

BRIEF ON HIGH-PERFORMING SYSTEMS: FINLAND

Overview

When the first PISA results became public in 2000, Finland topped the league tables. Since that first PISA administration, Finland has remained among the topperforming countries, though it has slipped in all three subjects on the last two rounds of PISA.

It was only in 1970 that Finland established a basic comprehensive school for all students through grade 8 and the mid-1980s before it created a common curriculum for all students in the basic school. It coupled this reform with a restructuring of teacher education to move it into research universities, which resulted in a more prestigious status for the teaching profession. A shift in authority for managing schools and teaching followed in the 1990s, alongside an expansion of secondary and post-secondary education, including efforts to raise the academic rigor of vocational education for secondary students. Many believe the key to the success of the Finnish education system is simply the quality of their teachers and the trust that the Finnish people have vested in them. But the Finnish focus on teacher quality is only one element in a carefully designed system that has been adapting to changes in society and the economy for the last half century.

Despite its success, Finland faces some challenges. The recent decline in PISA scores was matched by a decline in performance on national exams, suggesting that the nation is struggling to maintain its high levels of student performance. Moreover, while Finland remains one of the most equitable nations in the OECD, both in terms of performance on PISA by socioeconomic background and economically, both PISA results and national sampling test results show a slight increase in inequality, which also reflects a growing economic inequality in the nation. Further, although Finland remains largely homogeneous, the country, like other European countries, has seen an influx of immigrants in recent years. Immigrant students performed significantly below their non-immigrant peers in reading on PISA 2018, after accounting for socioeconomic background. An anti-immigrant party, the Finns Party, narrowly lost a national election in 2019; it has also led among all parties in many recent opinion polls, and public surveys show widening polarization on a range of political issues.

The national government formed in April 2019, led by the center-left Social Democratic Party, pledged to strengthen the education system and address inequality. The government proposed reversing funding cuts to education enacted in the past few years (that were part of across the board cuts due to a tight economy), and raising the school leaving age from 16 to 18, thereby making upper-secondary education—general and vocational—compulsory. A new prime minister, also a member of the Social Democratic Party, was appointed in December 2019 following her predecessor's resignation.

In addition, like many countries, Finland has tried to find ways for the education system to address the changes in the economy and in society wrought by digitalization and artificial intelligence, as well as to capitalize on the opportunities artificial intelligence offers to improve teaching and learning and social supports for young people. A new national curriculum, released in 2016, attempts to take on that challenge by explicitly emphasizing cross-curricular competencies such as learning to learn, cultural competence, and ICT competence.

Population	5,540,730
GDP	\$291 billion; \$48,579 per Capita
Employment	Unemployment: 6.6%; Youth Unemployment: 17.1%
Ethnic Makeup	Finnish 91%, Swedish 5%, Russian 1%
Major Industries	Electronics: 21.6%; Machinery, vehicles, and engineered metal products: 21.1%; Forestry: 13.1%; Chemicals: 10.9%
Educational Attainment	Upper Secondary School Graduation Rate: 89%

Governance and Accountability

Governance

The Ministry of Education and Culture oversees all publicly funded education, including the development of the national core curriculum and the accreditation of teacher training programs. The Finnish National Agency for Education is the operational arm of the Ministry, and responsible for administering education programs.

Below the national level, six Regional State Administrative Agencies administer some discretionary funds for education, such as for school construction. Primarily, though, administration of local basic schools is the responsibility of municipalities. They make decisions on funding allocations to schools, local curricula, and recruitment of personnel. The municipalities can also grant autonomy to schools to perform those functions. There are more than 2,000 schools in Finland, one-third of which teach fewer than 100 students. However, larger schools exist, with the largest comprehensive schools enrolling more than 900 students. For upper secondary education, the Ministry of Education and Culture provides licenses to local authorities, municipal authorities, and registered associations and foundations to establish schools.

There are very few private schools in Finland; those that exist are granted the same government funds as public schools, and are required to use the same admissions standards and provide the same services as public schools. The majority of the private schools in Finland are religious.

