposition from the universities and the grammar school teachers that its recommendations quickly died.

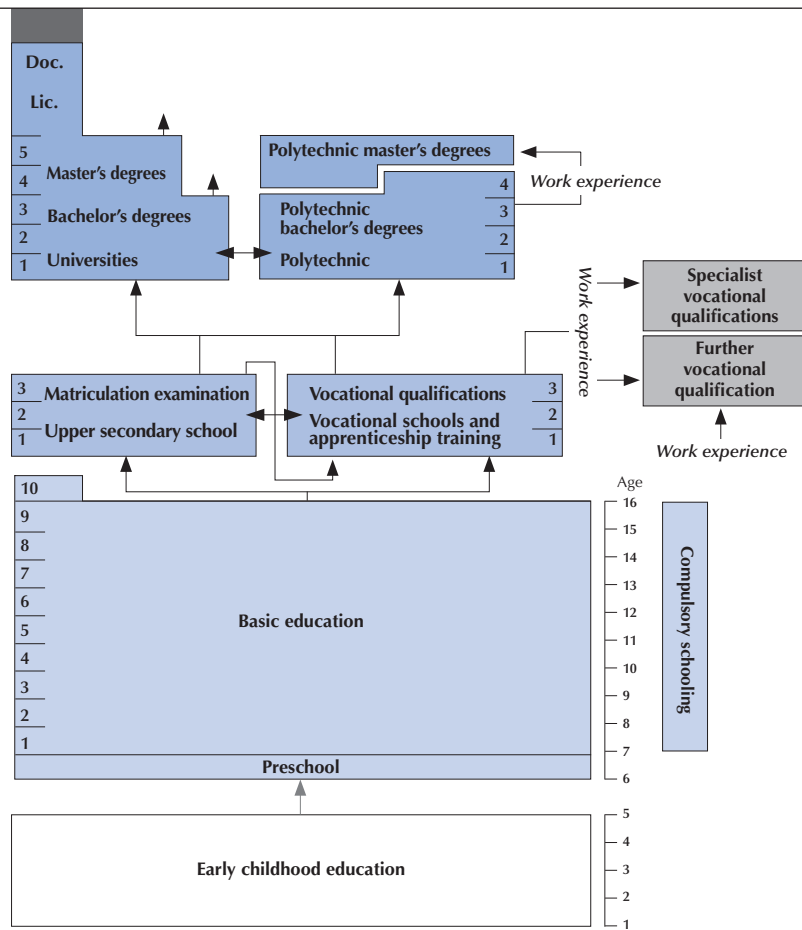
A decade later, however, the idea of the common or comprehensive school resurfaced in the recommendations of the Commission on School Programs, and this time the idea gained traction. The commission recommended that compulsory education in Finland should take place in a nine-year (grades 1-9) municipally-run comprehensive school, into which existing private grammar schools and public civic schools would ultimately merge (Figure 5.1). This proposal triggered a very substantial debate about core values and beliefs. Could all students be educated to a level that only those who currently had access to grammar schools were expected to achieve? Did society really need all young people to be educated to a high level? Did all young people really need to know a third language in addition to Finnish and Swedish (a requirement of grammar schools), and was it fair to expect this of them? Over the next several years these debates continued, but as Finland's ambitions grew to become more economically competitive, and as the demand for social and economic equality grew, pressure on parliament built up to move forward with the recommendation to create the new comprehensive school. In November 1968 parliament finally enacted legislation, by a substantial majority, to create a new basic education system built around a common, comprehensive school for grades 1-9.

The reason for dwelling at some length on the political evolution of the comprehensive school idea is that most Finnish analysts believe that the comprehensive school (*peruskoulu*, in Finnish) is the foundation upon which all subsequent reforms rest. As Pasi Sahlberg, Director of the Center for International Mobility and Co-operation, and an interpreter of Finland's education story to the outside world put it during an interview for this report "The comprehensive school is not merely a form of school organisation. It embodies a philosophy of education as well as a deep set of societal values about what all children need and deserve."

The transition from a parallel form of school organisation to the single comprehensive system was challenging, and consequently was phased in slowly and carefully. Implementation did not begin until 1972, initially in northern Finland and only gradually spreading to the more populated municipalities and towns in the south. The last southern municipality to implement the new comprehensive system did so in 1977.

■ Figure 5.1 ■

## Finland's education system organisation



Jukka Sarjala, who spent 25 years in the Ministry of Education (1970-1995) before becoming Director-General of the National Board of Education, described the task he faced as the person in the ministry with lead responsibility for planning the implementation of the new law:

My challenge was to develop a plan that guaranteed that this reform would ultimately be implemented in every Finnish community. There were lots of municipalities that were not eager to reform their system, which is why it was important to have a legal mandate. This was a very big reform, very big and complicated for teachers accustomed to the old system. They were accustomed to teaching school with selected children and were simply not ready for a school system in which very clever children and not so clever children were in the same classes. It took several years, in some schools until the older teachers retired, for these reforms to be accepted. (Interview conducted for this report)

A major vehicle for addressing the anxieties of veteran teachers and resolving some of the difficulties inherent in merging the formerly parallel sets of schools into a unified system was the development of a new national core curriculum for the comprehensive school. The process for developing the curriculum engaged hundreds of teachers and took place over a five-year period (1965-1970). One important decision that allayed the fears of some of the critics of the comprehensive school was to allow some differentiation in the upper grades to accommodate perceived differences in ability and interests, especially in mathematics and foreign languages. Schools could offer three levels of study in these subjects: basic, middle, and advanced, with the basic level corresponding to what had been offered in civic schools and advanced to what had been offered in the old grammar schools. This form of ability grouping persisted into the mid-1980s, when it was finally abolished.



Perhaps the most significant and long-lasting consequence of the shift to the comprehensive school was the recognition that to create a school system that could serve all students equally well, regardless of family background, would require a teaching force with a very high level of knowledge and skills. To quote Pasi Sahlberg again:

In the early 1970s policy makers realised that if we were to successfully implement this very ambitious comprehensive school reform, bringing all Finnish students into the same school and expecting them to master the same curriculum, it would require not only different systems of support but a very different level of understanding and knowledge from each and every teacher. (Interview conducted for this report)

This recognition led to a sweeping set of reforms that significantly raised the bar for aspiring teachers by moving teacher preparation from the *seminarium* (the Finnish equivalent of teacher college) into the university, and ultimately requiring all teachers, primary through upper secondary, to obtain a masters degree as a condition of employment. The design and content of the new teacher preparation programmes are described in more detail below. Finland also has a long tradition of in-service teacher training that developed over the years as national curricular changes have been implemented. During the intensive adaptation to the new educational structure from 1972 to 1977, Finland instituted a special, comprehensive, compulsory in-service training programme for all teachers in all municipalities.

