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WORKING PAPER

School Meals Case Study: Finland

Prepared by the Research Consortium for School Health and Nutrition, an initiative of the School Meals Coalition

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Introduction

The school meals system plays an essential role in Finland's educational system. Equal access to education and free-of-charge school meals has been one of the key factors in supporting economic growth and transforming Finland into a knowledge-based society. Initially, school meals were introduced to address post-war poverty and malnutrition. At the time, Finland was also resettling thousands of internally displaced people and orphans. The law to provide meals free-of-charge for all pupils came into force nationwide in 1948. For more than 75 years, Finland has been offering school meals for all students – the longest-running free-of-charge school feeding programme in the world which is funded with the government and municipal taxes. The funds for operating costs are disbursed directly to the education providers. The financial resources are not earmarked to the allocation or imputation bases; instead, the local authority or other education provider is free to decide how to allocate the funds.

Country Profile

Population and economics

Total population	Proportion of population aged 0-14	Proportion of population employed in agriculture sector	Gross Domestic Product (GDP) per capita	Proportion of women in the workforce
5,548,000	15.4%	1.9%	41,900 USD	41%

Table 1: Data on the population and economic sectors.

Education

Education levels in Finland are organized for the distinct age groups:

- **Early childhood education and care:**
Vocational, Children under school age, 0–6 years.
- **Pre-primary education:**
Compulsory begins at the age of 6, one year before primary education.
- **Primary and lower secondary education:**
Compulsory, begins at the age of 7, includes grades 1–9.

➤ **Upper secondary education:**

Compulsory, general participation age 16–19 years. Divided: a) general upper secondary education and b) vocational upper secondary education

➤ **Higher education:**

A) Universities: The mission is to conduct scientific research and provide instruction and postgraduate education based on it.

B) Universities of applied sciences: Training professionals in response to labour market needs and conduct research and development which supports instruction and promotes regional development in particular.

Number of children in each age group:

1. Pre-primary, primary and lower secondary education 2021

0-9 total 558 768 (Pre-primary education total 57 207 → 51.3% of boys and 48.7% of girls cannot be provided) → 94 % of grand population.

2. General upper secondary students year 2021

Male 41 727, Female 59 304

Total 101 031 → (Grand population 302 694 → 33,4% of grand population) with 39.3% of girls and 26.5% of boys

3. Vocational upper secondary qualification students 2021

Total: 120 663 → Male 73 083, Female 47 580

Grand population 302 694 → Share of total 40% → Share of male students of boys population 47%, Share of girls students of female population 32%

	Pre-primary, primary, lower secondary	General upper secondary students	Vocational upper secondary students
Girls	27,860	59,304	47,580
Boys	29,347	41,727	73,083
TOTAL	558,768 (94% of grand population)	101,031 (33.4% of grand population)	120,663 (40% of grand population)

Table 2. Participation to education. Source: Finnish Education Statistics <https://viipunen.fi/en-gb/>

Food security, nutrition and health

- **Stunting:** Not available
- **Obesity:** In 2022 29 % of Finnish boys aged 2–16 years and 18 % of girls were living with overweight (including obesity), and 9 % of boys and 4 % of girls with obesity¹.
- **Micronutrient deficiency:** Milk and milk products are fortified with vitamin D. Nutritional status of children will be collected and published soon.
- **Food insecurity:** Poverty and food insecurity data will be up-dated

Design and implementation of school feeding programmes

Programme objectives

Finland's school meals model is unique in integrating a sustainable, balanced, safe, appealing, and free-of-charge meal into food education across curricula. There are several norms guiding.

Over seven decades, Finland's school meals model has progressed from the provision of very modest school meals into a multi-dimensional food education programme that covers all children from basic education to vocational and university levels. Finnish expertise and know-how could assist the implementation of school meal programmes in many parts of the world.

¹ *Overweight and obesity are defined according to Finnish growth standards and BMI criteria (Saari A et al. 2011) Reference: THL, FinChildren register monitoring.
<https://www.terveytemme.fi/finlapset/en/index.html>



FIGURE 1. Well-organised school catering.

Figure 1. Well-organized school catering. Source: *Eating and learning together - recommendations for school meals 2017*.