Schools are managed by the teachers and staff. The local municipal authority in any given region appoints principals for six- or seven-year terms, but once appointed, the municipal authorities largely leave the running of the school to the principal and his or

her teachers. Principals are responsible for managing the school staff, ensuring the wellbeing and success of the students, and managing the school budget, although they do this generally in collaboration with the teachers.

Planning and goal-setting

Until recently Finland's Ministry of Education and Culture developed four year development plans with specific objectives and strategies for the education system. As of 2018, the country has shifted towards a 10 year government wide strategy. The 2019 Government Strategy is called Inclusive and Competent Finland - a socially, economically and ecologically sustainable society. Included in its goals are a rise in the level of education of all its citizens and a decrease in differences in learning outcomes among them; children and young people will feel well; and education and training will enhance gender equity and nondiscrimination in society. The Ministry of Education and Culture is developing its own strategic plan with specific measures for these goals by 2030.

Education Funding

Funding responsibilities are divided between the federal and the 311 municipal governments, with the federal government assuming about 40 percent of the financial burden of schools and municipal authorities assuming the remaining 60 percent. The amount of federal money given to each municipality is determined by the number of children aged 6-15 and an annually calculated unit cost per student. Municipalities pay for meals for every student in basic education.

In 2016, Finland spent \$10,200 per student in primary and secondary school, as compared to the OECD average of \$9,800. Total spending on education represented 6.9 percent of Finland's GDP in 2016, compared to the average across OECD countries of 4.5 percent in 2015.

The Ministry of Education and Culture allocates additional funds to municipalities for immigrant students who have been living in Finland for less than four years, for lowincome students, for students in single parent families, and for students with parents who are unemployed or undereducated. Municipalities can distribute these funds to schools as they wish.

Accountability

Finland used to have a central education inspectorate in charge of evaluating school performance, but this was abolished in 1991. It was replaced by the National Evaluation Council which oversaw sample evaluations periodically to assess the performance of the school system rather than of individual schools. In 2013, the National Council was replaced by a new independent agency called the Finnish Education Evaluation Center (FINEEC). FINEEC is staffed by researchers, teachers and principals who are appointed by the Ministry. FINEEC conducts thematic evaluations, such as assessments of the implementation of national policies, as well as evaluations of learning outcomes, which are conducted through examinations administered to a sample of students in grade 9 across the country. They are administered in Finnish and mathematics every three years and other subjects every five years. Currently, their emphasis is on evaluating the

consistency of implementation of the core curriculum. FINEEC develops a periodic evaluation plan to lay out the subjects of the assessments. FINEEC also provides support to schools to conduct their own self-evaluations. Although FINEEC's reports will present findings and make recommendations for improvement in terms of both policy and practice, their recommendations are not binding. Teachers are expected to use professional judgment and discretion, take collective responsibility for the education of their students, and be accountable to their peers.

Prior to the 1970s, Finland's education system was characterized by few highperforming and many low-performing schools. Finland's educational reforms over the next few decades aimed to address this central problem. By establishing a comprehensive school for grades 1-9 with rigorous standards, improving teacher quality, and establishing a weighted per-pupil funding formula, rather than reimbursing schools for their expenses, Finland has been able to almost completely eliminate what was once a huge disparity.

Now, there is little disparity in performance among Finnish schools. Only 7 percent of the variance in PISA reading scores in 2018 was between schools, compared to an OECD average of 29 percent. This percentage has remained fairly consistent in Finland since 2009, the last time reading was the PISA focus subject.

Formal teacher evaluation is relatively rare in Finland. Lower secondary school teachers surveyed by TALIS reported that they receive very little formal feedback, and few schools have formal teacher appraisal systems. Almost 28 percent of middle-school teachers in Finland teach in a school where the principal reports that teachers are not formally appraised by the principal. Thirty-seven percent of Finnish lower secondary school teachers report that they have never received feedback on their teaching in school. Some municipalities have more formal evaluation systems, however. In the city of Helsinki, for example, principals do use a common form to appraise teachers' practice. This form focuses upon some key features of teaching that are considered important, but do not rate teachers on student test results.

Supports for Equity

Supports for Young Children and Their Families

Finland offers a wide range of supports to families with young children. Since the 1930s, every mother of a newborn baby receives a box filled with clothes, sheets, toys, diapers, and other essential items. The country also provides mothers with four months of paid maternity leave and fathers with nine weeks of paid paternity leave, followed by eight months of paid parental leave, which can be taken by either parent.