A third major effect of the implementation of the comprehensive grade 1-9 basic school was to greatly heighten demand for upper secondary education. In 1970 only 30% of Finnish adults had obtained at least an upper secondary diploma. That percentage is now over 80%, and among 24-35 year olds it is 90%. This extraordinary growth is in part due to a radical set of reforms enacted in 1985, in which the traditional set structure of the academic upper secondary school was replaced with a much more flexible, modular structure, which injected significantly more choice into the system. In recent years the modernisation of the academic secondary school has been mirrored in the vocational secondary school (known as vocational education and training or VET), which has been significantly strengthened and expanded to the point where it now enrolls 42% of graduates from the comprehensive school. One reason for the increasing popularity of the vocational secondary option is that Finland has in recent years created a set of polytechnic colleges, thereby creating a pathway into tertiary education for vocational students. Today vocational upper secondary education gives eligibility to university studies as well. So the way into tertiary education is totally open to VET students. VET has thus become a trusted pathway to tertiary education. Consequently, 43% of young Finns in their twenties are enrolled in tertiary education, well above the OECD average of 25%, and the highest percentage in Europe. Moreover, much has been done in Finland to increase work-based learning initiatives, creating strong links between VET and professional life.

### **Economic development and the cultivation of the schooling culture in Finland**

The story of the evolution of the Finnish education system over the past two decades is inextricably linked to the development of the modern Finnish economy. The rise of the comprehensive school in the 1970-1990 period needs to be seen in the context of the development of the Finnish welfare state and the national push for much greater social and economic equality. However, the less visible but equally profound changes in Finland's schools over the past two decades need to be seen in the context of the deep changes taking place in the Finnish economy.

Two major events occurred in the early 1990s that triggered a significant shift in the economic development strategy promulgated by Finland's governmental and private sector leaders. The first was the initiation of the accession process that led to Finland's acceptance into the European Union in 1995. With the collapse of the Soviet Union (a major trading partner), Finland had no choice but to diversify its export strategy and begin to move away from its historic reliance on forest products and other traditional industries. The second and more powerful stimulus was a major economic recession in the early 1990s, set off by a collapse of the financial sector reminiscent of the banking crisis the US has recently experienced. Unemployment in Finland approached 20%; gross domestic product (GDP) declined by 13% and public debt exceeded 60% of GDP.

The government used this crisis as an opportunity to develop a new national competitiveness policy designed to support private sector innovation and focused heavily on the development of the telecommunications sector, with Nokia as the central player. In a remarkably short time, Finland managed not only to dig itself out of recession but to reduce its historical reliance on its natural resources and transform its economy into one based on information and knowledge. Investments in research and development provided the fuel for this growth. In 1991 only 5 Finnish workers out of 1 000 were in the research and development (R&D) labour force. By 2003 this number had increased to 22, almost three times the OECD average. By 2001 Finland's ranking in the World Economic Forum's global competitiveness index had climbed from 15th to 1st, and it has remained at or near the top in these rankings ever since.



The impact of this new focus on innovation and R&D not only led to the development of new partnerships between tertiary education and industry in Finland, but also had a profound effect on the primary and secondary education sector. Finnish employers sent very strong signals to the schools about the kinds of knowledge, skills and dispositions young people needed in order to be successful in the new economy. Finnish industry leaders not only promoted the importance of mathematics, science and technology in the formal curriculum, but they also advocated for more attention to creativity, problem-solving, teamwork and cross-curricular projects in schools. In spite of some criticism in the 1990s, one example of the kind of message that corporate leaders were delivering to the schools is this statement from a senior Nokia manager whom Sahlberg interviewed during this period in his role as chair of a task force on the national science curriculum:

If I hire a youngster who doesn't know all the mathematics or physics that is needed to work here, I have colleagues here who can easily teach those things. But if I get somebody who doesn't know how to work with other people, how to think differently or how to create original ideas and somebody who is afraid of making a mistake, there is nothing we can do here. Do what you have to do to keep our education system up-to-date but don't take away [the] creativity and open-mindedness that we now have in our fine *peruskoulu*. (Sahlberg, forthcoming)

Implicit in this last sentence is the Nokia manager's belief that the comprehensive schools were already paying attention to developing at least some of the traits that employers in the new Finnish economy were seeking. In fact, it is hard to imagine how an information and knowledge-based economy could have grown up so quickly in the 1990s if the Finnish schools hadn't already been producing graduates with the kind of flexibility and openness to innovation that industry was demanding. The development of these kinds of qualities is at least as much a function of the culture and climate of schools as of the formal curriculum.

## FINNISH SUCCESS IN EDUCATION

While it is important to note the key legislative landmarks that have created the policy framework within which Finnish schools have become world-class over the past decade, these do not provide a full explanation for Finland's remarkable success story. After all, Finland is not the only northern European country to have abolished tracking and created a unified basic school structure. Other countries have revamped and upgraded their teacher education programmes and have taken steps similar to Finland's to modernise secondary education. So what else accounts for Finland's success? One way to explore this question is to outline some of the most salient characteristics of Finland's comprehensive schools as described by the Finnish informants for this study.

### A system involving more than education

The first thing to note is that these schools offer more than education. These are full-service schools. They provide a daily hot meal for every student. They provide health and dental services. They offer guidance and psychological counselling, and access to a broader array of mental health and other services for students and families in need. None of these services is means-tested. Their availability to all reflects a deep societal commitment to the well-being of all children.

### Support for children with special needs

A second, related characteristic is the role of the "special teacher". Finland prides itself on its commitment to inclusion. While 8% of Finland's children are deemed as having special education needs, only half of them are placed in special schools; the other half are mainstreamed. Finnish educators believe that if schools focus on early diagnosis and intervention, most students can be helped to achieve success in regular classrooms. Its principal mechanism for supporting struggling students in a timely fashion is the "special teacher", a specially trained teacher assigned to each school. Their job is to work closely with the class teachers to identify students in need of extra help and to work individually or in small groups with these students to provide the extra help and support they need to keep up with their classmates.