A school meal is considered as part of the national core curriculum, providing the pupils not only with a free of charge, balanced meal every school day, but also with food-related knowledge and skills. School meals play a key role in food education in school and the promotion of the well-being of the whole school community. The objective of food education in school is to master healthy and sustainable everyday food choices, the diversity of food alternatives and their significance, and to aim at food competence.

Please find more about Finland's food-based dietary guidelines:

- Eating and learning together - recommendations for school meals 2017, <http://urn.fi/URN:ISBN:978-952-302-844-9>
- Health and joy from food – meal recommendations for early childhood and care 2018, <http://urn.fi/URN:ISBN:978-952-343-033-4>
- Student Meals Benefiting Health and Communities – Food recommendations for vocational institutions and general upper secondary schools 2019 <https://urn.fi/URN:NBN:fi-fe2020041416466>

Targeting and coverage

The effectiveness of the policy can be measured in improved health and learning capacity in the education system. The Finnish results are excellent: since the year 2000, every year 90–95 % of pupils completing the 9-year basic education move straight onto upper secondary education. Finland has constantly achieved high scores in PISA reviews. Also as mentioned, increased labor force participation brings additional economic growth. The female employment rate in Finland, at 66%, is well above the OECD average of 55%, and more than 9 out of 10 Finnish woman and mothers who have jobs in employment work full-time.

Source: Finnish Education Statistics <https://vipunen.fi/en-gb/>

- **Social protection:** School meals support equal opportunities and education for all, including girls and children from lower socio-economic status of the families. Quality of the school meal is equal for all.
- **Improved health and learning capacity:** School meals educate pupils in healthy meals, offer diverse flavors and opportunities to taste new foods, strengthens togetherness and improve their learning capabilities via relaxed break between lesson hours and satiety.
- **Additional economic growth:** School meals support gender equality and make it easier for parents to work outside home, increasing female labor force participation, and thus supporting economic growth. A nourished pupil can learn and develop and that will lead to capable individual.
- **Stronger local economy and heritage:** School meals provide an opportunity to source local products and promote local food cultures.

Meal type

Concrete steps for a meal tray planning:

1. **Balanced meals** refer to the adequacy of the meal, taking the place where teaching is provided as well as the length of the school day into account. On ordinary school days, a lunch, which is normally a hot meal, is served. According to the recommendations of the Finnish National Nutrition Council (22), a school meal should include a warm main dish, salad, fibre-rich bread with margarine and milk, buttermilk or a plant-based drink
2. **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.

3. 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 labor efficiency, the adequacy of floor space, and the capacity of hot and cold storage space in the kitchens. The food production method in the municipality may be centralized or decentralized, for example the meals can be prepared in a school or the meal or part of it can be prepared in the central kitchen and then transported to a school.

WHO's guidelines for School headmasters and teachers promote school meals as part of Healthy School programmes:

<https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey>

Nutritional norms

Appropriately organized school meals must be organized and scheduled so that students of all ages can eat their meal at the appropriate time and with enough time reserved for eating. The serving lines are located so that if there is a queue, it will not disturb the students who are already eating. Teachers who eat with the pupils serve as role models.

Meal free of charge and recommended free snack

The provisions regarding freedom from charges apply to persons subject to compulsory schooling who have been enrolled as pupils. All components of the daily school meals are always free of charge. A snack is recommended to be provided free of charge to ensure adequate nutrition in cases where the interval between meals becomes too long for the pupil, including lessons and school commuting time.

Balanced meals

Balanced meals refer to the adequacy of the meal, taking the place where teaching is provided as well as the length and nature of the school day into account. From the nutritional viewpoint, balanced meals refer to a meal that has an adequate energy content, is nutrient-dense and composed in accordance with nutrition recommendations. The meals must be adequate also on field trip days and various theme days. Today the meal has to be composed according to the nutrition guidelines and school meals provide 30 % of the daily energy need of the child.

Sustainability

Sustainability of the meals are given greater emphasis all the time. The recommendations for school meals encourage schools to serve a vegetarian meal to all pupils at least once a week and as a free choice to choose from every day. Municipalities can also set targets for their food service providers, e.g. with respect to sustainable food procurement or climate impacts.

Appropriately supervised meals

Supervision refers to food education that considers the age and the capabilities of the pupils, as well as communication that supports school meals as a positive experience for the students. Supervision develops food knowledge and supports the development of consumer awareness and a sustainable lifestyle. At meals, the pupils are encouraged to good behavior, showing respect for others as well as for food and eating. The supervision of the meals shall be pupil-oriented and illustrative.