Health care is a right guaranteed to all Finnish citizens under the constitution. The health care system is managed by municipalities, which fund and provide primary care and, usually in concert with other municipalities, provide specialized health care in regional hospitals. Under the National Health Insurance system, all prenatal and perinatal care, along with annual checkups for children up to age 7, are free of charge. In 2019, the government proposed consolidating health care into regional authorities and allowing more private providers, but that plan was defeated and the entire government resigned.

Finland has very generous maternal and parental leave, which was just extended to 14 months for either parent. Finland also makes direct cash payments to families with children under age 17, which they can use with no restrictions. In 2018, the benefits totaled €113.78 per child, with larger amounts for additional children. Single parents also received additional bonuses.

Prior to age 6 when compulsory school starts, all children from birth have a universal right to subsidized ECEC services. Parents who chose to care for their children at home rather than in center-based child care also can receive a child care allowance. In 2016, a new law ended the principle of children's equal access to ECEC regardless of their family's economic position or engagement in the labor market. Now, children whose parents are not students or working full-time have only a 20-hour per week entitlement to subsidized ECEC, and have no right to subsidized part-time ECEC to supplement half-day pre-primary education. Children are more likely to participate in ECEC as they grow older. As of 2017, 1 percent of those under the age of 1 participated in ECEC, while 31 percent of 1-year-olds participated, 59 percent of 2-year-olds participated, and 79 percent of 3- to 5-year-olds participated (as of 2016; 6-year-olds' participation is now compulsory).

Supports for School-age Children

Finnish schools not only provide education, they provide many other important resources and services for their students, including a daily hot meal, psychological counseling, and health and dental services.

The Ministry of Education and Culture allocates additional funds for immigrant students who have been living in Finland for less than four years, for low-income students, for students in single parent families and for students with parents who are unemployed or undereducated. Municipalities can distribute these funds to schools as they wish. The government has also invested significant additional funds to since 2016 in developing more supports for new immigrants, including better training teachers to support them and developing

Finnish law also requires instruction in Finnish, Swedish, or Sami, depending on students' native language. Students with hearing disabilities are given instruction in sign language.

Learning System: Preschool

Preschool

In 2016, Finland made a year of pre-primary school, for 6-year-olds, compulsory; previously, schooling was not compulsory for children until age 7. In 2019, the government launched a pilot two-year pre-primary program for children starting at age 5. Most pre-primary schools are public, but there has been an increase in the number of private, for-profit centers. All centers must meet national standards for quality, including the national Curriculum Guidelines for Early Childhood Care and Education, which were put in place following a transfer of responsibility of ECEC to the Ministry of Education in 2013. The guidelines were intended to raise and standardize quality throughout the system and connect the system to the primary schools. Finland's

education evaluation agency, the Finnish Education Evaluation Center, undertakes periodic thematic evaluations of the early childhood system with the aim of making recommendations to improve the overall system.

There are no formal learning performance standards or outcome requirements for early childhood education, and no requirements for formal assessments. However, ECEC teachers are expected to use formative assessments to gauge children's progress and use the data from these assessments to adjust instruction or program quality. An individual learning plan is developed for each student and is shared with primary school teachers when students leave pre-primary programs.

Learning System: Primary and Secondary Education

Primary and Secondary Education System Structure

Since the 1970s, Finland has had comprehensive schools for all students. Today in Finland, students start school with one year of pre-primary education at age 6, followed by nine years at a basic school. In 2020, the government proposed raising the compulsory schooling age from 16 to 18, and making upper secondary education free of charge. The goal was to help ensure that fewer young people drop out of school before earning a degree; currently, about 10 percent to 15 percent do so.

During the early primary years, students generally stay together in a class with the same teacher for several years. That way, the teacher can follow their development over several grade levels and build more personal, lasting relationships with their students.

Following the completion of basic school, students choose between academic or vocational upper secondary schools, or they may choose to leave school altogether. This option is unpopular; more than 95 percent of students continue on to upper secondary education, with about half of those choosing an academic program, and half a vocational program.

