



School Meals for All

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School feeding: investment in effective learning – Case Finland

MINISTRY FOR FOREIGN AFFAIRS OF FINLAND • FINNISH NATIONAL AGENCY FOR EDUCATION

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Foreword

School meals are increasingly recognised as a vital investment in human capital with a significant positive impact on both the national and local economy. This is why more and more countries are interested in organising school feeding. It is seen as playing an important role in national development, while also providing a crucial means to support and give protection to children during times of crises.

School feeding is globally the most widely provided form of social protection. Schools provide a unique opportunity to coherently address the different causes and consequences of malnutrition, while at the same time facilitating children's access to school, increasing enrolment and attendance rates, and improving their cognitive development. Malnutrition severely undermines childhood learning. In many developing countries, only a half of adults aged 20 to 64 who have completed five years of school can read a full sentence. School feeding has a major role to play in tackling the learning crisis. As such, school feeding goes far beyond the plate of food, producing high returns in education, gender equality, health and nutrition, social protection, and economic and agricultural development.

In Finland, free-of-charge school meals have been provided since the 1940s, with the aim of supporting the educational system. Today, each school day, all pupils and students attending pre-primary, basic and upper secondary education are entitled to a free-of-charge, full meal. According to the Finnish national core curriculum, in addition to providing nutrition, the mealtime also contributes towards education by raising awareness of the importance of healthy diets and nutrition in food-related education. The Finnish school feeding system is a joint responsibility, steered nationally while implemented locally by municipal education authorities. It is a shared investment in the future of the individual pupil and in the future of the society.

Furthermore, school feeding can make a direct and indirect contribution towards achieving the Sustainable Development Goals, especially the second goal (SDG2) – Zero Hunger. A free nutritious school meal can support pupils and students in receiving an adequate quantitative and qualitative daily intake of food. Well-planned and implemented school feeding also supports environmental, cultural, social and economic sustainability.

With its long history, the school feeding programme has become an integral and important part of the Finnish education success story. In order to tell this story globally, Finland, in collaboration with the United Nations World Food Programme (WFP), has for the first time collected the lessons learnt into a comprehensive document that follows the school feeding assessment outline developed by WFP. It is our sincere hope that particularly those countries struggling with the practicalities of building their respective systems will be able to benefit from our experience.

The investments Finland has made in human capital and equal opportunities for all children, through access to free education and the provision of free school meals, have been among the key factors in strengthening economic growth and transforming Finland into a knowledge-based society. They will continue to play an important role in shaping the future.

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Country profile

Population in 2017

5,513,130¹

**Gross Domestic Product
Per Capita in 2017 (USD)**

45,703.30²

**Population ages 0–14 years
in 2017 (% of total)**

890,424 (16,2%)³

**Primary School Gross
Enrollment Ratio in 2016 (%)**

100.42⁴

**Primary School Net
Enrollment Ratio in 2016 (%)**

99.06⁵

**Under-fives suffering from
stunting (moderate and severe)
in 2007–2011 (%)**

0.0^{*}

**Employment in agriculture in
2017 (% of total employment)**

1.4⁶



* Finland is a developed country with a low infant mortality rate and child malnutrition. Extensive maternity and child health care services are available for all expectant mothers. Since the 1940s, municipalities have been obliged by law to arrange maternity and child welfare clinic services. The welfare of both mother and child is monitored regularly throughout pregnancy and in early childhood.

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Summary

With a history of over 70 years, Finland has the world's longest-running free-of-charge school feeding system. Each school day, all pupils and students attending pre-primary, basic and upper secondary education are entitled to a full, balanced meal. In the country of 5.5 million inhabitants, approximately 830,000 school meals are served daily⁷, most of them in basic education schools. School feeding is seen as an essential part of a child's well-being and growth, and a balanced school meal* is more, than just nutrition: it sustains the ability to study, it gives pleasure and renewed energy, and increases the students' awareness and knowledge of food and nutrition. As a joint responsibility of the national institutions and local education providers, school feeding is a shared investment in both learning and the future of the country.

In the beginning of the 20th century, Finland was a poor country, with agriculture the main source of livelihood. At that time, only few children attended school, and 40% of all 15-year-olds were illiterate. The law on compulsory education came into effect in 1921 and in that connection, arranging school feeding was considered an essential task of the municipalities. However, at that time, only the most economically disadvantaged children were targeted for feeding subsidies provided by state.

A law on providing free-of-charge school meals for all pupils in a municipality came into force in 1943. At that time Finland was still at war, which resulted in a large number of internally displaced people with reduced access to proper food and nutrition. After a 5-year transition period, the school feeding system had reached a nationwide scale.

School feeding system is directed by national legislation, instructions and recommendations. Since 2004, school meals have been part of the national school core curriculum giving the system an educational status. The core curriculum also includes sustaining the wellbeing of the pupils including basic education, before-school and after-school activities, as well as pupil welfare services.



Photo credit: Pekka Kyytiäinen / Finnish Heritage Agency – Musketi:
Kansalliseen kuvakokoelmaan

The teacher distributes soup or porridge to pupils. Lunch is eaten in the classroom. Harjula school, 1950.

* A balanced school meal is a meal that is adequate, when the length and location of the school day are taken into account. Nutritionally, a balanced meal has adequate energy content, is nutrient-dense and is composed according to nutrition recommendations.

The school feeding system in Finland is decentralised, meaning that the responsibility for planning and organising statutory education, including school feeding, rests with municipalities and other providers of education.* As budgets for education are determined locally, financial allocation to school feeding is also subject to local political decision-making by municipal councils. In 2017, the national average cost of a single school meal in basic education was EUR 2.80. This cost includes food personnel costs, equipment and transport. Tough economic times are also reflected in school feeding. As the number of schools in each municipality varies from a single school to over a hundred, the practicalities of procurement and organising the feeding vary substantially. Local curricula and annual school plans define the principles of arranging mealtimes and objectives for school feeding and related education, concerning health, nutrition and table manners.

In addition to full, nutritious meals, school feeding provides pupils with food-related education. A meal can be used as a holistic pedagogical tool: to share information about national and international food cultures, proper nutrition, good manners, and a sustainable way of life. The mealtime can be a relaxing break from learning and a time to interact with peers in a calm and enjoyable environment. Additionally, pupils are actively encouraged to participate in the planning and implementation of meals.⁸

The key strengths of today's school feeding system in Finland are

- serving nutritionally balanced, safe and wholesome meals every school day to all pupils
- a well-functioning system that builds on over 70 years of lessons and experiences
- strong national steering through legislation, instructions and recommendations
- systematic and decentralised procurement through municipal liability
- skilled and educated catering staff
- good and closely-monitored food safety in Finland in general
- horizontal cooperation and trust throughout the system

* In Finland, 95% of basic education is arranged by municipalities. The remaining 5% comprises state-owned and private schools.



Self-service buffet allows pupils to choose what they eat and how much.

1 Introduction

Comprehensive, free-of-charge school feeding system (Kouluruokailu) is a Finnish social innovation, which plays an essential role in the educational system of the country. Since the early 1940s, the Finnish municipalities have had the responsibility of organising school feeding for children in basic education. In the beginning, the meals were simple, containing mainly soup or porridge. In recent decades, the system has evolved. School feeding is now considered part of the national core curriculum, providing the pupils not only with a free-of-charge, full and nutritious meal every school day, but also with food-related knowledge and skills.

In order to share the lessons learned, this publication provides a short history and description of the school feeding system in Finland. It starts with an overview of the history of the school feeding programme. Later, it moves on to elaborating on various dimensions of the system, including legislation, decision-making, financing, procurement, cooking, nutritional questions and stakeholders. The publication ends with conclusions on lessons learned and best practices, as well as challenges, of the current school feeding system.

Geography and population of the country

The Republic of Finland is located in Northern Europe, bordered by Russia, Sweden and Norway. The total area of the country is 390,908 km². The country is divided into 19 regions, which have a regional self-government status. The regions are made up of a total of 311 municipalities. The population of Finland (circa 5.5 million people) is concentrated on the south-western coastal plain and in the south of the country, with the largest city being the capital Helsinki (pop. 643,272). A total of 85% of the population is urban. The official languages are Finnish (90%) and Swedish (5%). Also the Sámi language has official status in four northern municipalities. The main other languages spoken in Finland as a mother tongue are Russian, Estonian, Arabic, Somali and English.^{9, 10, 11, 12}

In Finland, conditions for agricultural production are tough. Finland is the northernmost agricultural land in the world with a relatively short growing season, which varies between 105 days in the North to approximately 185 days in the South. In addition, the long days during the growing season require adapted plant varieties: in the Northern parts of Finland daytime can last up to 21 hours.

The main crops cultivated are wheat, barley and oats – both for human consumption and for livestock. Almost a half of the cultivated field area is covered with these crops while almost another third is used for growing grass for livestock. In addition, vegetable production is carried out in both open fields and greenhouses. The average size of a Finnish farm (agricultural land) is 47 hectares.

A brief history of school feeding in Finland

In the beginning of the 20th century, Finland was a poor country, with agriculture the main source of livelihood. At that time, only a few children attended school and 40% of all 15-year-olds were illiterate. General compulsory education was prescribed by law in 1921. By the 1930s, more than 90% of the population were already literate.¹³

In the 1940s, when universal school feeding was guaranteed by law, the situation in society was very challenging. During the World War II, between 1939–1945, Finland was at war with the Soviet Union. As a result, Finland lost parts of its territory resulting in almost half a million internally displaced people. 80,000 children were sent to neighbouring countries for better protection, but the majority returned home after the war. Around 50,000 children were left as orphans. After the war, a massive reconstruction programme started. A major task was the resettling of the 430,000 internally displaced people in the country that remained. Sometimes the land for resettlement was expropriated from larger farms, which caused resistance; however, despite this, the resettlement programme has been considered one of the most successful in the world.

Malnutrition was prevalent during the war, and some food items were subject to rationing until 1954. During this time, the situation was so alarming that Finland received international food aid: for example in 1947, UNICEF shipped clothing and food, notably milk powder and lard, to Finland to support the 50,000 orphaned children. Finland became a member of the World Bank in 1948 and received loans for industrial development, such as water power plants, forestry and road infrastructure. These investments gave a boost to the economy and provided a remedy for high unemployment rates.

Arranging comprehensive education and school feeding formed part of the Finnish turn of the century social awakening. School dining was first officially discussed in the Elementary School Meeting of 1896. In 1905, the National School Soup Association** (*Koulukeittoyhdistys*), whose goal was to endorse food preparation in schools, was founded. State funding for school feeding was first applied for in 1908, but it wasn't until 1913 that the state granted nutrimental benefits for the most economically disadvantaged pupils.