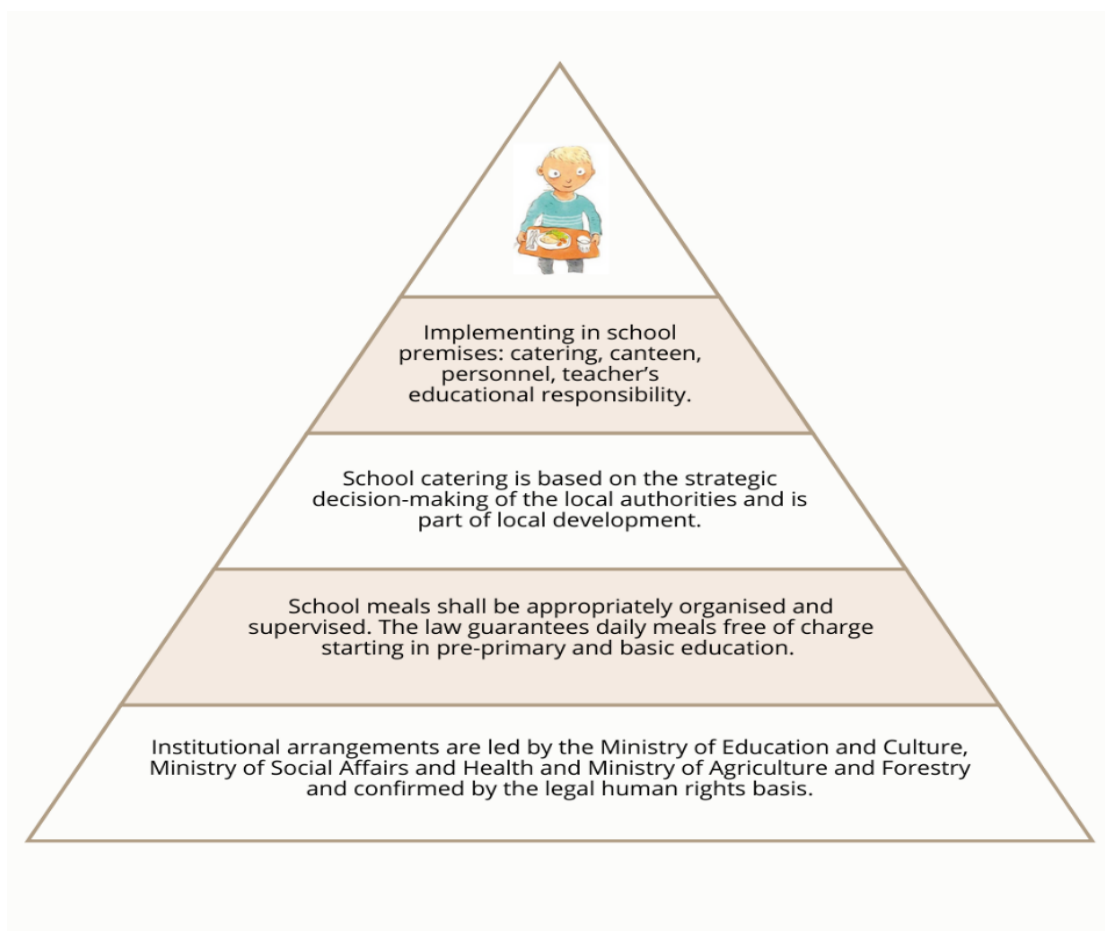


Figure 2. How to develop a school meals system: a Finnish example of the work across sectors and involving various stakeholders (Picture by Harri Oksanen)

Nutritional guidelines

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

Table 3. Energy content of a meal for different ages.

Total fat	30-40 E%
Saturated fat	Less than 10 E%
Total carbohydrate	45-50% E%
Sugar	Less than 10 E%

Table 4. Energy content of a daily school meal (% of energy).

Schools are encouraged to serve a vegetarian meal to all pupils as a second option daily or once a week.

Food procurement

Finland's food services' procurement system is relatively centralized. The school meal recommendations include voluntary nutritional criteria for procurement.