In the final two years prior to university in general academic upper secondary education, there are no required classes, nor are there grades. Instead, students design an individual education plan. Classes are taught in modularized topics and students can take which modules they would like. Nevertheless, students who wish to attend university are strongly incentivized to take certain modules in sequence because those subjects are heavily weighted in the Matriculation Exam, which determines which universities students can attend. For example, all students who wish to attend universities will need to earn a passing score on the mathematics Matriculation Exam, so they will need to take several sequential modules of advanced mathematics.

For students who are interested in specializing, a set of specialized upper secondary schools exist. These schools focus on certain subjects, such as the sciences, or arts, music or sports. Some general upper secondary schools offer specialized tracks. Others offer the International Baccalaureate diploma program.

Curriculum, Assessment, and Qualifications

Curriculum

Finland has a national core curriculum, which includes the learning objectives for the core subjects, the amount of time that is suggested to be devoted to specific learning objectives, and requirements for when students should be assessed, with guidance on how to grade assessments at two benchmarks. Based on the national curriculum, municipalities may develop their own curriculum, reflecting their local contexts. Or, municipalities may instead choose to develop curriculum guidance, and allow each school to develop its own curriculum. The local curricula, whether at the municipal or school level, define in much greater detail the instructional objectives teachers should follow and how students should be assessed. Separate local curricula are required for Finnish-speaking, Swedish-speaking, and Sami-speaking schools, in which instruction in the native language complements basic education.

In 2014, the National Board of Education (renamed the National Agency for Education in 2017) began a revision of the national curriculum, which had last been revised in 2004. Although some press accounts suggested that the new curriculum for basic schools, released in 2016, did away with subject areas, this is not the case. The curriculum defines learning objectives for all core subjects, and assessments continue to measure achievement in subject areas. However, the curriculum document states that local curricula can integrate subjects through interdisciplinary projects, and the curriculum for basic school (grades 1-9) defines "transversal" competencies that are infused in the curriculum in all subject areas. The transversal competencies are: thinking and learning to learn; cultural competence, interaction, and self-expression; taking care of oneself and managing daily life; multiliteracy; ICT competence; working life competence and entrepreneurship and; participation, involvement, and building a sustainable future.

The core subjects in the basic school curriculum are:

- For grades 1-2: Mother tongue and literature, second national language, foreign languages, mathematics, environmental studies, religion, ethics, music, visual arts, crafts, physical education, guidance counseling.
- For grades 3-6: Mother tongue and literature, second national language, foreign languages, mathematics, environmental studies, religion, ethics, history, social studies, music, visual arts, crafts, physical education, guidance counseling.
- For grades 7-9: Mother tongue and literature, second national language, foreign languages, mathematics, biology, geography, physics, chemistry, health education, religion, ethics, history, social studies, music, visual arts, crafts, physical education, home economics, guidance counseling.

The Core Curriculum for General Upper Secondary Education is designed differently than the one for basic school. Students in general upper secondary school must complete a minimum of 75 modules, which average approximately 38 hours each. Students develop an individual study plan when they begin upper secondary school. Students do not have free choice in all their courses; there are required numbers of courses that must be taken in different subject areas. The courses include compulsory courses; specialization courses, which are optional courses that offer a more specialized study of a subject area; and applied courses, which include methodology courses, vocational courses, and multidisciplinary courses. The curriculum document identifies the objectives and core content for each course. It also specifies that students should receive both formative and summative assessment, and that teachers should assess students using either a 10-point numerical scale (where 5 is "adequate", 10 is "excellent" and 4 or below is failing), or a pass-fail mark. There is no specific rubric as to how to grade school-based assessments.

As in the previous curriculum, the Core Curriculum for General Upper Secondary Schools identifies six cross-curricular themes, analogous to the transversal competencies for basic school. While the document states that the themes "have been taken into consideration" in the descriptions of individual subjects, it does not specify which objectives for instruction are linked to the themes. The themes will be "translated into concrete terms in the local curriculum," the document states.

To support schools and municipalities in developing local curricula based on the national curricula, the National Agency for Education established the Majakka ("Lighthouse") network, which has hosted meetings of local educators and a web site with resources for developing curricula. The National Agency also provided €100 million to support localities in implementing transversal competencies; municipalities also established 2,200 tutor-teacher positions to support the teaching of the transversal competencies.