The law on compulsory education came into effect in 1921. School feeding was seen as beneficial, but the state still only gave school feeding subsidies to the most economically disadvantaged children. The system was far from universal and based on charity. The development of school feeding slowed down in the 1920s. Towards the end of the decade, school feeding was taken back into public discussion. In 1936, the National Board of Education published a pamphlet stressing the importance of school feeding, because, according to research, only 40% of pupils were completely healthy. After careful planning, the law on school feeding for all pupils was passed in 1943 and was given a 5-year transition period, making 1948 the starting year of comprehensive free-of-charge school feeding in Finland.

The timeline below gives an overview of the development of the Finnish school feeding system, in connection with some major events in the history of the country and its economy.

* The association was founded by Augusta af Heurlin, who was an active founder and participant in many organisations relating to women's rights and education at the turn of the century.



Photo credit: Helsinki City Museum

Some municipalities arranged school feeding even before the law made it compulsory. Warm food was served for a small fee. Helsinki, Huopalahti school, 1931.

A timeline of the development of the Finnish school feeding system

	School feeding	Society and education	GDP (EUR) per capita
Late 20th and early 21st century	The School Soup Association is founded in 1905. The importance of nourishment in relation to school attendance and learning is recognised. Female teachers, teachers' wives and servants, with the help of pupils, act as cooks. The state first starts to subsidise school feeding in 1913.	Universal suffrage in 1906: All Finns of age, including women, get the right to vote and to stand as a candidate in elections. Finland was an autonomous part of the Russian Empire 1809–1917. Finland gains independence from Russia in 1917. Civil war in 1918.	
1921	The law on elementary school funding states, that the state is responsible for two thirds of a beneficiary meal for pupils of limited means.	General compulsory education of 7–15 year-olds was prescribed by law, replacing voluntary schooling.	3,110
1923	The first guidelines for school feeding were given, stating the necessity of a teacher-supervised meal break between lessons. All pupils must be reminded, that it is essential to eat a meal before coming to school. A nationwide system was not yet implemented, and the meal (e.g. porridge) was subject to a charge.		3,615
1930s	Breakfast rooms were taken into consideration when planning new school buildings.	In the period 1939–1944, Finland was at war with the Soviet Union. Food rationing started in 1939. Finland suffers great losses, including losing territory in the eastern part of the country, which leads to the evacuation and rehousing of some 400,000 internally displaced people.	4,408 (in 1930)
1943	A 5-year transition period for providing free-of-charge school meals to all elementary school pupils is started by governmental decree. The capital, Helsinki, implements the system in 1943. All elementary school pupils are obliged to work to a reasonable extent, growing vegetables or picking forest berries, which the school can use for school meals. Elementary school teachers are obliged to supervise.	Finland pays substantial war reparations to the Soviet Union, in the form of ships and machinery, during the period 1944–1952.	6,122
1948	The 5-year transition period ends. All schools now offer a free-of-charge, daily meal of porridge or soup. Pupils bring their own milk and bread from home to supplement these meals.		6,530

	School feeding	Society and education	GDP (EUR) per capita
1954	The National Nutrition Council is founded to monitor and develop public health.	Food rationing ends.	8,262
1958	The position of a school feeding inspector is initiated in the Finnish National Agency for Education.		9,062
1960s	Meals served at school become more varied with more vegetables, and even frozen foods. A sufficient school meal covers approximately one third of the food requirements of a pupil.		10,314 (in 1960)
1981	The National Board of Education gives guidelines on school feeding and how it should be arranged, in regard to nutritional content, special diets, the timing of meals, and the educational task of the practice.		22,233
1983	Free-of-charge school feeding is extended to upper secondary education. The state contributes to funding these meals in the same way it does for basic education schools.		23,363
1999	The fully renewed laws on comprehensive schools were taken into effect. Still, all pupils and students attending basic and upper secondary education shall be provided with a balanced and appropriately organised and supervised meal on each and every school day.	Finland joins the European Union (EU) on 1 January 1995.	32,963
2004	School feeding becomes a part of the national core curriculum and a part of pupil welfare services. Cooperation between school and home is described in the national core curriculum.	Finland has at various times ranked highly or even in first place in the OECD PISA (Programme for International Student Assessment) study, following its first participation in 2000.	38,036
2010	Nutritional criteria for procurement services are issued by the Ministry of Social Affairs and Health.		39,689
2014	School feeding is described in detail in the new national core curriculum. The emphasis is on its health-related, educational, social and cultural significance. The monitoring and evaluation of school feeding are also described.		38,855

14, 15, 16, 17

2 Methodology of the Study

The objective of this review is to provide a detailed example of the design and implementation of a functional school feeding programme in a developed country. The study aims to contribute to global learning on school feeding programmes and practical implementation of school feeding programmes in other countries.

This review follows the World Food Programme's case study outline presented in the publication *The Global School Feeding Sourcebook: Lessons from 14 countries* with slight modifications according to the context of the country. In addition, this study introduces a variety of local and national innovative practices implemented by various organisations and short case-studies of school meal systems in four Finnish municipalities.

In this review, the term 'school feeding' covers not only the free-of-charge food served daily in schools, but also the mealtime and the educational task of the practice. As school feeding is a part of the educational system and not a separate programme, this review will address school meals as a system. The focus is mainly on municipally arranged school feeding in basic education.

This review is based on data from various sources collected mainly by the Finnish National Agency for Education (EDUFI), the Finnish Food Authority and the National Institute for Health and Welfare. Both primary and secondary data sources are used. Articles published in trade journals, interviews and other literature on the subject are also utilized.



A school meal includes a glass of milk.

3 Design and Implementation of the Finnish School Feeding System

Municipalities and other providers of education have a vast amount of independence in arranging school feeding, and the practices vary from region to region. Municipalities are bound by legislation and directed by nutrition and food recommendations for different age groups. In a municipality, arranging school feeding can be the responsibility of social, educational, technical or administrative services. The school catering service is usually part of a wider provision of catering, cleaning and other welfare services, that operate in fields such as elderly care, child care and health care. Most municipalities centralise these services using a single producer organisation, as opposed to using a combination of outsourced services and producing services municipally.

Horizontal cooperation is a key characteristic in the institutional arrangements of Finnish school feeding. There is no single institution in charge of the system, but it is governed in cooperation (*See Table 6. Institutional arrangements*), with a joint responsibility for the well-being of children in the country.

3.1 Objectives

The main objective is to offer a free-of-charge, versatile and balanced, appropriately arranged and structured meal every single school day for all pupils and students in pre-primary, basic and upper secondary education. The mealtime must be directed and supervised by adults. For some pupils the school

meal is the only warm daily meal, and a substantial part of daily nutrition. It covers one third of the nutritional needs of the pupil. School feeding supports growth and healthy weight development, it promotes healthy meal schedules and learning, and develops food competence and food sense*. School feeding is an integrated part of the pedagogical structure of a school day, which must be planned, monitored and evaluated regularly¹⁸.

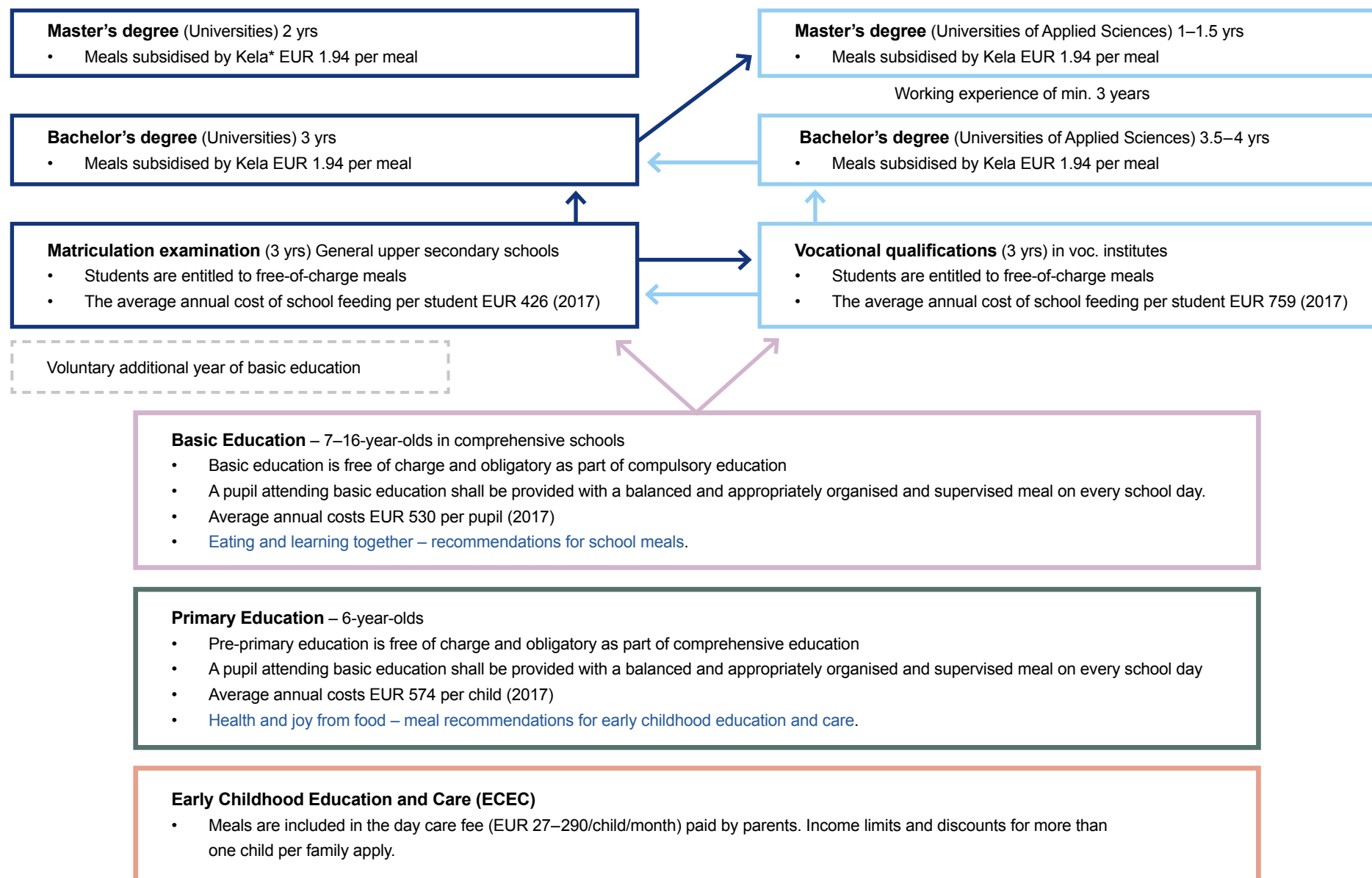
3.2 Targeting and coverage

Through pre-primary, basic and upper secondary education the demand for coverage is 100%. Education at these levels is free of charge, including school meals. The pre-primary, basic and secondary education providers are obliged to provide all children and students with a meal, or meals, that fulfill the requirements given in legislation and the local curricula. The state and municipalities share the costs of education. In addition to free-of-charge meals to school aged children, a school feeding system also covers children in kindergartens, where meals are included in the day-care fee paid by parents. In higher education, students get a meal subsidy, which means they are offered an affordable, well-balanced meal daily.