Concrete steps for follow-up at local level:

1. Children's health and welfare indicators followed regularly (e.g., through a mobile app): height, weight and vaccinations monitored regularly.
2. Educational tools and information available for the whole community and staff at schools.
3. Setting criteria for procurement system and educating both decision makers and food providers to respond to biddings according to the nutritional or sustainability criteria (not only lowest price). Procurement system varies between local municipalities.
4. Recommendations for sustainable food procurement are published by the Ministry of Agriculture and Forestry to support and guide municipalities in sustainable and responsible food procurement. These goals and criteria follow EU legislation, strategies, and goals, as well as the UN Agenda 2030 sustainable development goals. The national alignments consider procured catering services, procured food suppliers, and the foods that the catering services procure from the suppliers. Regulations are legally binding and require monitoring.

The local municipalities can collect taxes and municipality leaders can decide how much funds are provided for services. Education and school meals are obligatory, but the cost of meals varies.

In brief, the national alignments in Finland aim for and promote public procurement that is high in quality, innovative, and ecologically, socially, and financially sustainable. Relatedly, the alignments strive for a just transition to a sustainable food system that considers social, economic, cultural, and ecological aspects of sustainability. Regarding nutrition and health, the alignments strongly recommend following national nutrition, food, and meal recommendations and the minimum nutritional criteria the recommendations define for meals, meal components, and foods. Regarding ecological sustainability, the alignments focus on and promote increased procurement of local, organic (target for catering services: 25% by 2030), and seasonal food with emphasis on plant-based foods and sustainably sourced fish. Additionally, the alignments promote an efficient use of energy, raw materials, and side streams; cleantech solutions; and the reduction of food waste. Further considerations include the promotion of ecologically friendly food production methods and farming practices, animal welfare, food safety, and ecologically sustainable packaging. Regarding social and financial sustainability, the alignments aim to promote open and fair competition, support local employment and businesses, and prevent black economy.