Furthermore, it is not left solely to the discretion of the regular class teacher to identify a problem and alert the special teacher. Every comprehensive school has a "pupils' multi-professional care group," as described by Riitta Aaltio, principal of a 360-student primary school in Kerava, just outside Helsinki. The group meets at least twice a month for two hours. The group consists of the principal, the special education teacher, the school nurse, the school psychologist, a social worker, and the teachers whose students are being discussed. The parents of any child being discussed are contacted prior to the meeting and are sometimes asked to be present. Principal Aaltio describes the group's function as follows:

In each meeting we usually have enough time to discuss two classes of pupils with their class (*i.e.* homeroom) teacher, plus any "acute cases". First, we talk about the class and how things are going in general. If there are



any concerns – learning, teaching, social climate – or some problems with individual students we try to decide what kind of support we can provide. If we believe a pupil needs professional help beyond what we can provide at the school, we help the family get that kind of help be it medical, psychological, or social.

These measures are available to all students – social background makes no difference – because health care, like education, is free in Finland. This functional support system is a very important part of our education system. It helps explain why we have such small gaps in student achievement. (Interview conducted for this report)

### **Significant responsibility for teachers and students**

Both regular class teachers (grades 1-6) and subject teachers (7-9) exercise an enormous degree of professional discretion and independence. While there is a national core curriculum in Finland, over the past 20 years it has become much less detailed and prescriptive. It functions more as a framework, leaving education providers and teachers latitude to decide what they will teach and how. Teachers select their own textbooks and other instructional materials, for example. Because the only external testing in comprehensive schools is done on a sampling basis and is designed to provide information on the functioning of the system as a whole, assessment in Finnish schools is a classroom responsibility. Teachers are expected to assess their own students on an ongoing basis, using the assessment guidelines in the national core curriculum and textbooks. However, a major focus in Finnish classrooms is also on helping students learn how to assess their own learning. In Principal Aaltio's school, this emphasis begins as early as first grade.

Finnish classrooms are typically described by observers as learner-centred. As the emphasis on student self-assessment would suggest, students are expected to take an active role in designing their own learning activities. Students are expected to work collaboratively in teams on projects, and there is a substantial focus on projects that cut across traditional subject or disciplinary lines. By the time students enrol in upper secondary school (grades 10-12), they are expected to be able to take sufficient charge of their own learning to be able to design their own individual programme. Upper secondary schools are now mostly based on individual study plans. There is no longer a grade structure; each student proceeds at his or her own pace within the modular structure. Every student constructs his or her own study plan, which consists of different courses in various subjects according to each student's individual choices.

The focus on helping students take increasing responsibility for their own learning is not accidental; it reflects a key value underpinning the national core curriculum for the comprehensive school, as described below:

The learning environment must support the pupil's growth and learning. It must be physically, psychologically, and socially safe, and must support the pupil's health. The objective is to increase pupils' curiosity and motivation to learn, and to promote their activeness, self-direction, and creativity by offering interesting challenges and problems. The learning environment must guide pupils in setting their own objectives and evaluating their own actions. The pupils must be given the chance to participate in the creation and development of their own learning environment. (Preamble, National Core Curriculum for Basic Education, 2004)

### **Social and cultural factors**

As with all education systems that achieve good results, Finland's success is a function of the interaction of several different factors that work together to create a coherent approach that supports consistent system-wide performance. Some of these factors are cultural. As Sahlberg points out, Finland's history and geography – “caught between the huge kingdom in the west and the even bigger empire in the east” – compelled it to put the nation's interest first and not allow education policy to become victim to partisan politics:

We are a small nation that the rest of the world sees as a strange place that speaks a language nobody else understands. Over the last half-century we developed an understanding that the only way for us to survive as a small, independent nation is by educating all our people. This is our only hope amid the competition between bigger nations and all those who have other benefits we don't have. (Interview conducted for this report)

While Finland has jealously guarded its hard-won independence, in many areas of social policy it has been much influenced by its Scandinavian neighbours, especially Sweden. As noted above, the idea of the comprehensive school emerged in Finland as part of a larger movement in the 1960s for more social and economic equality, and over the next two decades the Finns adopted many features of the Swedish welfare state. Consequently, Finnish schools are embedded in a society with strong social safety nets and a broad and deep commitment to the healthy development and well-being of children, as reflected in Principal Aaltio's description of the pupils' care group in her school.

Another reflection of Finnish society's deep commitment to its children can be found in its school buildings. In the period following the Second World War, municipalities and towns all over Finland embarked on a major effort to rebuild schools that had been destroyed and build new ones where none had existed. Consequently, most children in Finland attend schools that are small enough for each child to be known by all the adults in the school (although more than 50% of school children go to schools that have more than 300 pupils). While the school buildings are not intended to be architectural statements, they are typically light, airy and functional. Their small size allows for a degree of personalisation and individual attention that is one of the hallmarks of Finnish education.

Finnish society is also characterised by a degree of social cohesion and trust in government that is partly a function of size and relative cultural homogeneity, but which also reflects the national temperament. Social cohesion and trust are difficult factors to isolate and quantify, but they clearly are part of the explanation for why teaching has become such an attractive profession for talented young people in Finland, at least on a par with medicine and law. Finnish primary teacher education programmes are able to attract *ten applicants for every slot*. Olli Luukkainen, President of the Finnish Teachers Union comments on the trust factor in discussing the status of teaching in Finland:

Teachers in Finland are very independent. They can decide almost everything: how they will teach, what they will select from the basic (national) curriculum, when they will teach each particular topic. The fact that teachers have so much independence and respect influences young people as they are deciding what program they will follow in the university. If they choose teacher education they know they will be entering a profession that enjoys broad trust and respect in the society, one that plays an important role in shaping the country's future. (Interview conducted for this report)

### Exceptional teacher quality

The trust that teachers enjoy in Finnish society is deserved and reflects the very high quality of their training. For example, Finnish teachers have earned the trust of parents and the wider society by their demonstrated ability to use professional discretion and judgement in the way they manage their classrooms and respond to the challenge of helping virtually all students become successful learners.

The quality of teachers and teaching lies at the heart of Finland's educational success, and the factors responsible for producing that quality can be found at the intersection of culture and policy. One policy aspect was the 1979 decision to move teacher preparation into the universities and make it substantially more rigorous. Another was the subsequent decisions of governments in the 1980s to devolve increasing levels of authority and responsibility for education from the Ministry of Education to municipalities and schools. This movement was largely an expression of ideology, of a growing scepticism in the West about the role of central governments and their ability to know what works best in the field. However, the effect of these decisions was to extend even greater responsibility and trust to educators in the schools.