* Food sense is acknowledging what influences the food habits of an individual, and reflecting on the choices an individual makes, both on an individual level and on a food system level. Food sense should be taught in cooperation with all relevant school subjects.

Nutrition is taught in home economics and health education, which are both compulsory subjects for all. Health education is taught as a part of other subjects in grades 1–6 (7–12 year-olds) and as a subject on its own in grades 7–9 (13–15 year-olds). Home economics is taught to all in the 7th grade. As a part of the subject, pupils learn about food and nutrition in practice, when they prepare food in class and enjoy self-made meals with classmates. They also learn how to manage other household tasks, e.g. cleaning, textile care and budgeting.

Picture 1. The Finnish educational system and implementation of school feeding.



19, 20, 21, 22

* Kela is the Social Insurance Institution of Finland.

3.3 Modalities, food basket, and nutritional norms

School meals generally consist of typical Finnish foods with international influences. Portion size examples (model plates) for different age groups are provided in the recommendations for school meals. A balanced school meal includes

- a hot dish including potato, rice or pasta with fish, white or red meat or vegetarian protein sources such as legumes or eggs
- a vegetable side dish and salad dressing/oil
- a drink (milk, plant-based milk drink or soured milk)
- whole grain bread
- margarine



An example of a typical school meal.

It is the responsibility of the municipality to provide adequate resources for fulfilling the requirements. As procuring school feeding often includes tendering for a food service provider, minimum standards are written into the invitation to tender. School feeding menus are planned municipally, usually by the food service provider. The planning is mainly directed by the Finnish nutrition recommendations*, by price and by customer wishes. Special attention is paid

to the proportions of energy nutrients, the quality of the carbohydrates, the amount of salt, and the quality of fats.

Table 1. Energy content of a meal for different ages.

School grade/age	Energy kcal/meal	Energy MJ/meal
Pre-primary to 2 nd grade (6–9 yrs.)	550	2.3
3 rd –6 th grade (10–13 yrs.)	700	3.0
7 th –9 th grade (14–16 yrs.)	850	3.5

23

Table 2. Energy content of a daily school meal.

	% of energy
Fat	30–40
Saturated fat	less than 10
Protein	13–17
Carbohydrates	45–50
Sugar	less than 10

24

Schools are encouraged to serve a vegetarian meal to all pupils one day a week, and to have two alternative foods on display each day to provide a choice of meals. At least one of these can be a vegetarian alternative, usually including dairy and eggs. Some municipalities have made the decision to always have a vegetarian option as one of the alternatives.

Usually schools have an appointed space, a school canteen, where school meals are served and eaten. Any learning environment, including the school canteen, needs to promote health and safety. The pupils go to the canteen at a set time specified for their class or group and are encouraged to wash their hands before joining the lunch queue. The usual break time is 20–30 minutes.

* Finnish nutrition recommendations include separate recommendations for the population in general, for school meals as well as for school-age children and teenagers.

The potential of digital solutions

The world is currently going through a digital revolution that affects every aspects of human life, including food production and services. Digital technologies also offer huge potential for school feeding. Different data basis and applications support planning of nutritious, ecological meals as well assist in reducing labour, costs and food waste. The [Fineli](#) -database, maintained by the National Institute for Health and Welfare, has information about the average nutrient contents of over 4,000 foods and 55 nutrient factors of foods used in Finland. The private sector is developing solutions (e.g. [Jamix](#), [Aromi](#)) for restaurant management that are applicable also for school feeding systems. Today's school learners in many countries are also digi-native and use technology on a daily basis, offering great potential for using technology to enhance awareness of nutritious food and responsible food consumption.

Special Diets in Schools

Special dietary meals are provided when required. Catering to special dietary requirements requires cooperation between the school, the kitchen personnel, the pupils, their parents and school health care staff. All food served is low-lactose, and a lactose-free option is available. Special attention is paid to the meals of athletic teenagers, and pupils and students with illnesses that require a special diet (e.g. celiac disease or type 1 diabetes). Options for various religion-based diets (kosher, halal etc.) are also available upon notification. However, the objective is to offer basic food, that suits as many pupils as possible as it comes, or with minor modifications. This is considered in the menu planning.

The food is usually arranged in a self-service buffet, where the pupils take as much of each meal component as they wish. Catering staff guide and advise the pupils to take an appropriate amount of each component. Teaching staff supervise the lunch and remind the pupils of good table manners. Often the teaching staff will also eat a school meal. A teacher supervising a class in the school canteen is entitled to a meal subsidy (equivalent to EUR 3.78 per meal in 2015), making it an affordable lunch option. After eating, the pupils take their dishes to an assigned place and sort any waste into biodegradable and mixed waste. They thank the kitchen staff for the meal and head off to enjoy the rest of their break indoors or outdoors.

3.4 Food procurement and preparation

Food service procurement

Catering services can be produced by the municipality or the service can be procured from a catering company (either municipally-owned or private). If the service is outsourced, it is procured through a transparent and open competitive process, which is bound by law* derived from the European Community directives on public procurement. The EU has also prepared [guidelines](#) for public procurement of food for health regarding school meals.

The grievance mechanism is based on complaints made about the service. Parents or school staff can make a complaint, if the food quality or the service is inadequate – for example, if the canteen runs often out of food. Shortcomings and conflicts are preferably dealt with by discussing the matter at the school. However, parents can also make formal complaints to the Regional State Administrative Agency, if the conflict cannot be resolved at the school.

Links with local communities and local production

The main objective for tendering is to get a stable and cost-efficient food service. Even though the focus is on economic sustainability, municipalities can make independent choices that resonate with their municipal strategy, as long as they are connected to the target of public procurement. For example, the use of seasonal or local produce should be described in the strategy of the procurer. As locally produced foodstuffs may be more expensive, careful tender planning is central to getting the emphasis where the municipality wants it. ^{25, 26}

* Act on Public Procurement and Concession Contracts, 1397/2016 and 6 Section

Case Kiuruvesi: Commitment to local food

The Finnish food market is highly concentrated, with two major actors having 80% of the market. Therefore, it is quite difficult for smaller producers to get their products into the market. Contracts with institutional customers can give smaller producers stability, as has been seen in Kiuruvesi, a rural municipality in central Finland with approximately 8,000 inhabitants. Since the 1990s, Kiuruvesi has made a commitment to favouring local and organic foods in its public procurement, which has brought various kinds of food entrepreneurship to the region.²⁷



Left-over meals as a tool for social sustainability

Some schools and municipalities have made the decision to serve surplus food leftover from school feeding after the school day to the public for a small charge. This does not only reduce food waste but is also a socially sustainable course of action: serving low-cost, nutritious meals to residents in the nearby community. Eating the meal at the school also gives the recipients an opportunity to socialise with others.

Food preparation

There are multiple practices used in food preparation, and these can exist in parallel even within the area of a single municipality, depending on the specific needs of the area. The choice of method is directed by such factors as cost and labour efficiency, the adequacy of floor space, and the capacity of hot and cold storage space in the kitchens. The choice should be based on the needs of the customer, which in this case is the school. The trend nowadays is to build new, more efficient central kitchen systems, where food is prepared, either partially or fully, and then transported to schools. Still, many schools are equipped with kitchens, in which catering staff prepare and serve all the food from start to finish themselves.

Kitchen equipment, such as the type and number of ovens and cold storage space, is planned according to the cooking method and amount of food to be served. There are four main types of preparation practices: *Cook & Serve*, *Cook cold*, *Cook & Chill* and *Hot fill*²⁸. Food safety regulations put in place by the Finnish Food Authority (e.g. cooking and storage temperatures and in-house control monitoring – HACCP)* apply.

The *Cook & Serve* method is the most traditional one. The food is cooked from raw materials, semi-finished products and pre-cooked foods in a school kitchen and served straight away close by. This practice is best suited to environments, where a large number of customers are served simultaneously.

The *Cook cold* method includes preparing and mixing cold components in a central kitchen, from which the food is transported cold to a school kitchen, where the food is cooked and served. The *Cook cold* method enables the kitchen to cook a limited amount of food at a time, dividing a large quantity of food into smaller portions according to customer flow.

In the *Cook & Chill* method the food is prepared, cooked and chilled at a central kitchen and transported to schools for re-heating. The microbiological quality of the food is ensured by paying close attention to the preservation of hot and cold chains.

* HACCP=Hazard Analysis and Critical Control points

In the *Hot fill* method the food is prepared and cooked at a central kitchen, packed hot and only then chilled. This method requires safe and durable packing materials and efficient means of chilling the food.

Table 3. Kitchen and food preparation types.

Kitchen type	Food preparation and transport
Central kitchen	<ul style="list-style-type: none"> • Recipe planning and pre-preparation for multiple locations • The food is transported hot, cold or chilled to service, distribution and heating kitchens and service points • Pre-prepared food is transported to local kitchens daily
Regional/ production kitchen	<ul style="list-style-type: none"> • Food preparation (e.g. Cook & Chill or Hot Fill method) • Food is transported to local kitchens daily
Preparation kitchen	<ul style="list-style-type: none"> • Traditional school kitchen • Food is prepared and served close by • Food can also be transported to other service points
Service/Distribution kitchen	<ul style="list-style-type: none"> • Fully cooked food is provided by a preparation kitchen and is transported daily to the service kitchen • Food transportation containers are sent back to the preparation kitchen for washing • Energy-providing carbohydrates (potatoes, rice or pasta) are usually cooked in the kitchen of the service premises
Heating kitchen	<ul style="list-style-type: none"> • Fully-prepared food is transported to the kitchen and heated for serving
Serving point	<ul style="list-style-type: none"> • No food preparation at the serving premises • All food is transported to the premises and served immediately • Food transportation containers are sent back to the preparation kitchen for washing

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Apart from at serving points, all the personnel working in the kitchens described are usually catering staff, who have a vocational qualification relevant to their task. Kitchen equipment varies, and this restricts the kind of preparation that can occur and the kind of foodstuffs that can be used. For example, buying local, unprocessed products may be impossible due to a lack of equipment or space for handling these products according to the hygiene regulations. Tableware is washed and stored at the school.