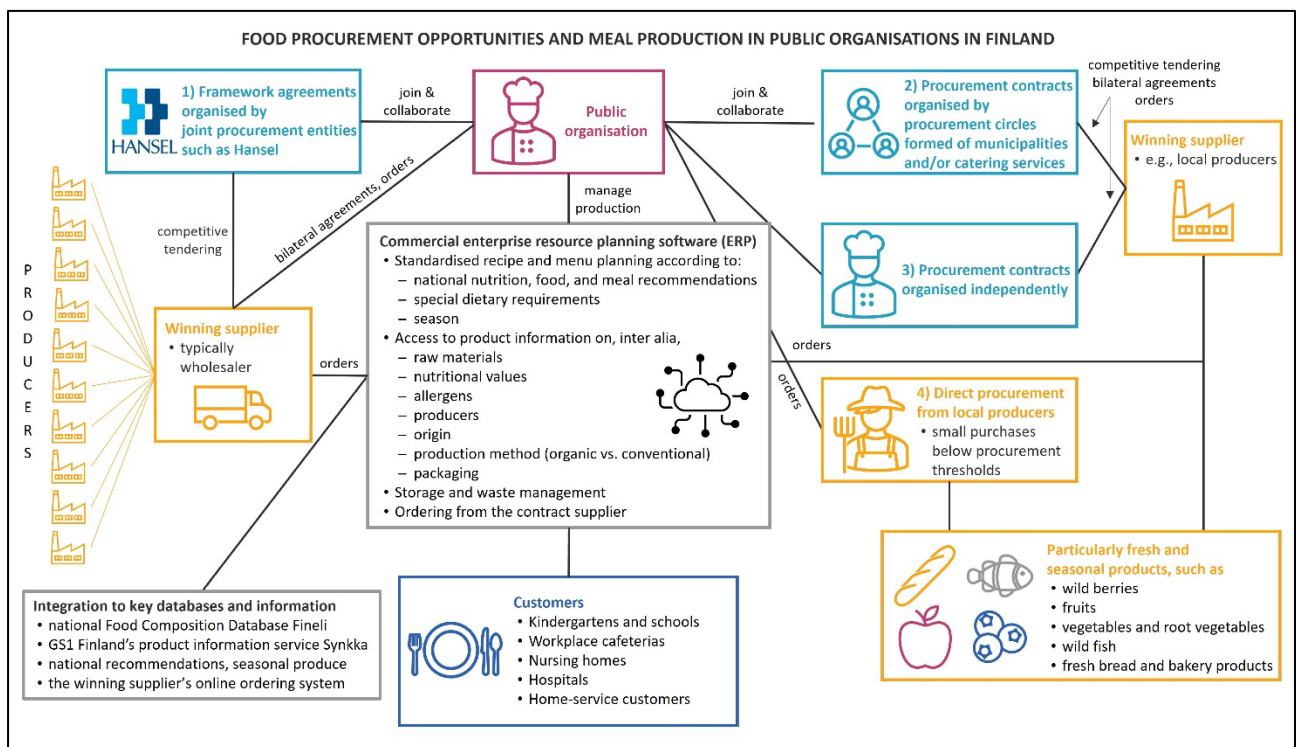


Figure 3. Food procurement opportunities and meal production in public organisations in Finland. Source: Joint Action Best-ReMaP Work package 7: Public procurement of food in public institutions—a pilot EU approach Task 7.5: case study

Eeva Rantala & Susanna Raulio, Finnish Institute for Health and Welfare (THL), Finland

Costs, benefits and budgeting

Cost implementation

Provided by the Association of Municipalities statistics <https://www.localfinland.fi/>

- Cost of providing school meals per pupil per year in Finland in 2022: **572 EUR** (190 days of school).
- Cost of one school meal in basic education: **3,01 EUR** (National average 2022); 0.84 EUR incl. raw materials (approx. 30%); 1.2 EUR incl. labour (approx. 43%).

Financing

Finland's municipalities are independent as they can collect local taxes but with the tax funds they have to provide services including education and school meals. Finland does not have national budget only for school meals. The municipalities make their budgets for the schools. The government gives an amount/ schoolchild, but the municipalities decide how they use that money (for materials, teaching, school meals, special education, school transport, etc).

The local authority or other education provider is responsible to arrange their economy by the law and they are entitled to guarantee numbers quality and reliability. The funds for operating costs are disbursed directly to the education providers. The financial resources are not earmarked to the allocation or imputation bases; instead, the local authority or other education provider is free to decide how to allocate the funds.

Monitoring and evaluation

Prerequisites:

- Municipalities are responsible for providing pre-primary, basic education and upper secondary education, including school meals, to all their residents.
- A single school meal has no predetermined price, but the quality of the meal must meet the criteria given in legislation, the national core curriculum, local curricula, and national guidelines.
- Decision-makers and school personnel are aware of and apply updated guidelines and good practices regarding nutrition and physical activity.
- The National Nutrition Council of Finland issues and updates science-based nutritional recommendations and food based dietary guidelines.

- Continuous monitoring and co-creation by stakeholders for updating food and nutrition policies.
- Systematic, transparent, and decentralized procurement of food ingredients and services.

Monitoring

School meals system is monitored both on a local and national level. The municipalities are also responsible for the implementation, monitoring and evaluating school meals. Participation in school meals and the quality of the food and the meal break must be monitored and evaluated regularly according to National Core Curriculum for Basic Education (2014) by The Finnish National Agency for Education.

Government helps the municipalities in evaluating school meals. TEAviisari is a National tool for municipalities and it shows the direction of health promotion capacity building in municipalities. Municipalities can search and compare results. The results describe health promotion capacity building in municipalities, that is, the way in which municipalities promote the health and well-being of their residents. School meals are part of the “Basic education: Whole country” -study (every second year) by Finnish Institute for Health and Welfare together with Finnish National Agency for Education. Please see: <https://teaviisari.fi/teaviisari/en/tulokset>

Local data is usually gathered on food waste and participation in school meals. Nutritional quality and funds used are monitored, feedback from the children and school personnel is collected. National studies are carried out by National Institute for Health and Welfare: an example is School Health Promotion study to study the living conditions, school work, health, health related behavior and school health services as well as follow up by questionnaire which school meal components pupils and students eat and how often. More examples: um.casestudyfinland.schoolfeeding.june2019.netti.pdf (oph.fi)

Lessons learned and best practices

We need to continue to develop the system in Finland:

- **Monitor children's food consumption (we already have adult food consumption data)** information about children and young people's nutrition, school meals and food education.
- Covid-19 taught us we need to create **standard operating procedures for the arrangement of school meals during states of emergency**: we now have examples we can learn from.
- **Not all pupils eat the full school meal every day** 100% coverage is not achieved, even though food is available for all. According to various studies, part of the teenage pupils replace the school meal with unhealthy snacks. Not eating the school meal is also connected with other unhealthy habits, like smoking and alcohol use. All this is in line with other research on meal frequency.
- **Food education is** regulated to be part of mealtimes and promotes balanced and comfortable eating while enjoying daily school lunches. Also eating together in school restaurant is associated with overall healthier eating patterns also outside school. Finnish school curriculum has obligatory health education and "home economics" with cooking classes for both boys and girls promote balanced eating and enjoying daily school lunches and is connected to overall healthier eating habits outside of school as well.
- Sustainability of the school meals is to be developed together with the pupils to meet their changing food habits and preferences.
- Municipalities should set clearer outcome-based health and sustainability targets for their service providers in order to secure future financing and quality of the school meal provisioning.