Assessment and Qualifications

Guidelines for assessment are a part of the national core curriculum. The curriculum also states that the goal of assessment is to develop students' capacity for self-assessment, so that students may understand their progress and help to design their own learning activities.

At the end of each school year, the basic core curriculum requires every school to provide students with a report that contains a verbal assessment or numerical grade indicating how the student has achieved the objectives in the subjects that are part of the curriculum of that school year. Verbal assessments, which can be in oral or written form, provide students and parents with detailed information on student progress, rather than a numerical score. The end-of-year report also provides an assessment of the student's behavior. The report also indicates whether the student will be promoted to the next grade or retained. Generally, students who fail courses can be retained, although they can also take tests to demonstrate that they have attained the necessary knowledge and skills.

At the end of basic education, schools administer a final assessment. The final assessment is required for mother tongue and literature, the second national language, foreign languages, mathematics, physics, chemistry, biology, geography, health education, religion or ethics, history, social studies, music, visual arts, crafts, physical education, and home economics. Students are awarded grades on a 10-point scale; a grade of 5 is considered "adequate" for passing. The core curriculum currently contains guidance on what knowledge and skills students should demonstrate to earn an 8 (considered "good"). Ministry officials have collected samples of student work from

different levels and determined that more guidance is needed. They are currently in the process of developing and disseminating for feedback standards to earn a grade of 5 ("adequate") and 10 ("excellent.")

At the end of basic education (grade 9), students who have passed all subjects that are part of the student's study plan—that is, received a grade of 5 or better—receive a basic education certificate. The certificate indicates the grades for each core and optional subject and an indication that the student has received guidance counseling and an introduction to working life. Students who earn a certificate can apply to upper secondary schools, either general or vocational. Students grades in basic school are the primary basis upon which students are admitted to secondary school

The only external testing in basic education is for monitoring (rather than accountability) purposes and is done on a sample basis in grades 6 and 9. Finland also participates in international assessments like PISA. At the end of basic education (lower secondary school), Finnish students must decide whether they want to continue in an academic track possibly leading to university, or to pursue vocational education. However, there is no formal test to determine their path.

At the end of upper secondary school, all university-bound students in academic secondary school, and many students in vocational upper secondary school, take the National Matriculation Exam to determine whether they are eligible to graduate. This examination measures a student's competency in four areas. Students are required to take an examination in the area of their mother tongue language, but can choose the three other subjects from the following group of four: the second national language, a foreign language, mathematics, or sciences and the humanities. For languages and mathematics, there are two levels of the test, basic and advanced. Students can take either level in any tests, but are required to take at least one advanced level among the four tests. In addition, the test subjects are weighted, so that students who pass exams in priority subjects (such as advanced mathematics) receive many more points toward university admission. For this reason, almost all university-bound students take the same subjects.

The national language tests include a textual skills section that measures the ability to read, comprehend, analyze, and make inferences about textual passages, and an essay. For the essay, students choose one topic out of 12 and write a four-to-five-page essay on it. The foreign language test includes writing as well as listening and reading comprehension, and includes multiple-choice and open-response questions, translations, and short essays. The mathematics test has 13 multi step math problems requiring students to show their work, from which students are required to answer 10. The humanities and science tests vary by subject, but include multiple-choice and essay questions as well as drawing assignments and data analyses. All of the tests are online as of 2019. Teachers can access them through a password-protected online portal.

Although higher education institutions historically administered their own admissions tests, most universities have shifted to admitting students primarily on the basis of their Matriculation Exam results. Therefore, the Matriculation Exam largely determines students' acceptance to institutes of higher education. That being said, students who do not earn a high score on the Matriculation Exam can choose to take university-based exams to compete for a limited number of competitive slots. Students can also retake

tests or supplement their scores by taking tests in additional subjects or tests at an advanced level. Students who choose upper secondary school can take this exam if they want to go to university at the end of initial vocational training.

Learning Supports

All Finnish schools are assigned specialists to address learning needs of special needs students, who are broadly defined as any student who needs learning help. These are full-time teachers who work with students individually and in small groups, as needed. Teachers refer students for this support. In 2015, almost a quarter of all Finnish students received such support and almost half of Finnish students receive some sort of academic support at some point during their schooling.