Prior to devolution, the central administration had two primary tools for regulating the quality of education: the national core curriculum, and a national school inspectorate. As mentioned above, the national core curriculum has become much less detailed and prescriptive – there are now only 10 pages devoted to basic school mathematics – and the current version acknowledges that the curriculum plan adopted by each municipality will incorporate locally-developed priorities and reflect community aspirations and values. Even more striking, the inspectorate was abolished, leaving only the periodic sampling of student learning in grades 6 and 9 as the central administration's vehicle for assessing and monitoring school quality. Nevertheless, municipalities are legally obliged to evaluate the education provided by their schools.

Those responsible for designing the reforms following the establishment of the common school in Finland are likely to have followed a rationale similar to this:

*If we can somehow manage to recruit highly talented young people to enrol in our teacher preparation programmes and then redesign those programmes to equip all incoming teachers to differentiate instruction, diagnose learning problems, and assess student progress; and if we can create the conditions in schools that allow teachers to exercise professional judgement and discretion in selecting materials and designing instruction tailored to the needs of their students; and if we can create school cultures in which teachers take collective responsibility for the learning and well being of their students; and if we can create in every school mechanisms that provide access to extra support for children and families most in need; then we can be reasonably confident that virtually all students in virtually all schools will thrive.*

Because this theory of change rests so heavily on the quality of the teaching force, we now turn to the role of teacher preparation in Finland.





### **Finnish practices in teacher recruitment and preparation**

Teaching has long been a respected occupation in Finland, but until the teacher education reform act of 1979, there was little sense that teachers required much advanced training. After completing upper secondary school, prospective primary and secondary teachers enrolled in a *seminarium* (teacher college) for two or three years of mostly practical training and then moved straight into the classroom. This model of preparation was hardly unique to Finland. Its premise was that as long as students had a solid foundation of subject matter knowledge from their upper secondary schooling, they could be taught enough about pedagogy, child development and classroom management in two or three years to become effective teachers. The *seminaria* presumably screened their applicants to ensure that they had the requisite character and personality traits to become teachers, but their admissions criteria were understandably much less rigorous than those of the universities.

All this changed with the movement of teacher education from the teacher colleges into the university, and especially with the decision to require even primary school teachers to obtain a master's degree before receiving a teaching qualification. As was the case with the creation of the comprehensive school, this decision was not without controversy. University leaders initially resisted the idea that teaching was anything more than a semi-profession and feared that advocates for other semi-professions like nursing and social work would now clamour to give their training programmes university status. Their real worry was that the admission of teacher education candidates would lead to a dilution of academic standards and a consequent loss of status.

Over time, however, as the new university-based teacher education programmes were designed and built, these fears were not borne out. In fact, university-based teacher education programmes are now highly selective and teacher education units in the university faculties have autonomy in the selection process.

In 2010 over 6 600 applicants competed for 660 available slots in primary school preparation programmes in the 8 universities that educate teachers. The admissions process occurs in two stages. The initial paper screen is based on the applicant's Matriculation Exam score, upper secondary school record, and out-of-school accomplishments. Those who pass that screening must then take a written exam; be observed in a teaching-like activity in which their interaction and communication skills can be assessed; and finally be interviewed to assess, among other things, the strength of their motivation to teach.

The teacher education programmes for prospective primary and upper grade teachers are somewhat different in structure, but not in rigor. Primary grade teachers major in education, but they are expected to minor in at least two of the subjects included in the primary school curriculum. This means, for example, that they are studying mathematics in the mathematics department, not in the education department. Upper grade teachers major in the subject they will be teaching, but they do substantial work in education as well, either in an integrated five-year programme or in a concentrated fifth year after they have completed their work in their subject field. It is also possible for a master's degree holder to take one year of pedagogical studies in the faculty of education to gain a formal teacher qualification.

Teacher education in Finland has at least four distinguishing qualities:

- Research based. Teacher candidates are not only expected to become familiar with the knowledge base in education and human development, but they are required to write a research-based dissertation as the final requirement for the masters degree. Upper grade teachers typically pick a topic in their subject area; primary grade teachers typically study some aspect of pedagogy. The rationale for requiring a research-based dissertation is that teachers are expected to engage in disciplined inquiry in the classroom throughout their teaching career.
- Strong focus on developing pedagogical content knowledge. Traditional teacher preparation programmes too often treat good pedagogy as generic, assuming that good questioning skills, for example, are equally applicable to all subjects. Because teacher education in Finland is a shared responsibility between the teacher education faculty and the academic subject faculty, there is substantial attention to subject-specific pedagogy for prospective primary as well as upper-grade teachers.
- Good training for all Finnish teachers in diagnosing students with learning difficulties and in adapting their instruction to the varying learning needs and styles of their students.
- A very strong clinical component. Linda Darling-Hammond, a leading US scholar and practitioner of teacher education, describes this aspect of Finnish teacher preparation:



Teachers' preparation includes both extensive course work on how to teach – with a strong emphasis on using research based on state-of-the-art practice – and at least a full year of clinical experience in a school associated with the university. These model schools are intended to develop and model innovative practices, as well as to foster research on learning and teaching. ...

Within these model schools, student teachers participate in problem-solving groups, a common feature in Finnish schools. The problem-solving groups engage in a cycle of planning, action, and reflection/evaluation that is reinforced throughout the teacher education program and is, in fact, a model for what teachers will plan for their own students, who are expected to use similar kinds of research and inquiry in their own studies. Indeed, the entire system is intended to improve through continual reflection, evaluation, and problem-solving, at the level of the classroom, school, municipality, and nation. (Darling-Hammond, 2010)

In summary, raising the bar for entry into teaching has made this an even more attractive career option than previously, enabling teacher preparation programmes to select from the top quartile of secondary school graduates. The significantly lengthened and strengthened preparation of teachers has equipped them to rise to the increasing professional autonomy and control challenge thrown down to them by government. The autonomy and trust that teachers enjoy has only enhanced their status in the society, thereby assuring that teacher preparation programmes should continue to attract a steady flow of highly talented and motivated applicants.

### ***Finnish teachers: autonomy, quality assurance and accountability***

One of the most striking facts about Finnish schools is that their students have fewer hours of instruction than students in any other OECD country. This means that Finnish teachers teach fewer hours than their peers. In lower secondary schools, for example, Finnish teachers teach about 600 hours a year – 800 lessons of 45 minutes each, or four lessons per day. By contrast, US middle school teachers teach about 1 080 hours, or six daily lessons of 50 minutes. Teaching hours per day also depend partly on the number of teachers in a given school and teaching loads vary according to the level of education being taught. Nevertheless, the number of teaching hours is generally fewer than in many other countries. Leaving aside the important question of how Finnish 15-year-olds manage to outperform peers in other nations despite the equivalent of three less years of schooling, the relevant question here is what Finnish teachers are doing when they are not engaged in classroom teaching.