Challenges

School food system is an integrated part of the pedagogical structure of a school day, which must be planned, monitored and evaluated regularly.

School meal 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. Balanced nutrition is provided with relatively tight funding and is one success.

In Finland we continue to encourage all to eat school lunch and aim to widen the free-of-charge food system to include also either breakfast or snack besides the lunch to protect food security.

The most important table we can think of is the children's dining table. School meals are an investment in the future. The 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. This principle will continue to play an important role in shaping the future as well.

The Finnish Government (2023) will implement a National Health and Wellbeing Programme in multilevel and intersectoral cooperation. The programme will strengthen the impact of health and wellbeing promotion by introducing practices that have been assessed as effective and by developing new solutions that are based on overall economic benefit and cost effectiveness. The Government aims to increase physical activity in every age group. To achieve this, a cross-administrative action plan "Get Finland Moving programme" will be established to promote physically active lifestyles and functional capacity. The Government will support the implementation of the programmes -> funding for implementation. Reference: Programme of Prime Minister Petteri Orpo's Government 20 June 2023. [A strong and committed Finland: Programme of Prime Minister Petteri Orpo's Government 20 June 2023 \(valtioneuvosto.fi\)](#)

ORGANISATION OF MEALS IN EDUCATIONAL SETTINGS OF FINNISH CHILDREN AND YOUTH

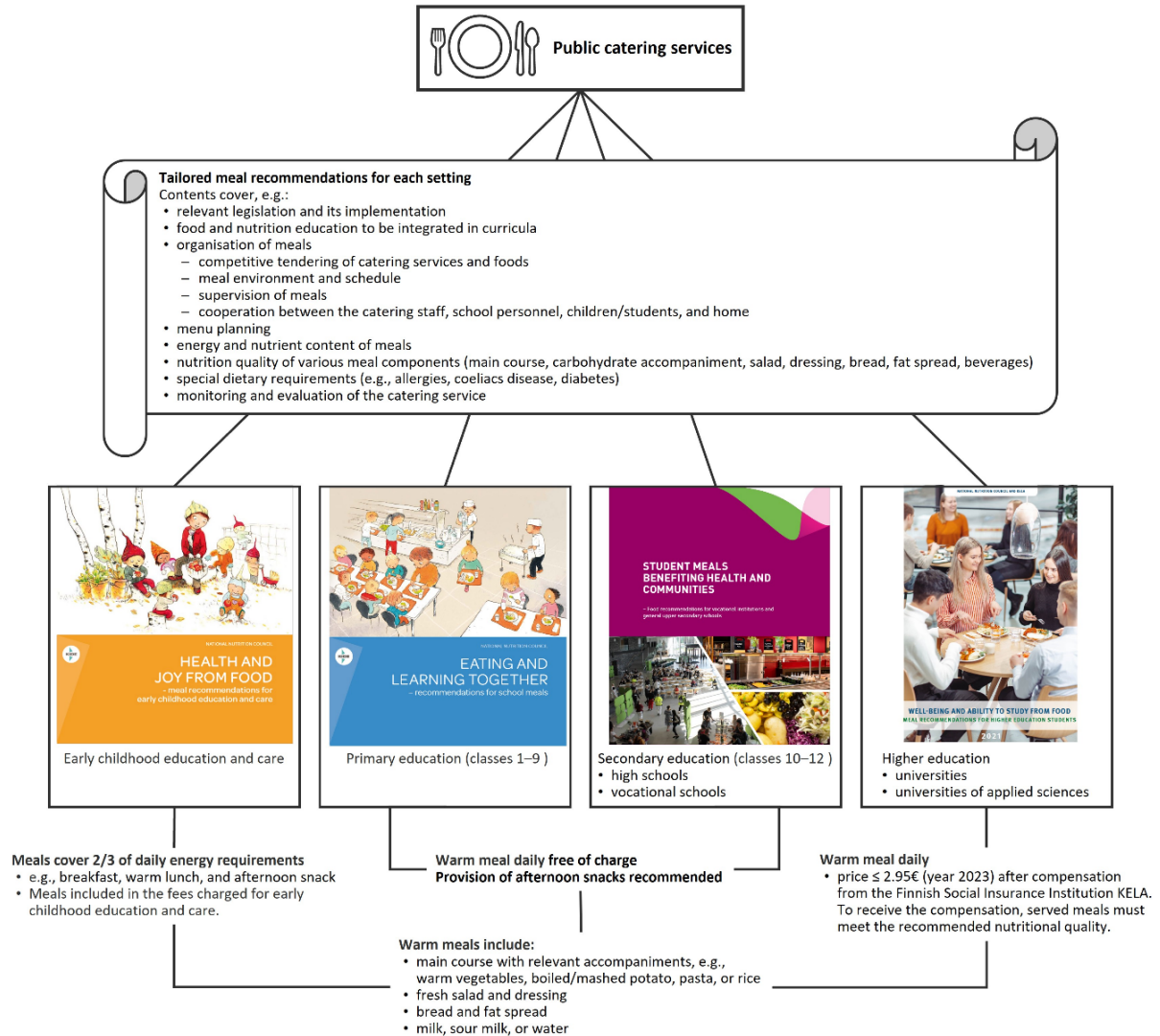


Figure 4. Organisation of meals in educational settings in Finland. Source: Joint Action Best-ReMaP Work package 7: Public procurement of food in public institutions—a pilot EU approach Task 7.5: case study. Eeva Rantala & Susanna Raulio, Finnish Institute for Health and Welfare (THL), Finland

Related resources