Snacks in Schools

The fee for before and after-school activities includes a healthy snack. The snacks are directed by the same nutritional recommendations as school feeding in general, and are a part of the pedagogically-based food education conducted in schools.

Some schools also have vending machines or kiosks, which mostly offer healthy and nutritious products. Sweets and sugary drinks should not be regularly available in schools. Parents and guardians are consulted about the acquisition of vending machines or the setting up of school kiosks. Parents also have the right to decide what kind of marketing their underaged children are subjected to.

Ensuring hygiene and food safety in kitchens

All school kitchen staff handling unpacked and easily perishable goods must have a hygiene passport which is acquired by passing a hygiene proficiency test. The [hygiene passport system](#) ensures that all kitchen staff have basic knowledge of food safety and hygiene. Anyone working with perishable foodstuffs that are served unheated is obliged to be tested for salmonella, and to provide their employer with a certificate showing a negative test result.

[Oiva](#) is a publication system of food safety and hygiene inspections administrated by the Finnish Food Authority. Oiva covers restaurants, including mass caterers, and all stores selling food. The inspections are carried out by municipal food inspectors and cover questions on general and food hygiene and food safety. The summary of the report must be published in a highly-visible place, for example on the door of a canteen, for all customers to see.

3.5 Country School Feeding Programme Factsheet

Table 4. Country School Feeding Programme Factsheet.

<p>Start date: 1940s</p>	<p>The first law on a free-of-charge school meal for all was passed in 1943 with a five-year transition period. 1948 is the first year of free school feeding of all elementary school pupils in Finland.</p>
<p>DESIGN AND IMPLEMENTATION</p> <ul style="list-style-type: none"> • Rationale/Impact Nourishing, ensuring learning and narrowing social differences • Implementation levels Coverage of free-of-charge meals is 100% of pupils and students in pre-primary, basic and upper secondary education. • Supply, storage and logistics Decentralised model: Municipalities have independence in implementation practices, bound by legislation, the national core curriculum and directed by national nutritional recommendations. • Modality, Food basket details All schools offer a full, well-balanced lunch including a warm meal, fresh vegetables or fruit, bread and milk. In addition, some municipalities and providers of education serve breakfast or a snack. • Food preparation Arranged municipally; for guidelines, see chapter 3.4 	
<p>Policy, Legal framework documents</p>	<p>Current legislation, guiding documents and recommendations: See chapter 3.6</p>
<p>INSTITUTIONAL ARRANGEMENTS</p> <ul style="list-style-type: none"> • Lead institution <i>Ministry of Education and Culture</i> Finnish National Agency for Education • Supporting institutions <i>Ministry of Agriculture and Forestry of Finland</i> Finnish Food Authority National Nutrition Council <i>Ministry of Social Affairs and Health</i> 	<p>Main responsibility for implementation Pedagogical consistency and development Development of learning environments Gathering data on educational costs</p> <p>Coordinates food policy Coordinates food safety OIVA, hygiene passport and in-house control (HACCP) systems Coordinates the EU funded school fruit, vegetables and milk scheme</p> <p>Gives nutritional recommendations - for the general population - for children - for school meals</p> <p>Funds projects and organisations related to school meals Health and welfare related research</p>

National Institute for Health and Welfare	School Health Promotion studies Health promotion capacity builder surveys
Ministry of Finance	State budgeting and funding municipalities' basic duties
Statistics Finland	Produces the majority of official statistics
Municipalities (local authorities)	Implementing education, including school feeding: planning, budgeting and financing, service procurement
Annual budget	State share approx. 25% Municipalities' share approx. 75% School feeding is budgeted for as part of the educational system. For details, see 3.8 Funding and Budgeting.
Cost per child per year	An average of EUR 530 per child per year in municipalities
Community involvement	<ol style="list-style-type: none"> 1. Cooperation between home and school is required by the national core curriculum. Food education and school feeding are a shared interest. Successful implementation requires cooperation between the teaching and catering staff, the school administration, the pupil welfare services, the pupils and their parents/carers. 2. Various organisations and projects are involved in developing the practice
Innovations / Best practices	<ol style="list-style-type: none"> 1. A holistic view of school feeding with both the nutritional and pedagogical aspects taken into consideration 2. Offering a full, balanced and healthy meal free of charge daily 3. National recommendations for school meals 4. Regular monitoring and evaluation of the practice, and the use of gathered data in developing the system 5. School feeding as an integrated part of a school's operations, in co-operation with the kitchen, teaching and other school staff, as well as the pupils and their parents/carers. 6. Horizontal institutional cooperation and networks as a course of action
Weaknesses/Risks	<ol style="list-style-type: none"> 1. Not all pupils eat all components of the meal every day, and do not get all the nutritional benefits of a full, balanced meal. Some pupils opt for store-bought snacks over the school meal. 2. Nationwide information is not always available, as municipalities have a vast amount of independence in the implementation of school feeding.

3.6 Policy and Legal frameworks

Legislation

School feeding is regulated by legislation, national and local curricula and national recommendations. Fundamental rights, that safeguard an individual's rights in relation to a public authority, are prescribed by the constitution. The constitution also prescribes and determines the contents of municipal duties and tasks. These are particularly educational and social rights. Further legislation is prescribed in acts and decrees concerning basic education, upper secondary education and early childhood education and care.

Municipalities in Finland are key societal influencers, and their range of duties is exceptionally wide in a European context. In Finland, municipalities are self-governing communities in which a council chosen by its inhabitants has the highest authority. Municipalities provide the citizens' basic services, of which the most important ones relate to social welfare and health, education and cultural administration, the environment and technical infrastructure.

Table 5. Current legislation and recommendations.

The Finnish Constitution (731/1999) Section 6 Subsection 3	Children shall be treated equally and as individuals and they shall be allowed to influence matters pertaining to themselves to a degree corresponding to their level of development.
The Finnish Constitution (731/1999) Section 16 – Educational rights	<p>Everyone has the right to basic education free of charge. Provisions on the duty to receive education are laid down by an Act.</p> <p>The public authorities shall, as provided in more detail by an Act, guarantee for everyone equal opportunity to receive other educational services in accordance with their ability and special needs, as well as the opportunity to develop themselves without being prevented by economic hardship.</p>

Basic Education Act, Section 3 (13.6.2003/477)	Education shall be provided according to the pupil's age and capabilities and so as to promote healthy growth and development in the pupil. Those providing education shall cooperate with pupils' parents/carers.
Basic Education Act, Section 31 (13.6.2003/477)	The pupil shall be provided with a balanced and appropriately organised and supervised meal free of charge on every school day.

Recommendations

The National Nutrition Council coordinates education and information guidance on implementing new recommendations to food service professionals and those working within the educational system. The Finnish recommendations are based on the *Nordic Nutrition recommendations**. In 2017, 69% of schools reported compliance with the National Recommendations for School Meals³¹.

The National Nutrition Council, founded in 1954, is a group of experts working under the Ministry of Agriculture and Forestry. It works in three-year periods and is comprised of 16 experts representing nutrition and state administration, universities and other research facilities, health care, public health promotion and institutional catering.

Duties of the Council 2017–2020:

- monitoring and evaluating the implementation of the national nutritional recommendations
- monitoring and developing the nutrition of the population by issuing nutrition recommendations and by making proposals for specific measures
- communicating about nutrition and monitoring the implementation of such measures and their impact on public health throughout the whole life span
- making initiatives and statements on matters concerning public health and nutrition, considering the whole food chain
- monitoring the results of nutritional risk assessments and making initiatives and statements accordingly
- monitoring food and health policy programmes, and tasks included in them.

* Nordic Nutrition recommendations

Pedagogics and curricula

Local curricula are based on the national core curriculum, which for its part defines norms for school feeding.³² School meals and monitoring the health of pupils with special diets are part of pupil welfare. Municipalities and schools are obliged to define the central guidelines for arranging school feeding and relevant educational objectives in annual school plans. The national core curriculum calls for multilateral cooperation between principals and the school management, teachers, food service staff, pupils and their parents.

National core curriculum for pre-primary education 2014, Sections 2.1 and 4	A pupil attending basic education shall be provided with a balanced and appropriately organised free meal on every school day. The meal breaks shall be supervised. The structures and practices of a learning community promote well-being and safety, thus creating the preconditions for learning.
National core curriculum for basic education 2014, Section 5.5	The purpose and coverage of school feeding; guidelines for arranging school feeding; timing and guidance; monitoring and evaluation.

3.7 Institutional arrangements

Coordination

The Finnish system is based on horizontal cooperation between ministries and governmental agencies, with different main responsibilities.

The Ministry of Education and **The Finnish National Agency for Education** coordinate and develop school feeding from a pedagogical perspective. They have the main responsibility for practical implementation on a national level.

The Ministry of Social Affairs and Health and **the National Institute for Health and Welfare** oversee national monitoring and the nutritional content of the meals and general welfare in schools.

The Ministry of Agriculture and Forestry has the responsibility for coordinating food policy. **The Finnish Food Authority** governs food safety issues. **The National Nutrition Council** develops, updates and coordinates the implementation of the nutritional guidance of school feeding.

Table 6. Institutional arrangements.

Institution	Role	Activities
MINISTRY OF EDUCATION AND CULTURE	Lead institution: main responsibility for all publicly funded education in Finland	Drafting legislation and government resolutions concerning general education; Coordinating activities in the branch of pre-primary, basic and general upper secondary and other general education in accordance with the policies laid out in the Government Programme.
• Finnish National Agency for Education (EDUFI)	Pedagogical development of school feeding Cooperation with a wide network of actors in the field	Develops the national core curriculum for basic education, upper secondary education and early childhood education and care; Develops pedagogy, learning environments and food-related education; Arranges a yearly network meeting (School feeding cluster) with various partners in the field; Compiles annual reports of educational costs in municipalities; Governs funding of projects issued by the Ministry of Education
MINISTRY OF AGRICULTURE AND FORESTRY	Food policy	Steers policy on the sustainable use of natural resources
• Finnish Food Authority	Promotes, monitors and studies the safety and quality of food	Manages the Oiva monitoring system (including in-house control HACCP); Arranges and monitors the hygiene passport system; Coordinates the EU-funded School fruit, vegetables and milk scheme
• National Nutrition Council	Follows the national state of health and nutrition and gives recommendations to improve the situation	Gives the nutritional recommendations for <ul style="list-style-type: none"> • the general population • families with children • school meals • early childhood education and care
MINISTRY OF SOCIAL AFFAIRS AND HEALTH	Promotes the good health and functional capacity of the population	Planning, steering and implementation of social and health policy
• National Institute for Health and Welfare	Researching and monitoring national welfare and health and developing measures to promote them	Health promotion capacity building -tool TEAvisari School Health Promotion study
MINISTRY OF FINANCE	Stabilising general government finances; safeguarding sustainable economic growth; ensuring that public services and administration are effective and efficient	Budgeting based on true costs reported by the municipalities Transferring state subsidies to municipalities
MUNICIPALITIES	Education provision, producing and procuring basic services for inhabitants	Arranging education and school feeding