With the professional autonomy Finnish teachers enjoy comes very substantial responsibility for tasks that in other systems are typically handled more centrally. Chief among these are curriculum and assessment. As described above, the national core curriculum is really a framework rather than a roadmap, leaving teachers an enormous amount of discretion to interpret that framework, select their own textbooks and other curriculum materials, and then design their own lessons, all of which require time. In some schools the process of curriculum development is undertaken collaboratively by teams of teachers, while in smaller schools the responsibility might fall largely on each individual teacher.

The 2004 National Core Curriculum offers some broad criteria for student assessments, but again it is teachers who have the principal responsibility for building systems to continuously assess the progress of students. Teachers are also expected to be in close communication with parents, and many schools have an elaborate structure of staff committees to deal with various aspects of school life. Although Finnish teachers in theory are allowed to leave school when they are not teaching, teaching is clearly a full-time profession.

When it comes to professional development in Finland, the situation seems highly variable. This is in large part because Finnish schools are primarily funded at the municipal level, and municipal authorities attach varying degrees of importance to professional development. Municipalities are required to fund three days annually of mandatory professional development for each teacher, but some municipalities do much more. On average, Finnish teachers report spending seven days a year on professional development, some of which are in their own time. Some larger municipalities organise common professional development activities for all their schools, while others allow each school to design its own programme.

According to Olli Luukkainen, this highly variable approach to professional development is a weakness of the Finnish system:

Our system of continuing education and professional development for teachers is not good enough. It differs too much from one part of the country to another and one group of teachers to another. Teachers in vocational schools, for example, have much better support for continuing education than do primary teachers. (Interview conducted for this report)



Recently, however, the union, ministry and other partners have come together to develop a national programme to try to provide more equitable access to professional development. The ministry allocated EUR 20 million to support this programme in 2010.

### **Assessing progress**

Beyond the periodic sampling assessments administered at different grades by the National Board of Education, there is no national mechanism for monitoring the performance of schools. There is a national evaluation council, but its role seems to be focused more on the evaluation of national policies than the performance of schools. There is a National Matriculation Exam taken at the end of upper secondary school, but its function is to certify what the student knows, not to assess the quality of his or her school. Perhaps the most frequent question asked of Finnish policy makers is, therefore, “How, in the absence of annual external assessments and any form of outside inspection, do you assure that all students in all schools are receiving a quality education?” This question comes most frequently from visitors from countries like the US and the UK, which invest heavily in external accountability systems designed to produce more equitable outcomes. Even so, their results pale in comparison to the Finnish system.

There is no obvious, single answer to the quality assurance question. The ability of Finnish schools to produce high achievement with so little variation between or within schools is the result of the confluence of factors, cultural and educational, outlined throughout this chapter. One factor cited by Principal Aaltio is, paradoxically, the heavy Finnish emphasis on student assessment. While the Finns do not assess for school accountability purposes, they do an enormous amount of diagnostic or formative assessment at the classroom level. When asked how she knows how well the students in any particular class are learning, Principal Aaltio’s answer is that there is so much assessment data at her disposal that there is no way she would not know if a teacher was failing to teach her students. She also reports that, in her school at least, the parents keep a close eye on how their children are progressing and would alert her if there were problems. As described above, there are also the twice-monthly meetings of the pupil’s care group to bring class as well as individual problems to light.

### **Lines of accountability**

Accountability in the Finnish system is built from the bottom up. Teacher candidates are selected in part based on their ability to convey their belief in the core mission of public education in Finland, which is deeply moral and humanistic as well as civic and economic. The preparation they receive is designed to build a powerful sense of individual responsibility for the learning and well-being of all the students in their care.

The next level of accountability rests with the school. Again, the level of trust that the larger community extends to its schools seems to engender a strong sense of collective responsibility for the success of every student. While every comprehensive school in Finland reports to a municipal authority, authorities vary widely in the quality and degree of oversight that they provide. They are responsible for hiring the principal, typically on a six or seven-year contract, but the day-to-day responsibility for managing the schools is left to the education professionals, as is the responsibility for assuring student progress.

Given the very substantial level of autonomy that schools enjoy, one might expect that the system would focus the same kind of attention on recruiting and developing a corps of highly effective principals as it does on preparing teachers. However, there is little evidence of this. As in many countries, the role of the principal in Finland is changing, but the very independence of teachers in Finland poses some special challenges according to Professor Jouni Välijärvi of the University of Jyväskylä, lead researcher for the analysis of Finland’s PISA results:

Historically, the principal in Finland has simply been head teacher, first among equals as a member of the teaching staff with the added responsibility of representing the faculty to the rest of the society. But given the degree to which school budgets have been decentralised, the job is now much more demanding, for principals now have financial responsibility along with responsibility for the care and well-being of the students.

Because Finnish teachers are highly educated and are accustomed to being in full control of their own classroom, we have no tradition of principals actively visiting classes to monitor the quality of teaching in their schools. In fact, given our small school sizes, most principals are themselves teaching at least a few hours a week, so their role is a mixed one, with confusing and sometimes contradictory demands. (Interview conducted for this report)

While some universities, including Välijärvi’s, have now mounted professional development programmes for principals, this does not seem to be seen as a major problem or need.



## FUTURE CHALLENGES FOR FINNISH EDUCATION

The big question all high-performing systems need to face is whether or not the policies and practices that have brought about their current high performance will be sufficient to sustain them in a rapidly changing, globalising world. In the case of Finland this question is a particularly intriguing one, for the big policy shift that most observers credit with bringing about Finland's current level of performance took place 40 years ago. Unlike many other high-performing countries, Finland's reforms have evolved slowly and carefully over decades, have enjoyed broad and sustained political support across many changes in government, and are so intertwined with deep cultural factors that they are firmly institutionalised in the fabric of everyday life in schools. They are not the result of bold new policies or big programmatic initiatives that one can identify with a particular government or political leader. Rather, they are now almost taken for granted as the way schooling is done in Finland.