Finnish law outlines three levels of support for struggling students. For most students who need assistance, teachers provide basic support, which includes remedial instruction, part-time special needs instruction, and individual guidance. Students who need intensified support, as determined by a pedagogical assessment, receive an individualized learning plan, which includes part-time special education classes and individual guidance. Students' learning and attendance are monitored regularly, and learning plans can be adjusted if the results indicate a change is needed. About 15 percent of students receive intensified support. The third level of support is special support. Students who need more than part time support in the classroom are referred for special support, or full-time services. About 16 percent of students receive full-time services. Most receive these services in mainstream schools, but a small percent of students with physical handicaps, including severely delayed development, severe handicaps, autism, dysphasia, and visual or hearing impairment (1.2 percent of the school population in 2015) are served in special schools funded by the national Ministry.

Teachers are important in the process of diagnosis and intervention, but it is not up to them alone to identify students for additional support. Each school has a group of staff that meets twice a month in order to assess the success of individual classrooms and potential concerns within classrooms. This group, which is comprised of the principal, the school nurse, the special education (or learning support) teacher, the school psychologist, a social worker and the classroom teachers, determines whether problems exist, as well as how to rectify them. If students are considered to need help beyond what the school can provide, the school helps the family find professional intervention.

Learning System: CTE

Development of the System

Since the 1970s, Finland's upper secondary vocational schools have been modernized and expanded; they are now such a popular option in Finland that 42 percent of upper secondary students are enrolled in VET programs. The 1994 Vocational Qualifications Act established a sequenced set of competency-based vocational qualifications —initial, further, and specialist —that students and adults earn based on demonstrated proficiency of skills, with or without formal training. This was followed by the 1998 Act on Vocational Education requiring all upper secondary vocational programs to be structured as three-year, full-time programs of study with a common academic foundation. This made the structure and foundational courses of academic and vocational upper secondary programs equivalent, and would allow all graduates to apply to university. Later amendments to the legislation introduced a modular structure for vocational qualifications that provides students with a foundation of basic vocational skills with options for individualization and specialization depending on a student's career interests.

The Finnish government passed a set of extensive reforms in 2017, with the goal of improving the quality of VET and encouraging lifelong learning. Performance-based funding was introduced to encourage schools to focus on raising completion rates and helping students find employment in in-demand field. The reforms also streamlined oversight and regulation of upper secondary VET, continuing VET, apprenticeship training, and labor market training. In addition, the number of qualifications was cut in half and each was broadened to better align with the labor market and to provide students with broader training. The reforms add more flexibility in how VET is structured, making it more competency-based, personalized, and available in varied learning environments, including on-line, in school and in workplaces. The goal was to encourage more participation in VET from both students and adults seeking to upskill.

Governance

VET programs are developed, delivered, and assessed in cooperation with business and industry partners. The National Forum for Skills Anticipation, working on behalf of the Ministry of Education and Culture and the Finnish National Agency for Education, organizes groups from key industry sectors to monitor, evaluate, and anticipate the development of education and training needs in their sector, making projections about the future labor market and revising them on a regular basis. Secondary VET is designed to prepare students to earn one of 43 initial vocational qualifications, organized in 10 broad areas of study, which indicate competence to enter employment in particular fields. Beyond initial qualifications, young people and adults can earn additional qualifications (further and specialist) that certify a next level set of skills. Vocational qualifications are developed by a broad range of stakeholders, including representatives from the Ministries of Education and Culture and Employment and the Economy, unions, industry, and universities.

The 10 broad fields of study in the Finnish VET system represent a range of industries that go beyond the traditional trades, including Health and Welfare, Education, Natural Sciences, and Technology. VET schools, mostly operated at the municipality level, prepare their own school curricula based on the national qualifications requirements issued by the Finnish National Agency of Education that specify the vocational skills to be mastered and methods for demonstrating and assessing competence. Industry representatives participate in the development of school curricula, organize and plan training and skills demonstrations, and play a role in assessing students.