Institution	Role	Activities
Schools	Implementing school feeding	The principal is responsible for school culture, the appropriateness of school feeding and meeting educational goals; Teachers are responsible for guidance and rearing; Food service staff are responsible for serving adequate and timely meals, and share the guidance and rearing responsibility with the teachers.
Community sector <ul style="list-style-type: none"> • Ammattikeittiöosaajat (Catering professionals' association) • The Association of Finnish Local and Regional Authorities • The Central Union of Agricultural Producers and Forest Owners (MTK) • Dairy Nutrition Council • Development Centre Opinkirjo • ELO Foundation for the Promotion of Finnish Food Culture • The Finnish Heart Association • Kotitalousopettajien liitto – Hushållslärarnas förbund ry • Maistuva koulu – Tasty School • Mannerheim League for Child Welfare • The Martha Organisation • The Swedish Martha Association in Finland • Parents' association • Hem och Skola • Ruukku – Centre for Food Culture • Rural Women's Advisory Organisation • Ruokatieto Yhdistys ry 		Various projects, development and guidance (see appx. 2) <ul style="list-style-type: none"> • www.amko.fi • www.localfinland.fi/ • www.mtk.fi/MTK_english/en • www.maitojaterveys.fi/en • www.opinkirjo.fi/en • www.elo-saatio.fi/en • www.sydanliitto.fi • www.kotitalousopettajat.fi • www.maistuvakoulu.fi • www.mll.fi/tietoa-mlista/ • www.martat.fi/in-english • www.martha.fi/sv/kontakt/english/ • www.vanhempainliitto.fi • www.hemochskola.fi • www.ruukku.org/en • www.maajakotitalousnaiset.fi/english • www.ruokatieto.fi/briefly-english
Other institutions <ul style="list-style-type: none"> • Statistics Finland • Motiva • Universities • Finnish Environmental Institute (SYKE) 	State-funded research company	Gathers data and compiles statistics Provides guides for sustainable operations Research on nutrition, food education and sustainability Research

3.8 Funding and Budgeting

Because school feeding comes under the general funding of education, there is no national budget specifically for it. Municipalities are responsible for providing pre-primary and basic education to all residents within their area, and for budgeting for this. The state participates in organising municipal services through the statutory government transfer system, which covers approximately 25% of the calculated costs of education. The statutory government transfer consists of

- the government transfer of basic public services (the Ministry of Finance)
- the government transfer of municipal educational and cultural administration (the Ministry of Education and Culture).

The transfer covers municipalities, organisers of private education and joint municipal authorities, and is put in place to fund operating costs and minor investments caused by education and cultural services³³. In 2017, the share of education expenditure in the state budget was 12.3%, and approximately 40% of the budget was directed to pre-primary and basic education. Statutory government transfers are not ear-marked, and the municipality can decide how to allocate the funds. Municipalities provide the rest of the funding and decide how to distribute the funds assigned to education. The funds are used for materials, teaching, school feeding, special education, school transport etc. Municipalities have the right to levy taxes to fund services, which is their biggest source of income (e.g. the municipal tax paid by residents).^{34, 35}

There is also no predetermined value for a single school meal, but it must meet the criteria given in legislation, the national core curriculum and local curricula. Municipalities allocate financial and other resources to school catering. In larger municipalities, the cost per child per meal is usually lower, than in smaller municipalities. In 2016, the annual average cost of school feeding per pupil varied between an average of EUR 442 (municipalities with 100,000 inhabitants

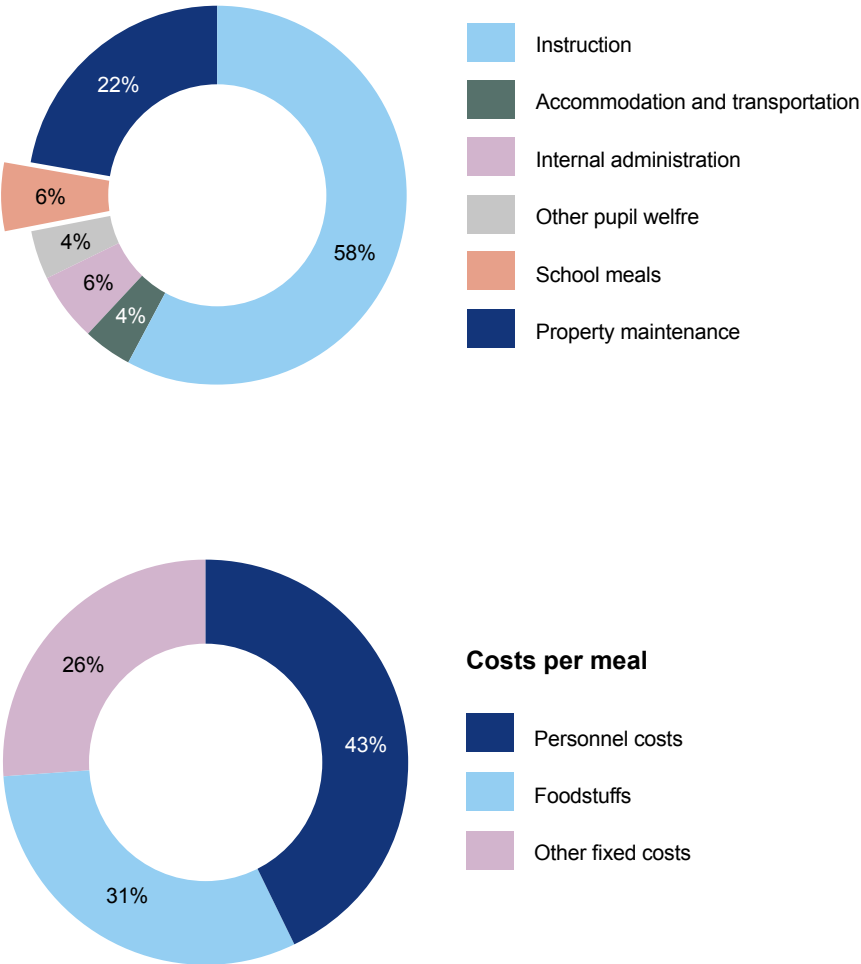
or more) to an average of EUR 704 (municipalities with 20,000 inhabitants or less)³⁶. The national average for a single school meal in basic education in 2017 was EUR 2.80. This cost includes foodstuffs, personnel costs, equipment, transport and additional meals bought from other sources³⁷.

The cost of meals of children in kindergartens are included in the day-care fee paid by parents. On average, the fee covers 14% of the early childhood education and care costs. The rest is covered municipally (national avg. 56%) and by government transfers to municipal basic services (national avg. 30%)³⁸.

Costs of school feeding	
Cost of one school meal in basic education (National average 2017)	EUR 2.80
incl. raw materials (approx. 30%) incl. labour (approx. 43%)	EUR 0.84 EUR 1.20
Share of school feeding of total operating costs of education in municipalities	6%
The actual cost per pupil per year in basic education (2017)	EUR 8,815
Costs of basic education school feeding in municipalities per pupil per year (2017, national average)	EUR 531
Annual national costs of school feeding (2016)	
Total	EUR 434M
- In basic education	EUR 317M
- In general upper secondary schools	EUR 43M
- In vocational institutions	EUR 74M
Number of teaching days per year in the Basic Education Act (628/1998)	190
Number of pupils in basic education (2017)	524,272

^{39, 40, 41}

Figure 1. Division of costs of basic education and per meal.



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School fruit, vegetables and milk scheme

Some funding is provided by the [EU funded School fruit, vegetables and milk scheme](#) to support the use of healthy foodstuffs in schools and in day care. The definitive allocation for Finland in the period 2018–2019 is EUR 1,599,047 for fruit and vegetables and EUR 3,824,689 for milk. Education providers can apply for funding annually, and it covers 90% of pupils entitled to the benefit.

Monitoring and evaluation

School feeding is monitored both on a local and national level. Local data is usually gathered on food waste and pupils’ participation in school meals. Other collected data varies. The nutritional quality is monitored by the catering service during the menu planning and implementation, with the help of dietary intake nutrient analysis software; standard recipes provided by material suppliers; or the nutrient content calculations in the National Food Composition Database, [Fineli](#). Local data on costs is gathered to monitor the realisation of the budget and for planning future budgets.

Feedback from pupils can be gathered regularly with simple electronic or paper feedback forms, for example, using a scale of smiley faces expressing different levels of satisfaction. The Finnish educational system has strong faith in the capability of a child, who has the potential, ability and right to take part in the decision-making that concerns his or her life. One of the responsibilities of basic education is promoting democratic values, active citizenship and participation in the community. This requires an operational culture of openness, where pupils can practice using democratic methods in everyday life and find opportunities to influence nearby communities. Pupils must have the opportunity to actively participate in the implementation and evaluation of school meals, and attention must be paid to their feedback and suggestions.

National data is gathered on food safety and pupil participation in mealtimes. The involvement of pupils, schools, kitchen staff and parents is also monitored. The main institutions implementing monitoring and evaluation are the Finnish Food Authority and the National Institute for Health and Welfare. The main surveys conducted in recent years are presented in table 7.

Since 2006, a national evaluation targeted at basic education and upper secondary schools is made biannually using the Benchmarking of the Local Health Promotion Capacity (TEA) survey. In 2016–2017, the survey covered approximately 90% of comprehensive and upper secondary schools. The data is gathered by the National Institute for Health and Welfare, in cooperation with EDUFI, in a national comparison database, [TEA viisari](#). This survey includes questions on

- pupil participation in mealtimes
- the timing of school meals (the time of the first mealtime shift and the duration of the break)
- the position of school feeding in the local curriculum
- local monitoring and evaluation
- cooperation between operators
- the involvement of pupils and their parents in the planning, implementation and evaluation of the practice.

The School Health Promotion study has been conducted biannually (since 1996), with the latest data gathered in 2018. The survey covers such health and welfare related issues as smoking, use of alcohol, and exercise, social well-being in schools, and some questions related to school feeding:

- How often pupils eat all the components of the school meal
- Which components they eat and how often
- How often they eat fruit and vegetables, sweets or sugary beverages.

The data collected is used as the basis for the evaluation and development of the practice and its guiding.⁴³

Table 7. Main surveys and research in recent years.