Given its history and development, what particular challenges might the future hold for Finland's education system? The first is not unique to Finland – the challenge of successfully absorbing increasing numbers of children of immigrants into its schools. This is a problem many European nations have struggled with, some more successfully than others. Although children of immigrants only make up about 3% of Finland's students, this percentage is growing, and as stated above there are already some schools in Helsinki that are nearly half immigrant. Until now Finland has been committed to providing immigrant children the option of continuing to study in their mother tongue and to teach all immigrant children their own language. However, this practice could be a problem going forward, as Jouni Välijärvi observes:

Traditionally we have stressed that immigrant students can be taught in their own language. We have done this for reasons having to do with our own history, when we were part of Sweden and wanted the right to be taught in Finnish. Even today, when Swedish is the native language of only 5% of our population, we have extended them the same right to be taught in their language. But when you have a growing number of languages, it may not be possible to continue to be able to provide this right to be taught in your own language. And then there is this larger question of how to balance respect for your native language with the importance of learning the Finnish language to be able to function in Finnish society. We have been critical of Sweden for its insistence that newcomers integrate into Swedish society, but given the expense and difficulty of finding enough teachers to teach all immigrant children in their own language, we may be forced to move in this direction as well. (Interview conducted for this report)

A second question one might ask about Finland's future has to do with the extraordinary degree to which its system relies on its continuing ability to draw its teachers from the top end of the talent pool. Can one imagine circumstances under which teaching might begin to lose its allure among young Finns? Professions undergo cycles in which their relative status in a society can rise or fall. Suppose, as some observers fear, the pendulum begins to swing back to more centralised control of schooling in Finland. If other countries begin to surpass Finland on PISA or other international measures of performance, will there be calls for the ministry to step in and take a stronger hand in guiding Finnish education? If that were to happen, would young people continue to find teaching so attractive?

A third question concerns the future of the current upper secondary divide between academic and vocational education. While there seems to be a strong societal consensus that supports the division of upper secondary education into tracks, at least one respected and deeply experienced former education official wonders whether the principle of the common comprehensive school might someday be extended into upper secondary education. Jukka Sarjala asks whether in the future the needs of academic and vocational education students will really be so different from one another:

If we ask what foreign language skills young people will need in the future, won't everyone need at least English in addition to Swedish, and many people in different lines of work might also need French or German or Russian. And what about mathematics? Won't everyone need some form of advanced mathematics? Wouldn't it make sense to combine academic and vocational programs in the same institution while allowing students to develop their own individual programmes? (Interview conducted for this report)

Current education policy strongly encourages co-operation between the two types of upper secondary education in order to provide students with a wider and more flexible selection of studies. Jouni Välijärvi believes that the rising popularity of vocational education among young people is likely to create increasing pressure at the municipal level for greater collaboration between the two types of schools:

Many academically oriented upper secondary schools are having trouble today attracting students. Because they are funded based on student enrolment, in some smaller municipalities this is a serious threat to their survival.



We are now starting to see some of these schools close, a brand new phenomenon in our system. At the same time a growing number of very talented students are leaving comprehensive school and choosing vocational studies, thereby increasing the popularity of vocational schools. In the coming years this will mean that unless the academic schools learn to collaborate on a deeper level, many more are likely to close, since most of our 450 academic upper secondary schools are very small and cannot sustain a continuing loss of students. (Interview conducted for this report)

A final worry or challenge is best articulated by Pasi Sahlberg at the end of his unpublished manuscript, *Finnish Lessons*. In Sahlberg's view, the Finnish reform movement over the last few decades has been animated by what he calls "the Big Dream," a unifying vision of a more equitable society in which even students in the most isolated rural schools would receive a strong enough educational foundation in the first nine years of schooling to equip them for further education, and in which young people from all walks of life would be prepared to live and work together through a common schooling experience. Is there now a need for a new vision, one more reflective of the changes taking place in today's society and responsive to what young people will need in the coming decades, a vision powerful enough to fuel the next generation of reforms?

## LESSONS FROM FINLAND

For all of Finland's perceived advantages of size, relative cultural homogeneity, and (in recent years) economic strength, it is important to remember that as recently as 1970 only 30% of Finnish adults had completed upper secondary school, and as recently as 1993 Finland was in near economic collapse. Finland's ascent into the very top tier of educational performance was by no means inevitable: it was at least as much the result of a set of policy decisions deliberately taken, implemented thoughtfully, and sustained over a very long period of time as of factors endemic to the country's culture and history.

### ▪ Commitment to education and to children

The commitment to education and to the well-being of children has deep roots in Finland's culture, and provides the bedrock upon which the comprehensive school movement rests. One of the striking things about Finland's reform story is that the political consensus achieved 50 years ago – that children should be educated together in a common school system – has remained intact across numerous changes of government.

### ▪ Cultural support for universal high achievement

The underlying belief behind the creation of the comprehensive school was that all children could be expected to achieve at high levels, and that family background or regional circumstance should no longer be allowed to limit the educational opportunities open to children. It is important to note, however, that the Finns have a significantly broader definition of "high achievement" than just performance in two or three subjects on standardised tests. The Finns pride themselves on offering a broad, rich curriculum to all students, even those who choose the vocational pathway in upper secondary school.

### ▪ Teacher and principal quality

Many countries pay lip-service to the importance of attracting and retaining a high-quality teacher force, but few have pursued this goal as single-mindedly as Finland. Finland has managed to make teaching the single most desirable career choice among young Finns through a combination of raising the bar for entry into the profession and granting teachers greater autonomy and control over their classrooms and working conditions than their peers enjoy elsewhere. Consequently, teaching is now a highly selective occupation in Finland, with highly-skilled well-trained teachers spread throughout the country. The quality of the teaching force seems very likely to be the major factor that accounts for the high level of consistent performance across Finnish schools.

Until recently, Finland does not seem to have paid the same kind of attention to the recruitment, training, and ongoing development of principals, but it is hard to believe that Finnish schools could perform so well without solid leadership, especially given the degree of autonomy that Finnish schools enjoy.

### ▪ Accountability

Accountability clearly matters in Finland, but it is almost entirely a professional model of accountability. The strongest manifestation of that accountability can be seen in the degree to which Finnish schools are organised to take collective responsibility for struggling learners. Finnish teachers are trained to identify children who are having difficulty and to intervene before these children get discouraged and fall too far behind their classmates. The fact that every school has a specially trained intervention specialist – the special teacher – means that the regular classroom

teacher has easy access to support and that struggling children are much less likely to go unnoticed or to fall through the cracks. The small size of Finland's schools is an important factor here, as is the co-ordination of resources, embodied in the pupils' care group. Again, this combination of elements helps explain why the gap between the top and bottom performing schools and students in Finland is so narrow compared with virtually all other nations.