Funding for VET comes from both the national and municipal governments. Funds are paid directly to VET schools, which can use the funds as they see fit. A new performance-based funding process is now being phased in as result of the 2017 reforms. By 2022, 50 percent of funding will be based on student enrollment, 35 percent will be based on how many qualifications are awarded and graduates produced, and 15

percent will be based on the percent of graduates who are employed or enrolled in further studies.

CTE Programs

VET in Finland is competency-based, allowing students to design their own individual pathways for completing an entire qualification or a supplementary skill set via another vocational module. Students can work at their own pace and "place" out of certain units if they demonstrate competence. Lifelong learning skills are emphasized, and students can include modules from other vocational qualifications.

About 75 percent of the coursework in VET programs is vocational, in a student's field of choice, and the remaining 25 percent of coursework is in the core curriculum subjects, which are common to all upper secondary pathways. VET programs also include six months of on-the-job learning in addition to coursework. The training can be in the form of a paid apprenticeship or an unpaid training agreement between the education provider and the workplace. Some schools also provide a simulated workplace. Skills demonstrations are arranged as part of on-the-job learning periods.

Once students have completed and passed assessments for all modules included in a qualification, they receive a qualification certificate, which consists of a vocational upper secondary certificate and a certificate of skills demonstrations. VET graduates can continue their studies to complete a further vocational qualification at a VET school or a specialized vocational degree from a postsecondary program. Students can also progress to higher education, either at a university or a university of applied sciences (polytechnic). Students who want to apply to a university program take the same matriculation exam that students in general upper secondary school take, and/or they may take university-based entrance exams. Students who take the matriculation exam often attend additional courses to prepare for the exam at an upper secondary general school.

For adults who want to further their education or increase their skill levels, programs and classes are available, whether the ultimate goal is learning to read or earning a master's degree. Adults who did not complete upper secondary school may take courses in order to earn a general education certificate or vocational qualification; they can strengthen their education in certain subject areas, or they may take non-degree or diploma courses. Adult participation in lifelong learning (26.4 percent) in Finland is much higher than the EU average (10.8 percent in 2016) but it is a goal to raise this number significantly.

High Quality Teachers and Principals

Teacher Recruitment

Finnish teacher education programs, like most graduate programs in Finland, are highly selective. Only one out of every ten students who apply to primary education programs are admitted; as many as 40 percent of applicants to subject teacher programs (grades 7-9 and upper secondary school) are admitted, depending on the field. Applicants are assessed for admission based on their upper secondary school record, their extra-curricular activities, and their score on the Matriculation Exam, which is taken at the end of upper secondary school. Applicants to primary school teachereducation programs may qualify for admission to teacher education by earning exceptionally competitive Matriculation exam scores, or they may take the Vakava entrance exam, a take-home, multiple-choice exam that assesses their ability to think critically and evaluate arguments in the education sciences. Once an applicant makes it beyond this first screening round, they are then observed in a teaching-like activity and interviewed. Only candidates with a clear aptitude for and commitment to teaching, in addition to strong academic performance, are admitted.

Teacher salaries are competitive compared to other professions in Finland, but are fairly average compared to other European countries. Lower secondary school teachers with the minimum amount of required education are paid \$35,676 in their first year; at the top of the pay scale, they can expect \$46,400 a year. The OECD average for a beginning lower secondary teacher is \$32,202; at the top of the scale, the average is \$55,122. Teacher salaries are somewhat lower than other professional salaries in Finland, but as survey results show, the profession itself is highly regarded and teachers themselves feel well-respected by society.

Teacher Preparation and Induction

In the 1970s, teacher education was moved from seminaria, or teachers' colleges, into universities and teachers were required to hold a master's degree. Only eight universities have teacher education programs (five vocational colleges offer teacher certification for aspiring teachers of vocational subjects who already have the appropriate qualifications from their respective industry), so quality control and consistent standards are easy to achieve.