Survey	Institution responsible	Target	Implementation of the survey	Goals of the study
TEAvisari Benchmarking of Local Health Promotion Capacity	National Institute for Health and Welfare, Finnish National Agency for Education (EDUFI)	Basic education schools, general upper secondary schools and vocational institutions	Questionnaire is sent to all schools in the target group Answered by principals with a committee of their choosing	Getting national data on the timing of school feeding, participation of pupils in mealtimes, practices on monitoring and evaluating, and levels of coordinating cooperation
School Health Promotion study	National Institute for Health and Welfare	Pupils in 8 th and 9 th grade; general upper secondary education students in 1 st and 2 nd year; Vocational institution students in 1 st and 2 nd year; Pupils in 4 th & 5 th grade and their guardians	An anonymous and voluntary classroom-administered questionnaire to pupils and students	To study the living conditions, school work, health, health-related behaviour and school health services. Which school meal components pupils and students eat and how often
Cost reports of education	Finnish National Agency for Education EDUFI	All education providers	Statistics Finland gathers information, EDUFI processes this into charts Educational costs divided into sections (incl. school feeding)	Used as a basis for national budgeting
Kouluikkuna (School window)	Association of Finnish Local and Regional Authorities	Gathers information to support municipal decision-making and comparison	Participating municipalities enter the requested data in the reference database. The service is subject to a charge for municipalities.	Gathering the costs of education in municipalities and other relevant data.
Food usage of pupils in 6 th and 8 th grade. Initial mapping for the school distribution system subsidy. (Only in Finnish)	National Institute for Health and Welfare, Ministry of Agriculture and Forestry of Finland	6 th and 8 th graders of one school in 20 municipalities (n=2941)	Each pupil completed an eating habit questionnaire (incl. questions on school feeding) Photographing pupils' trays during school lunches (n=593) 1. Straight after taking food 2. When finished eating	Gathering information on eating habits before implementing the new EU-funded school fruit, vegetables and milk scheme. A control study will be conducted in 2022 (at the latest).

3.9 Community Participation

The school community is an important actor in school feeding. Teachers and other school personnel guide and rear pupils during mealtimes. The goals and organisation of school feeding is discussed with parents in order to support pupils' development. The principal and teaching staff work in co-operation with catering staff to organise and further develop the practice. Some schools have school food committees, which are put together by the principal with

representatives coming from the teaching staff, pupils, school health care, and food service provider. They meet at least twice a year and their objective is to find concrete solutions to problems through collaborative planning.

Schools and municipalities work in co-operation with local and national organisations, associations, projects and companies. Some of the central national organisations are presented in appendix 2.



Photo credit: Virpi Kulomaa

International influences are present in Finnish school meals.

4 Evidence of Programme Impact

During the over 70 years of implementation of school meals, Finland has developed from a poor rural country to a modern welfare state. Finnish people possess a high-level of education and a positive attitude towards education. The benefits of school feeding are widely acknowledged, and mass meals following the same basic pattern are also common at universities and in workplaces. Serving a full, balanced meal at school gives parents the relief of knowing, that their children are well-nourished during the day. School attendance is very high, and school feeding reaches virtually all 7–15-year-olds and a large proportion of young people studying in upper secondary education.

The school feeding system was introduced in the 1940s to level out social differences, which it continues to do today by giving each pupil and student the opportunity to have at least one balanced, warm meal a day. The system has developed in parallel with the general development of the country, adapting to the circumstances of the time. Today, there is no undernutrition in the country, but obesity is a growing problem even among school children⁴⁴. Food-related education has a key role in the fight against obesity and malnutrition, and the school mealtime that is experienced by all pupils every school day for ten years is a valuable place for teaching the basic principles of a healthy diet.

School feeding is still an important part of social protection: in some areas, school canteen personnel report that Monday, the first day of the 5-day school week, is the day when pupils eat more than on other days. This has been taken as a sign of not getting a warm meal at home at weekends. Like many other countries, Finland has not made an impact evaluation of the school feeding system. The link between modern school feeding and learning has proven a challenging subject for research*. Yet, the benefits of school-time feeding and its links to education and learning is widely acknowledged⁴⁵. School feeding is a part of the Finnish basic education system, that has provided excellent results: Since the year 2000, every year 90–95 % of pupils completing basic education moved straight onto upper secondary education⁴⁶. Finland has also achieved high scores in PISA** reviews.

* The link between school meals and learning has been researched in the [ProMeal study](#) carried out as a Nordic collaboration. The research process is ongoing with further financing sought.

** OECD's [The Programme for International Student Assessment \(PISA\)](#) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students.

5 Conclusions

Lessons learned and best practices

1. Health and welfare

A central achievement of school meals is providing children with nourishing, tasty and free-of-charge meals that maintain their ability to study, teaches them proper nourishment and maintains their health. School feeding is also part of pupil welfare. Basic nutrition is ensured with balanced meals, high-class food safety and hygiene.

2. Support for learning

In the beginning of the 20th century, Finland acknowledged the importance of equal rights for education. As hungry children are not able to focus on learning, school feeding was seen as an important step towards educational equality. Today, school feeding is an integral part of the educational system and school operations. It is a versatile educational opportunity with food seen as more than just nutrition – a pedagogical tool that can promote physical and social wellbeing. The mealtime offers a great opportunity, for not only nutrition and relaxation, but also learning-by-doing food and sustainability education.

3. National guidance – Local implementation

School feeding system is directed by national legislation, instructions and recommendations, but its implantation is decentralized. Decentralisation makes it possible to consider local features. Local operators are given the freedom and responsibility to implement school feeding in their area. It is important to recognise local strengths and food culture and use them as a starting point for implementing school feeding. Finnish school feeding offers food made mainly with Finnish, local ingredients, which can support local food production and teaches local food culture.

4. Horizontal institutional cooperation

Building and maintaining sustainable practices requires long-term commitment and cooperation. All collaborators need to work towards a common goal over political boundaries so, that the basic public service provided by school feeding does not depend on political changes. Cooperation can also take place across state borders – for Finland, the Nordic countries in particular provide valuable cooperation.

Challenges

1. School meals are taken for granted: not all pupils eat the full school meal every day.

The goal of 100% coverage is not achieved, even though food is available for all. In lower grades (7–12-year-olds), almost all the pupils eat the school meal every day. In upper grades (13–15-year-olds), the attendance at school lunch is lower. According to various studies, teenage pupils in particular replace the school meal with unhealthy snacks. Not eating the school meal is also connected with other unhealthy habits, like smoking and alcohol use.

The main reason for not eating the free meal is that the pupil does not like the taste of the food that is on offer⁴⁷. Furthermore, recent studies have revealed that in addition to taste, the social, emotional and peer-related aspects of school mealtimes are important for students^{48, 49, 50}. Although skipping mealtimes is a worrying phenomenon, students' own viewpoints and justifications for skipping meals offer valuable starting points for further development work.

To ensure that school meals are appealing, the food has to be tasty and the canteen a pleasant space. In recent years, careful attention has been paid to developing both recipes and the practice in general. The meal must be served at lunchtime according to a normal meal rhythm, and the duration of the break must be such, that pupils have enough time to eat and talk with friends. It is important that the people close to pupils, their parents, have a positive and realistic view of school meals, and that they encourage their children to eat properly, also at school, every day.

2. Ensuring sustainability as a course of action throughout the system.

School feeding should be environmentally, culturally, economically and socially sustainable. Well-implemented school feeding supports all these aspects that also complement each other. Environmental sustainability can be strived for by avoiding food waste, using seasonal and domestic products and through energy and general efficiency throughout the production chain. Social sustainability is strived for through cooperation and interaction between people involved in school meals. Cultural sustainability is achieved through serving traditional, Finnish food, but also considering cultural differences. Economic sustainability is crucial, because school meals are produced at a relatively low cost.

3. Ensuring resources for following all necessary criteria.

Managing school feeding often comes down to resources, which are subject to political decision-making in municipalities. Balancing all necessary criteria – nutrition, tastiness, effectiveness, versatility and sustainability – on a single tray of food every school day is a challenge. It is met with giving precise national guidelines and having educated food service staff planning and making the food offered in school canteens. In some municipalities, there is a shortage of competent kitchen staff. It is important to develop the catering industry so that it is an attractive career option in future as well, to ensure adequate numbers of personnel.

Trade-offs

Balanced nutrition provided with relatively tight funding is one of the main successes of Finnish school meals. However, it is argued, that because of the tight nutritional guidelines and cost-efficiency, the tastiness of the food has taken second place. Efficiency has also been argued to be the source of using processed convenience foods instead of, for example, local produce. Many municipalities have addressed this issue in recent years through the modernisation of menus and by arranging pupil surveys on their preferred foods. Food can be made tasty, nutritious and inexpensive at the same time, when planned properly.



Photo credit: Satu Haavisto / Finnish National Agency for Education EDUFI.

Pupils eating lunch at school. Helsinki, Aurinkolahti School, 2018.

Appendices

Appendix 1. Key figures of education in Finland.

Pupils in basic education years 1–9 (2018)	560,503
Number of basic education schools (2017)	2,376
Of which municipal (incl. Åland)	2,291
Of which state-owned	20
Of which private	65
Comprehensive school pass rate (%)	99.7
Immediate continuation of studies after comprehensive school (2017)	(%)
General upper secondary schools	53.0
Vocational institutions	41.3
Voluntary additional year of basic education	2.6
No immediate continuation of studies after comprehensive school	3.1
Teaching days per year (Basic Education Act 628/1998)	190
Instruction time in compulsory subjects in basic education (9 years in total)	6,300
Absences from school, total (lessons/pupil/year, 2017)	31
Absences due to illness (lesson/pupil/year, 2017)	22.6
Other permitted absences (lesson/pupil/year, 2017)	8.3
Non-permitted absences (lesson/pupil/year, 2017)	0.1

51, 52, 53

Appendix 2. Organisations and projects

Ammattikeittiöosaajat ry (Professional kitchen experts' association) offers nutritional expertise and further training services. It also distributes up-to-date information to support the work of catering industry personnel. It promotes the societal appreciation of its members' trade, and takes stands on current issues. The association is a meeting point for people and new innovations in and around the catering business. It organises national nutrition campaigns and projects in cooperation with other organisations. One of the main campaigns is The School Lunch Diploma and The Alphabet Diploma for kindergartens. The Diplomas are certificates granted to schools and kindergartens for providing nutritionally, educationally, and ecologically sustainable lunches.

www.amko.fi www.kouluruokadiplomi.fi www.makuaakkoset.fi

The Association of Finnish Local and Regional Authorities promotes local self-government and the modernisation of municipal services. The Association's core tasks are to advance the interests and development of municipalities and their partner organisations. The Association brings the voice of municipalities and the entire local government sector to social debate and decision-making. The association also provides services to, and cooperates with, Finnish hospital districts, regional councils and joint municipal authorities. All Finnish municipalities, in total 311 (2017), are members of the Association.