- Guide for the Responsible Procurement of Food - Recommendations for requirements and evaluation criteria (2023) Funded by Ministry of Agriculture and Forestry, prepared by Motiva, a state-owned sustainability development company in collaboration with relevant stakeholders such as the Finnish Institute for Health and Welfare (THL)
https://www.motiva.fi/julkinen_sektori/kestavat_julkiset_hankinnat/tietopaketti/elintarvikkeet/kriteerit?v_12983=80901
- Nordic Nutrition Recommendations 2023, Nordic Council of Ministers DOI: 10.6027/nord2023-003 Recommendation on physical activity for children and adolescents aged 7 to 17 years (ukkinstituutti.fi) Publications of the Ministry of Education and Culture, Finland 2021:21. Ministry of Social affairs and Health. Maternity and child health care clinics. <https://stm.fi/en/maternity-and-childhealth-clinics>
- The Social Insurance Institution of Finland, Maternity grant. <https://www.kela.fi/maternity-grant> Child health care services in Finland
- [Paris Statement of the First School Meals Coalition Global Meeting](#)
- RUUKKU Finnish society for food education, <https://ruokakasvatus.fi/en/>
- Video, sustainable school meals: A Finnish recipe, <https://www.youtube.com/watch?v=APLedNIYYGM>
- Kaljonen, M. T., Peltola, M., Salo, E., Furman, 2019. Attentive, speculative experimental research for sustainability transitions: an exploration in sustainable eating. *Journal of Cleaner Production*, 206, 365-373. <https://doi.org/10.1016/j.jclepro.2018.09.206>
- Kortetmäki, T., Pudas, T., Saralahti, I. 2022. School meals 2030. How to halve the climate impact? [https://justfood.fi/en-US/Topics/All_news/School_meals_matter\(60403\)](https://justfood.fi/en-US/Topics/All_news/School_meals_matter(60403))
- Tykkyläinen, R., Kaljonen, M., Kortetmäki, T., Ritola, R., Salminen, J., Lehtinen, M., Saralahti, I. 2022. Kestävän kouluruokailun keittokirja. Nuorten ratkaisuja ruokapalveluille. Just food hankkeen julkaisuja 5/2022. https://issuu.com/suomenymparistokeskus/docs/just_food_05_2022
- VEGEMI food & sustainability education Vegemi co-created a model with city of Espoo early educators. Proven impact on one of the biggest challenges: fruit and vegetable consumption of young children and acceptance of new ingredients. - Vegemi food education <https://www.vegemi.uk/>



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