Primary school teachers are required to major in education, with a minor in two primary school curriculum subject areas. Secondary school teachers are required to major in the subject they will teach, and to complete a fifth year of education designed to ensure that they have mastered their craft, either alongside their major fieldwork or after they have completed four years of subject coursework. This five-year program results in a master's degree. Teacher education is research-based and requires students to complete a research thesis on a topic of their choice. Students must also spend a full year teaching in a teacher training school associated with their universities before graduation. These schools are public schools that are subject to national curriculum and teaching requirements just like any other municipal school. However, their schedules have been structured so that student-teachers and mentors have time for feedback and collaboration without affecting the learning time of students. Further, because they are affiliated with the universities, as prospective teachers and researchers develop and model new practices, they can complete research on the effectiveness of those practices and interventions for teaching and learning and potentially publish the results of that research. Teacher education programs in Finland are monitored by the Finnish Education Evaluation Center.

Finland has comparatively high standards for early education teachers. Lead teachers and heads of childcare centers in Finland have BA degrees. There is a requirement that every third staff person in a childcare facility have primary teacher certification, which requires a BA degree. Teachers of vocational subjects are required to have an appropriate Master's degree or a polytechnic degree (or the highest possible qualification in their occupational field) plus three years of work experience in the field. Vocational teachers are trained in pedagogy and teaching practice at five vocational teacher education colleges and one Swedishspeaking university. This training is provided free of charge for students. Vocational teachers are also required to participate in continuing training each year (usually up to five hours per school year) to keep their classroom competencies up-to-date. Alongside teachers, there are workplace instructors who supervise students during on-the-job learning periods. These are generally experienced foremen and workers who guide students and assess their vocational skills.

Teacher Career Ladders

Because the Finnish system places so much emphasis on school and teacher autonomy, there are not clearly defined career ladders. Teachers have control over their classrooms, lesson plans, and hours outside of teaching. However, in 2016, following the introduction of the new curriculum, the national government created the position of tutor-teacher and proposed to have a tutor-teacher in all 2,200 comprehensive schools. These tutor teachers provide peer-to-peer guidance and support on implementation of the new curriculum, design of multidisciplinary learning modules, incorporation of digital pedagogy and other areas of teaching and learning. The government provided €23 million between 2016 and 2019 to train the teachers and created regional networks for them to share ideas.

Successful teachers may become principals, who are appointed by the local municipal authority. Principals do have decision-making responsibilities for the school budget, but they do not have a great deal of authority over the teachers – there is no tradition of principals observing teachers in order to evaluate them. In smaller schools, often principals have their own teaching load in addition to their other duties.

Teacher Development

Professional development requirements differ by municipality. The national government requires each municipality to fund at least three days of mandatory professional development each year, but beyond that, time spent on professional development varies widely. Similarly, the government does not regulate what types of professional development teachers engage in. However, the national government funds professional development for national priorities; in 2019, the government provided \$11 million to support professional development for developing school cultures; pedagogy, vocational, and subject-specific competencies; well-being and support for learning; language and cultural diversity; and digitalization and ICT.

TALIS data indicates that the average Finnish teacher spends seven days a year on professional development, even though there are no financial incentives for doing so. The types of professional development vary, with some municipalities arranging large, multi-school training events and others leaving it up to schools to develop in-service programs.

Principal Recruitment, Preparation, and Development

Principals in Finland are required to have teaching qualifications to teach at the level of school they will lead. In addition, principals must meet one of three qualification requirements: a Certificate of Educational Administration issued by the Finnish National Board of Education (this primarily certifies knowledge of Finnish educational law and policies), completion of a program in Educational Leadership at a university, or proven experience in educational administration. In practice, almost no principals are hired without a Certificate of Educational Administration or a qualification in Education Leadership from a university, and the university qualification is much more highly valued. Vice principals are required to have the same qualifications. Municipalities, which conduct principal hiring, can specify additional requirements for candidates depending on their own needs.

The most common path to the principalship is through completion of a program in Educational Leadership at a university. These programs are typically 18-month programs that candidates enroll in part-time while they are teaching. The curriculum at the University of Jyvaskyla, for example, focuses on management and leadership issues, and requires principals to participate in weekend seminars and do a field practicum with a cooperating school. The practicum consists of five field visits to a cooperating principal, each focused on a different aspect of the job. Student discussions are guided by "tutors," who are senior principals in Finland, many of whom are working towards a doctorate degree in education. In addition to a final exam, candidates must develop and present a personal leadership philosophy, based on their own research and experience in the program.