#### ▪ How money is spent

Finland is by no means the highest spender per pupil among OECD countries, so money cannot be an important factor in explaining Finland's success. Teacher salaries are in the middle range for European countries. Schools are quite small in size, but they have minimal administrative overheads. Even in larger schools, principals are expected to teach, and the resources of the school are tightly focused on the classroom. Because of their commitment to the inclusion model, the costs of special education are significantly lower than in countries that rely more heavily on separate classrooms for special education students. Finally, because Finnish schools are mostly a function of municipal government, there are no separate school districts and no intermediate education units sitting between the municipalities and the ministry. Therefore, except for the costs of the national educational administration, virtually all of the money spent on education in Finland is focused on schools and classrooms.

#### ▪ Instructional practice

The decision three decades ago to move teacher education into the universities and upgrade the rigor and length of the training was taken largely in response to the challenge of meeting the needs of diverse learners in a common school. Part of the challenge, as described above, was equipping teachers to diagnose learning difficulties and design timely interventions. But the larger challenge, especially with the abolition of tracking in 1989, was helping them learn to differentiate instruction sufficiently well to engage all students in heterogeneously grouped classrooms. By all reports Finnish teacher preparation programmes focus intensively on helping teachers develop these skills, especially in the extended clinical portion of their training under the supervision of master teachers in the university-run model schools.

#### ▪ School organisation

This, of course, was *the* central insight that has driven Finland's reform agenda over the past several decades. According to virtually all observers and Finnish policy makers, the single most important education policy decision taken since Finland established its independence in 1917 was to create a common, untracked comprehensive school system that would serve students from all walks of life.

All the other policy decisions that together help account for Finland's dramatic ascent to a position of international leadership in education in the last decades flow from that basic organisational decision. Obviously, creating the comprehensive school structure in itself was no guarantee of improvement. Rather, it has been the steady, thoughtful way in which the new structure has been implemented that is mostly responsible for the extraordinarily high and equitable achievement of Finnish students. Of particular note are the investments made in recruiting and developing a teaching force committed to the values that underlie the comprehensive school and capable of meeting the needs of diverse learners in that setting.

#### ▪ Sequencing of reforms to economic development

In many ways what is most distinctive and impressive about Finland is the degree to which its education system has developed in close alignment with its economy and social structure. As described above, the story of the development of Finland's education reforms cannot be told without reference to the development of the welfare state in the 1960s and 1970s and the high-tech, information-based economy of the last two decades. Finland is at the furthest end of the development continuum outlined in the first chapter of this report. Its economy is driven by continuing investments in innovation and R&D. Finnish teachers are drawn from the top quartile of upper secondary graduates. Teachers are highly professional knowledge workers, and are treated as such. Accountability is almost entirely professional, as evidenced by the elimination of the inspectorate and the absence of external assessments. The curriculum framework and instructional guidance is designed to encourage an inquiry-based approach to learning.

#### ▪ Cultivating behaviours for the knowledge economy

Finnish schools work to cultivate in young people the dispositions and habits of mind often associated with innovators: creativity, flexibility, initiative, risk-taking and the ability to apply knowledge in novel situations. Some sceptics attribute Finland's consistently high performance on PISA to the degree of alignment between the kind of learning PISA measures and the values and the goals of the Finnish education system. There is clearly some truth to this observation, but this hardly constitutes a criticism of the Finnish system. The Finns are not the least bit apologetic about their focus on preparing people for an economy in which innovation and entrepreneurship will continue to be drivers of progress.



## FINAL OBSERVATIONS

Here are two final observations, both related to the degree to which the Finnish education system is aligned with and reflects qualities in the larger culture. The first has to do with the very nature of education reform in Finland. Most governments enact education reform through new programmes – e.g. smaller class sizes, more ambitious external assessments, and increased professional development. Reforms like these do not tamper with the basic features of the system. The Finnish reforms, by contrast, especially the creation of the comprehensive school, created a sector that functioned in a radically different way. It is the shape of this new sector, not continued programmatic initiatives from a central government, that accounts for Finland's success. One critical observer suggested that Finland doesn't really have a reform strategy, by which he meant that there were no central initiatives that the government was trying to push through the system. From a longer term, more sectoral perspective, however, Finland does have a strategy, one that has propelled it to the top of the international rankings. Other countries might benefit from adopting this perspective on their reform work.

The second observation has to do with the importance of trust. Trust, of course, cannot be legislated. Consequently, this lesson may be the least useful to others wanting to learn from Finland, especially if one views trust as a precondition for the kinds of deep institutional reforms embodied in the development of the comprehensive school. But in the case of the relationship between teachers and wider society, one can argue that trust is at least as much a consequence of important policy decisions as it is a pre-existing condition. Given the respect that teachers have historically enjoyed in Finland, there was a solid base on which to build. But the combination alluded to above – much more rigorous preparation, coupled with the devolution of much greater decision-making authority over things like curriculum and assessment – enabled teachers to exercise the kind of professional autonomy other professionals enjoy. This granting of trust from the government, coupled with their new-found status as university graduates from highly selective programmes, empowered teachers to practise their profession in ways that deepened the trust afforded them by parents and others in the community. The fact that there seems to be very little interest in Finland in instituting the assessment and external accountability regimes that have characterised the reform strategies of many OECD countries, most prominently the US and the UK, is perhaps the best evidence of the fundamental trust that seems to exist between the educators and the community. Given the extraordinary performance of the Finnish system over the past decade, this is a lesson others might want to study.