<https://www.localfinland.fi/>

The Central Union of Agricultural Producers and Forest Owners (MTK) is an interest organisation representing farmers, forest owners and rural entrepreneurs in Finland. MTK has over 317,000 members in local agricultural producers' organisations and regional forest management associations. All of the occupations and businesses of their members are based on renewable natural resources and their utilisation in a sustainable and economical way. MTK's

sister organisation, SLC, has approximately 14,000 members and operates in the Swedish-speaking areas of Finland.

https://www.mtk.fi/MTK_english/en_GB/frontpage/ <https://slc.fi/>

The Dairy Nutrition Council follows the latest research trends of milk and dairy products. Their task is to keep nutrition and health care specialists, as well as representatives of the mass media, up to date in questions concerning milk and nutrition. This is done by producing teaching material, lectures and bulletins. They offer schools and school canteens materials about dairy and nutrition: campaigns, brochures, posters and web pages. Their representative, the nutrition expert *Milk Maid*, visits schools and instructs pupils and school personnel about good nutrition, a healthy way of life and the role of milk and dairy products.

<https://www.maitojaterveys.fi/en/home.html>

Development Centre Opinkirjo promotes the well-being of children and youth. It ensures possibilities for children and youth to grow mentally coherent, self-confident, intellectual and critical, with the abilities to use problem-solving thinking methods. As such, they shall have the necessary resources and possibilities to participate and be heard in such matters that involve them according to their age. As a service organisation for child and youth work, Opinkirjo is formed by its member organisations and acts in co-operation with others within the field of education and fostering.

<https://www.opinkirjo.fi/en>

ELO – Foundation for the Promotion of Finnish Food Culture is a non-profit foundation which promotes Finnish food culture in Finland and internationally. ELO brings together the makers, doers, thinkers, dreamers and sponsors of the genuine Arctic food culture. One of ELOs main missions in this sector is the coordination of the Finnish School Meal Network. The Network is a powerful coalition of professionals, supporters and visionaries, covering all aspects of the system. The basis for this cooperation is an open and inspiring sharing of knowledge, experiences and practices.

<https://goo.gl/rREuzd> <http://www.elo-saatio.fi/finnish-free-school-meals> sini.garam@elo-saatio.fi

The Finnish Heart Association is a community promoting heart health. *The Smart Family* programme aims at bringing joy, motivation and encouragement to the lives of families with children. *Smart Family* also provides professionals with a method and tools for lifestyle counselling of families with children. Most school nurses in Finland have participated in Smart Family education. Also guiding material for school meals has been developed. *The Heart Symbol* can be issued, for a fee, to food products and mass catering meals, that fulfil a set of nutritional criteria.

<https://neuvokasperhe.fi/en>

<https://www.sydanmerkki.fi/en/>

<https://sydanliitto.fi/>

Kotitalousopettajien liitto ry (The Association of Home Economics' Teachers in Finland) is the national organisation for 19 local Home Economics' Teachers societies in Finland. It serves over 1,300 people who have a home economics teacher education, who work in different fields from research and education to industry. The association has been very active in the work of improving school feeding. It has published studies, guides, articles and statements in its own publication *Kotitalous* and other media. The association has also been very active in cooperation coordinated by the Parliament, the National Board of Education and the ELO Foundation.

<https://www.kotitalousopettajat.fi/>

Maa- ja kotitalousnaiset, Rural Women's Advisory Organisation is an extensive women's network in rural areas. It's a nationwide expert organisation in areas such as food, nutrition, entrepreneurship, rural landscape and rural environment. Their experts work in 11 regional centres. Experts on food and nutrition organise food courses, lectures and training. Their expertise lies in food culture, nutrition and food education, which is taught in a hands-on manner. In primary schools, they have carried out many projects concerning nutritional recommendations, sensory-based food education, information on the food chain and food culture.

<https://www.maajakotitalousnaiset.fi>

The Mannerheim League for Child Welfare promotes the wellbeing of children and of families with children, increases respect for childhood and seeks to make it more visible, and sees that children's views are considered in public decision-making, guaranteeing the right of children to a childhood. Their goals are to promote responsible parenting; to increase interest in volunteer work; and to develop partnerships across boundaries to cooperation advancing a global approach to the problems of children and families with children.

<https://www.mll.fi/tietoa-mllsta/welcome-mannerheim-league-child-welfare/>

Maistuva koulu – Tasty School aims at establishing a permanent culture of conscious food education in Finnish primary schools. The project is developing an online model for planning, implementing and evaluating food education. It gathers food education materials, training for teachers on food education, and self-assessment tools for schools. Indicators of food education in schools are developed for municipalities and cities. *Tasty School* is a research and development project implemented in 2018–2020 by the University of Eastern Finland and Centre for Food Culture Ruukku.

silja.varjonen@ruukku.org www.maistuvakoulu.fi

The Martha Organization and The Swedish Martha Association in Finland

The Martha organization was founded in 1899 as part of the women's movement. The task of the nationwide organisation was to provide rural homes with the knowledge and skills needed in everyday housekeeping. Even now, the task of the Martha organisations remains the same – teaching skills and knowledge necessary to managing one's own everyday life and finances.

The Swedish Martha Association in Finland is an advocate for good, green and healthy food for children at home, in pre-school and school. Through projects like *Tack för maten!* (*Thanks for the food!*) and *Operation skolmat* (*Operation school food*) they have developed school and pre-school meals together with personnel, children and parents.

[@marthaforbundet](https://www.martha.fi) [@martatvinkkaa](https://www.tackformaten.fi)
www.martha.fi www.tackformaten.fi

www.martat.fi

Ruokatieto Yhdistys Ry – Finfood – Finnish Food Information is an association that promotes Finnish food culture by communicating about food and the food production chain, and developing school meals. *Ruokavisa* (*The Food quiz*) is a package tackling issues such as responsibility and ethical food production, that includes teaching material, web-based games and events. *School meal agent* is a concept, where pupils, teachers and food service professionals develop school meals together at their own school. The goal is to recognise success and targets for development and make and implement an action plan of the targets and follow them.

<https://www.ruokatieto.fi/briefly-english>
www.ruokatieto.fi/kouluruoka-agentti

www.ruokavisa.fi
ruokatieto@ruokatieto.fi

UKK Institute / Healthy pupil (TEKO) -project. The task of the UKK Institute is to promote a healthy lifestyle through research, on-the-job training and guidance. Since 2010, the UKK Institute has developed the *Healthy pupil (TEKO)* project. The purpose of *TEKO* is to increase physical activity and other healthy lifestyle habits among children aged 11–15 in a nationwide setting. The project has built up information packs and practical toolkits e.g. digital testing, diaries, videos and PowerPoint slides for teaching and learning. The education material has been developed specifically for children by using their language and styles.

www.tervekoululainen.fi <http://www.ukkinstituutti.fi/en/>

Vanhempainliitto (Finnish Parents' League) and the Swedish-language **Förbundet Hem och Skola i Finland** coordinate 1,600 parents' associations operating in kindergartens, schools and educational institutions. They support and guide the building of a communal, equal and inclusive culture of operation by providing ideas and tools. School meals and their arrangements is a theme that parents take an interest in. Every two years they conduct a Parent barometer survey with issues related to school, collaboration and child rearing. In 2018, the latest results were published with a set of recommendations to the schools on how to get parents more involved in issues concerning school meals.

<https://vanhempainliitto.fi/tietoa-liitosta/welcome-to-parental-activity/>
<https://www.hemochskola.fi/>

Appendix 3. Case-studies of Finnish municipalities

Case 1. Helsinki

Number of basic education schools 2017	125
Annual costs of school meals per pupil (2017)	EUR 407
Calculated costs per meal (190 meals per year)	EUR 2.14
Number of inhabitants 2017	644,788
Number of pupils in basic education 2017	50,690

Lunch list – week 9

Monday 25.2.2019

Kebab sauce, rice, yoghurt sauce
Indian lentil stew, yoghurt sauce

Tuesday 26.2.2019

Vegetable-bean lasagnette
Soy-vegetable pan, chili sauce, bread

Wednesday 27.2.2019

Mince meat patties, Beef patties, brown sauce, potato
Green vegetable patties

Thursday 28.2.2019

Meat soup, cheese, bread
Barley porridge, fruit compote

Friday 1.3.2019

Fish fingers, tartare sauce, potato
Veggie fingers

The City of Helsinki is the capital of Finland, the largest city and provider of education of the country. It has also been a national forerunner of developing school feeding.

Most of the city's school feeding is governed by the City of Helsinki Service Centre, a public utility that consists of food, telephone and wellbeing services, under central administration. An orderer-provider model governs school feeding. The orderer, the Education Division, defines the concept and service description for school meals, and the Service Centre makes a service suggestion, including menus and recipes, and implements the service. The Service Centre procures the foodstuffs and produces most of the food in a municipally-owned food production facility. An external, private company transports ready food. Helsinki is developing operations further and is outsourcing 30% of school feeding services during 2017–2022. These services were competitively tendered, with 30% financial and 70% quality criteria, including criteria for sustainable operations, which resonates with the municipal strategy. The educational branch and their procurement specialists are in charge of organising the tendering.

There are 37 schools with preparation kitchens of their own. In twenty of these schools, the service has been outsourced. The remaining 17 schools order their foodstuffs from the same providers as the central kitchen. Helsinki uses two wholesalers to ensure reliability of delivery. Bread, meat and milk are procured separately. In addition, “mini-tenders” are used to procure seasonal products. All foodstuff procurement is conducted jointly with other public utilities.

Most meals are produced in a central kitchen located in Pakkala, Vantaa. The menus have a 6-week rotation and a vegetarian option is served daily. The food is assembled, cooked and transported to schools either hot or cooled depending on the equipment of the receiving school. The food can be further seasoned at the school. All catering personnel work for the food service. The personnel are encouraged to participate in in-service training. In addition, apprenticeship training is an option for training to become a catering professional.

In Helsinki's centralised model, food waste faces a challenge: individual schools only have 1–2 kg of daily surplus food, which usually cannot be sold on because of food safety regulations. On a municipal scale, the amount of food waste is substantial. Although the percentage volume is low, new ways of combating food waste are sought.

Helsinki is a city with a sizable administrative branch, which makes communication and data transmission at times challenging, or even inadequate. It is important, that school feeding is planned in horizontal administrative cooperation, so that various kinds of expertise are utilised. The main goals are economic sustainability, client satisfaction and personnel contentment. There must be enough tasty food served at the right time, so that all pupils choose to eat the school meal each school day.⁵⁴

Case 2. Mäntsälä

Number of basic education schools 2017	14
Annual costs of school meals per pupil (2017)	EUR 599
Calculated costs per meal (190 meals per year)	EUR 3.15
Number of inhabitants 2017	20,800
Number of pupils in basic education 2017	2,672

The municipality of Mäntsälä is located 60 kilometres north of the capital Helsinki. It is a small town with rural attributes.