■ Figure 5.2 ■  
Finland: Profile data

Language(s)	Finnish and Swedish <sup>3</sup>
Population	5 326 000 <sup>4</sup>
Youth population	16.8% <sup>5</sup> (OECD average 18.7%)
Elderly population	16.6% <sup>6</sup> (OECD average 14.4%)
Growth rate	0.43% <sup>7</sup> (OECD 0.68%) <sup>8</sup>
Foreign-born population	3.8% <sup>9</sup> (OECD average 12.9%)
GDP per capita	USD 35 918 <sup>10</sup> (OECD average 33 732) <sup>11</sup>
Economy-Origin of GDP	Electronics, machinery, vehicles and other engineered metal products, forestry and chemicals. Services: 70.6%; Industry and construction: 24.6%; Agriculture, forestry and fishing: 4.9% <sup>12</sup>
Unemployment	6.4% (2008) <sup>13</sup> (OECD average 6.1%) <sup>14</sup>
Youth unemployment	15.7% (OECD average 13.8%) <sup>15</sup>
Expenditure on education	5.9% of GDP; (OECD average 5.2%) 3.7% on primary, secondary and post-secondary non-tertiary 1.9% on tertiary <sup>16</sup> education <sup>17</sup> (OECD average 3.5%; 1.2% respectively) 12.5% of total government expenditure <sup>18</sup> 7.9% on primary, secondary and post-secondary non-tertiary 3.9% on tertiary education <sup>19</sup> (OECD average 9%; 3.1% respectively)
Enrolment ratio, early childhood education	48.2% <sup>20</sup> (OECD average 71.5%) <sup>21</sup>
Enrolment ratio, primary education	95.5% <sup>22</sup> (OECD average 98.8%) <sup>23</sup>
Enrolment ratio, secondary education	87.2% <sup>24</sup> (OECD average 81.5%) <sup>25</sup>
Enrolment ratio, tertiary education	42.6% <sup>26</sup> (OECD average 24.9%) <sup>27</sup>
Students in primary education, by type of institution or mode of enrolment <sup>28</sup>	Public: 98.6% (OECD average 89.6%) Government-dependent private: 1.4% (OECD average 8.1%) Independent, private: no data <sup>29</sup> (OECD average 2.9%)
Students in lower secondary education, by type of institution or mode of enrolment <sup>30</sup>	Public 95.7% (OECD average 83.2%) Government-dependent private: 4.3% (OECD average 10.9%) Independent, private: no data <sup>31</sup> (OECD average 3.5%)
Students in upper secondary education, by type of institution or mode of enrolment <sup>32</sup>	Public: 86.1% (OECD average 82%) Government-dependent private: 13.9% (OECD average 13.6%) Independent, private: no data <sup>33</sup> (OECD average 5.5%)
Students in tertiary education, by type of institution or mode of enrolment <sup>34</sup>	Tertiary type B education: Public: 100% Government-dependent private <sup>35</sup> Independent-private: no data <sup>36</sup> (OECD average Public: 61.8% Government-dependent private : 19.2% Independent-private: 16.6%)  Tertiary type A education: Public: 89.3% Government-dependent private: 10.7% Independent-private: no data <sup>37</sup> (OECD average Public: 77.1% Government-dependent private : 9.6% Independent-private: 15%)
Teachers' salaries	Average annual starting salary in lower secondary education: USD 32 513 (OECD average USD 30 750) <sup>38</sup> Ratio of salary in lower secondary education after 15 years of experience to GDP per capita: 1.15 (OECD average: 1.22) <sup>3</sup>
Upper secondary graduation rates	93% (OECD average 80%) <sup>40</sup>

StatLink  <http://dx.doi.org/10.1787/888932366693>

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## Notes

1. The historical material in this report draws heavily on Sahlberg (forthcoming).
2. To which students could apply after the 4th or the 5th grade of elementary school
3. "Population according to language and the number of foreigners and land area km<sup>2</sup> by area". *Statistics Finland's PX-Web databases*. Helsinki: Statistics Finland. 2008-12-31.
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12. OECD (2010), *OECD Economic Surveys: Finland 2010*, OECD Publishing.
13. OECD (2010), *OECD Factbook 2010*, OECD Publishing. Total unemployment rates as percentage of total labour force (data from 2008).
14. OECD (2010), *OECD Factbook 2010*, OECD Publishing. Total unemployment rates as percentage of total labour force (data from 2008).
15. OECD (2010), *Employment Outlook*, OECD Publishing. Unemployed as a percentage of the labour force in the age group: youth aged 15-24 (data from 2008).
16. The OECD follows standard international conventions in using the term "tertiary education" to refer to all post-secondary programmes at ISCED levels 5B, 5A and 6, regardless of the institutions in which they are offered. OECD (2008), *Tertiary Education for the Knowledge Society: Volume 1*, OECD Publishing.
17. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Public expenditure presented in this table includes public subsidies to households for living costs (scholarships and grants to students/households and students loans), which are not spent on educational institutions (data from 2006).
18. OECD (2010), *OECD Economic Surveys: Finland 2010*, OECD Publishing.
19. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Public expenditure presented in this table includes public subsidies to households for living costs (scholarships and grants to students/households and students loans), which are not spent on educational institutions (data from 2006).
20. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Net enrolment rates of ages 4 and under as a percentage of the population aged 3 to 4 (data from 2008).
21. OECD (2010), *Education at a Glance 2010*, OECD Publishing. OECD average net enrolment rates of ages 4 and under as a percentage of the population aged 3 to 4 (year of reference – 2008).
22. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Data from 2008 on net enrolment rates of ages 5 to 14 as a percentage of the population aged 5 to 14.
23. OECD (2010), *Education at a Glance 2010*, OECD Publishing. OECD average net enrolment rates of ages 5 to 14 as a percentage of the population aged 5 to 14 (year of reference – 2008).
24. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Net enrolment rates of ages 15 to 19 as a percentage of the population aged 15 to 19 (data from 2008).
25. OECD (2010), *Education at a Glance 2010*, OECD Publishing. OECD average net enrolment rates of ages 15 to 19 as a percentage of the population aged 15 to 19 (year of reference – 2008).



26. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Net enrolment rates of ages 20 to 29 as a percentage of the population aged 20 to 29 (Data from 2008). This figure includes all 20-29 year olds, including those in employment, etc. The Gross Enrolment Ratio (GER), measured by the UN as the number of actual students enrolled / number of potential students enrolled, is generally higher. The GER for tertiary education in Finland in 2008 is 94%, compared to the regional avg of 70% (UIS 2010).
27. OECD (2010), *Education at a Glance 2010*, OECD Publishing. OECD average net enrolment rates of ages 20 to 29 as a percentage of the population aged 20 to 29 (year of reference – 2008).
28. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Data from 2008.
29. Data is not applicable because category does not apply.
30. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Data from 2008.
31. Data is not applicable because category does not apply.
32. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Data from 2008.
33. Data is not applicable because category does not apply.
34. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Data from 2008.
35. Magnitude is either negligible or zero.
36. Data is not applicable because category does not apply.
37. Data is not applicable because category does not apply .
38. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Starting salary/minimum training in USD adjusted for PPP (data from 2008).
39. OECD (2010), *Education at a Glance 2010*, OECD Publishing (year of reference – 2008).
40. OECD (2010), *Education at a Glance 2010*, OECD Publishing. Sum of upper secondary graduation rates for a single year of age (year of reference – 2008).