School meals are administrated as a part of technical services, which also governs other food and cleaning services. The two branches were joined in 2015 to give more flexibility in, for example, using part-time municipal workforce in both branches. Mäntsälä has cooperated in foodstuff procurement with nearby municipalities in the past, but is now procuring its services and foodstuffs independently through a national unit of joint procurement. An outsourced, private service provider produces a majority of food served in schools in a central kitchen. In accordance with a local political decision, the outsourced service is tendered every 3–5 years. Outside consultants authorised by technical services conduct the tendering. The criteria for the latest tendering were 30%

Lunch list – week 9

Monday 25.2.

Mincemeat-macaroni casserole
Mixed vegetable, pickled beets

Tuesday 26.2.

Rainbow trout with sourcream
Boiled potatoes, grated carrots

Wednesday 27.2.

Wiener sausage sauce, potatoes
Mixed salad, sunflower seeds

Thursday 28.2.

Potato and vegetable casserole
Chinese cabbage, cucumber and pickle relish salad

Friday 1.3.

Meat soup, soft bread
Sliced cucumber

quality, 70% financial criteria, with guidance from the national nutrition recommendations and a demand for near 100% domestic foodstuffs. A few schools still have preparation kitchens. These locations are served municipally. All food service staff working at schools are municipal, and only the personnel of the central kitchen and food transport work for the outsourced food service company. Milk and bread are procured through municipal contracts. Foodstuffs for municipal kitchens are procured from a single wholesaler, and the private service provider uses its own procurement contracts. Kitchen fixtures are owned by the municipality, and most of the movable property by the service provider.

Schools serve lunch. A 6-week menu rotation is planned by the Head of Food Services in cooperation with the supervisor of food services and food service staff. The menu is updated every year. Each week includes a vegetarian day for kindergartens and comprehensive schools. The outsourced service provider uses a similar menu rotation. Their menus are planned in cooperation with municipal food service staff. Surplus leftover food is served for a small fee to the elderly, who have the opportunity to dine at local schools after school lunch hours. A green sign is hung on the school door of the school on days when there is surplus food on offer, and a red one on days when no food is left over.

Feedback is gathered regularly from pupils, and all feedback is handled by the municipal authorities. Feedback mostly concerns the qualities of single dishes served. With both municipal and outsourced services working in the same town, cooperation is key to successful implementation. It also challenges both parties to regularly monitor, evaluate and develop their practices. Cooperation is conducted through regular meetings between the representatives of the municipality and the service provider. The two parties have joint in-service training and an opportunity for apprenticeship training.

Current challenges are finding qualified personnel to work in school kitchens, and to strive for even better administrative cooperation. Mäntsälä relies on training their kitchen staff further and in close cooperation with the service provider to serve safe, inexpensive and balanced meals to all pupils, also in the future. Future trends are seen as a growing freedom of choice and an emphasis on vegetarian food.⁵⁵

Case 3. Parainen

Number of basic education schools 2017	15
Annual costs of school meals per pupil (2017)	EUR 765
Calculated costs per meal (190 meals per year)	EUR 4.03
Number of inhabitants 2017	15,288
Number of pupils in basic education 2017	1,621

Lunch list – week 7

Monday 11.2.2019

Ham sauce, pasta, salad
Vegetarian favabean bolognese

Tuesday 12.2.2019

Chicken soup, bread, cold cuts
Vegetable soup

Wednesday 13.2.2019

Potato and sausage hash, salad
Root vegetable hash

Thursday 14.2.2019

Meat and potato stew, salad, bread roll
Carrot patties, mashed potatoes

Friday 15.2.2010

Fish patties, lemon-dill sauce, potato, salad
Sweet potato and bean patties

The City of Parainen (Swedish – Pargas) is located in southwest Finland, reaching out onto the Archipelago Sea. It is a bilingual municipality with ten schools located on the mainland and five on islands, the furthest one being the school on Utö, a 3-hour drive followed by a 4-hour ferry ride from the municipal centre.

In accordance with a decision of the financial administration, Parainen has outsourced food services to an outside company owned by its clients. Tendering was made by the technical and financial administration. Kitchen staff contracts and the ownership of kitchen appliances were transferred to the new caterer.

School feeding is governed in close cooperation between the municipality and the caterer. A municipal steering group monitors finances. The group consists of the heads of school development, technical administration, social services and representatives of the food service. An educational developmental steering group focuses on the practicalities and educational side of school feeding.

The pupils are offered a daily lunch. A healthy snack is on offer for a small fee. The food service company plans the 6-week lunch menus. Schools can suggest menu items. The catering company in cooperation with the municipality chooses the wholesaler. Locally produced food is emphasised, and food items such as bread, potatoes, apples and tomatoes are procured from local farmers. The food is produced at a central kitchen, from which it is transferred by the catering company to schools to be heated and served. Only the four schools furthest out in the archipelago have preparation kitchens. The kitchen staff are catering company personnel. The school on the island of Utö with 11 pupils and 2 teachers have their lunch at the local hotel, which the municipality has made a contract with. When the hotel was temporarily out of business, a deal was made with a local resident who cooked the school lunch.

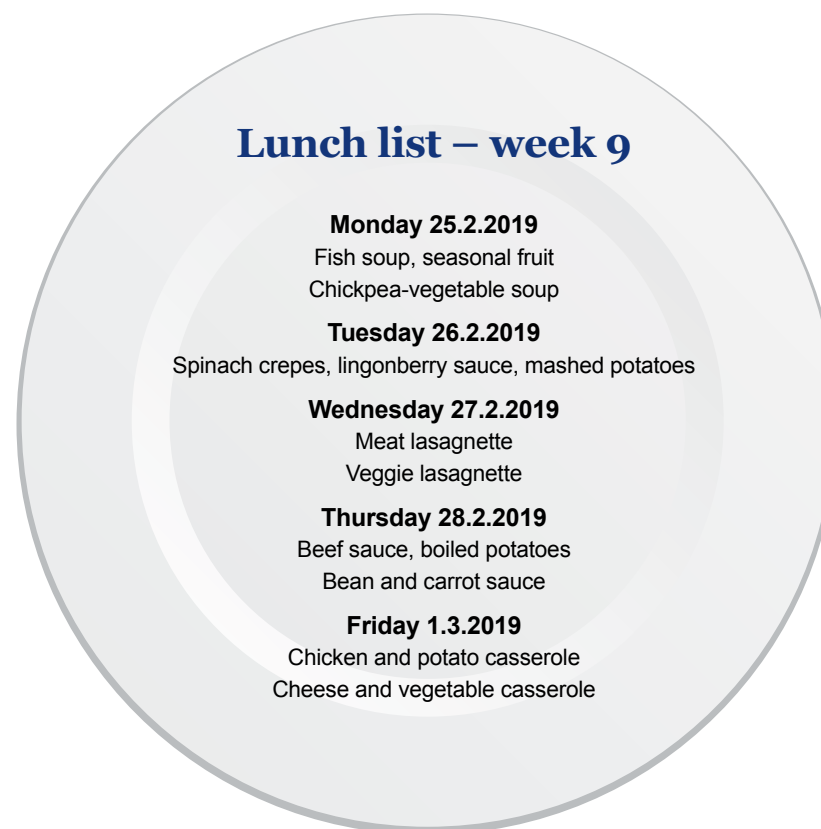
Feedback is gathered from pupils regularly. Most feedback, in addition to this, comes from school staff. The feedback is handled in the educational steering group. Cooperation and sustainable consumption are leading thoughts behind the developmental work both in administrative work and at schools. In lower grades, pupils get a day of work experience in the school kitchen. This is seen to increase their respect for school feeding. Catering staff are encouraged to take an educational role during the school day. Food waste is monitored by the catering company, and the municipality is searching for an NGO to start a left-over meals program with.

The goal is to get all pupils to participate in the school mealtime, even if they do not eat the whole meal. It is also important that teachers eat with the pupils. The central figure in this is the school principal, who can establish a school culture that supports community spirit, appreciation for school feeding and an understanding of the link between the school meal and learning.⁵⁶

Case 4. Turku

Number of basic education schools 2017	38
Annual costs of school meals per pupil (2017)	EUR 541
Calculated costs per meal (190 meals per year)	EUR 2.85
Number of inhabitants 2017	189,794
Number of pupils in basic education 2017	14,162

The City of Turku is located on the southwestern coast of Finland. It is the oldest city in Finland, the former capital, and still one of the largest cities in the country.



Turku is divided into five educational districts with a varying number of schools. Each district has several schools with preparation kitchens, from which food is transported by an external company to schools with service kitchens. A municipally-owned food service company won the latest competitive tendering process for all districts. Food preparation, service, foodstuffs and transportation are all tendered separately. Relevant criteria are gathered from national nutritional recommendations, the national core curriculum and guides published by Motiva and Ekocentria, for example. A highly detailed service description with an operational budget ensures that the municipality gets a high-quality service for a suitable price.

School feeding is governed in cooperation between Strategic Procurement and the Education Division. Contract fulfilment is monitored on two levels in steering groups: one consisting of municipal administrative personnel covering budgeting and decisions on policy matters, and another steering group with a more practical approach, consisting of food service personnel and school principals.

Kitchen fixtures are owned by the municipality, and smaller equipment by the service provider. The municipality makes procurement contracts with food suppliers, and the food service is obliged to use the appointed food suppliers.

Competitive procurement for raw materials and other equipment is made in cooperation with other nearby municipalities. Meat and bread come from separate suppliers, fruit and vegetables from a small wholesaler from a nearby municipality and the rest from a wholesaler operating nationally. The food service plans a 6-week menu rotation. A new menu is planned twice a year, which gives room for seasonality. In schools with grades 7–9, vegetarian food is available daily for all.

The service provider deals with and answers all feedback, which comes mostly through online feedback channels of the municipality and the food service. The feedback is used as discussion points in steering groups. School food committee work is starting in 2019 at a pilot school.

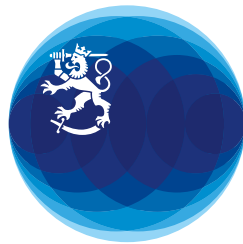
Turku has a very centralised practice, which makes the monitoring and developing of practices relatively easy. Turku hopes for wider municipal cooperation on issues concerning school feeding, so that municipalities are not left alone to tackle similar challenges individually. In future, Turku aims to develop ways to hear more pupils' opinions on food and recipe planning. More systematic cooperation between the food service and schools must be developed, with the best practices used actively made visible to the public.⁵⁷

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