

4

SUSTAINABLE FOOD EDUCATION IN FINNISH SCHOOLS THROUGH COLLABORATIVE PEDAGOGY

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Every school day, approximately nine hundred thousand Finnish public school students, ranging from one to eighteen years old, consume a tax-funded school meal. For students, the mealtime is embedded into the structure of their daily school experience.¹ Students make their way from the classroom to the dining room, queue for food, and select their meals. The food and mealtime are guided by national recommendations,² which state that mealtimes should last at least thirty minutes and should be organized with consideration of students' daily rhythms. A prepared plate and a visual guide showing a recommended meal composition are often placed at the start of the food line.³ In many schools, these guides are also discussed with students in the classroom, especially as a part of home economics education.⁴

Moving through the food line, students typically serve themselves a variety of dishes, usually a casserole or soup, vegetables and/or salad, bread, spreads (e.g., margarine), and beverages (milk, sour milk, and water). Children in early childhood education and primary levels typically receive help from adults to pick food and carry their plates, while older students (e.g., those in secondary level) have more independence during the lunch break.⁵ Full plate in hand, students then pour into the dining room. They cluster together at tables with their friends and school staff, eating and relaxing during the break from class. As the meal ends, students take plates,

cutlery, and any leftover food to a collection point. Often, they enjoy a short recess before returning to class for their next lesson.

According to the current curriculum and recommendations, school mealtimes in Finland support students' well-being and nutritional intake. They are a long-term investment in learning and sustainability.⁶ School meals aim to provide one-third of a student's daily energy intake. In addition to lunch, some schools provide free breakfast, while others offer snacks for purchase. Employees that work in school-based kitchens or in municipal central kitchens are typically employed by private for-profit companies (which means that they have a different employer than, for example, teaching staff). These companies are required to serve school food according to nutritional recommendations as a prerequisite for receiving state subsidies.

Throughout its development, the nationwide school meal system has been a Finnish social innovation, promoting equality and learning opportunities for all students regardless of background. However, Finnish society has changed significantly since the school meal system was established and refined in the first half of the twentieth century.⁷ Education around school meals has changed considerably too⁸ as the environmental movement encouraged more focus on sustainability. Recent studies emphasize the importance of combining eating and learning that is participatory, experimental, and collaborative, which, in turn, has influenced the nation's school meal policies.⁹

The Finnish school meal program is often held up as an international model. Yet it is also a realm of tensions and untapped potential. Understanding the current implementation framework and how the school meal program has been shaped by key historic milestones can facilitate more creative and sustainable forms of school mealtimes and food. We build on the promotion of sustainability in the Finnish school meal system to examine how collaborations between home economics and food services can be strengthened to support students' food-related learning for sustainable outcomes, including awareness of food choices and the environmental impact of food production (e.g., water and energy use) as well as food waste reduction. To develop these arguments, we use *pragmatist learning theory* and the term *food sense* to conceptualize food-related learning outcomes focused on sustainability.¹⁰ We suggest that these frameworks

can help build collaborations across professional spheres for students and school staff to participate in the co-development of sustainable school food practices. Such collaborations could become the platforms for transforming school food politics in the lunchroom and classroom by engaging the stakeholders most affected by mealtimes: students, their teachers, and the school catering staff.¹¹

THE CURRENT FRAMEWORK OF SCHOOL MEALTIMES IN FINLAND

At a legislative level, the Finnish Law on Compulsory Education¹² outlines that school meals should be appropriately organized and nutritionally balanced. The intent of this law, specifically the requirement of an appropriately organized mealtime, is translated by the Finnish National Agency for Education into the national core curriculum for basic education, which states that school mealtimes have both recreational and educational aims, including themes such as sustainable living, cultural competence, and manners.¹³ Additionally, the school meal recommendations of the Finnish National Nutrition Council emphasize collective learning during mealtimes.¹⁴ These recommendations constitute a key political document that frames the organization of school meals. The nutritional recommendations are linked to state subsidies received by school food caterers.

Both the core curriculum and the school meal recommendations appoint all in-school adults, including teachers, healthcare staff, and food services staff, with the task of providing guidance and education during the lunch period.¹⁵ The national recommendations suggest that school meals offer wide-ranging learning opportunities and that food-related content can be readily integrated into many school subjects, such as home economics, health education, environmental studies, and biology. In recent years, Finnish policy has given more attention to student participation, handling the topic in a more versatile manner and also providing practical ideas for implementation. These ideas include the implementation of yearly projects to develop school mealtime experiences together with the students. The national core curriculum for basic education is a binding document, and schools are required to encourage students to participate in planning, delivering, and evaluating school meals. In practice, though, municipalities, schools, and teachers have flexibility in how they execute

these requirements, leading to varying levels of student participation in school mealtime organization. Furthermore, the varying topics and extent of professional training about school mealtimes and food education of these different in-school adults can create tensions.¹⁶

Additionally, at an operative level, school meals are organized by municipalities, so implementation models and services differ across the country. In each municipality, school meals are included in the overall education budget. Schools of different sizes and locations incur different total costs for school mealtimes. The school meal budget covers fluctuating costs for food, staff, accommodation for students not living within municipal boundaries, transportation of supplies, and food service property maintenance. To manage and plan budgets, local data on costs are analyzed by food providers and municipalities. Information about implementation is gathered regularly at local and national levels. Authorities monitor students' school meal participation, food choices, nutritional intake, and food waste volume.¹⁷ The school meal recommendations strongly advise against selling sodas, juice, and food items with high levels of added sugar, salt, or saturated fat on school premises.¹⁸ Although delivery contracts, and overall budgets, are negotiated separately by municipalities, the quality of school meals is still defined by binding national legislation and nutritional guidelines for schools.

THE ROAD TOWARD SUSTAINABILITY—SIGNIFICANT MILESTONES AND INITIATIVES OF SCHOOL MEALTIMES

As Finnish society changed, nutrition and food education initiatives also have changed. The foundations of the Finnish school meal system were established in the last decades of the nineteenth century and first decades of the twentieth century.¹⁹ During this time frame, Finland was a poor country with an agriculture-based economy.²⁰ Many children lacked sufficient food and clothing to remain healthy enough to regularly attend school,²¹ and 40 percent of children under fifteen years of age were illiterate. The initial aim of school meals was to support good health and boost attendance.²² During this time frame, the organization of school meals was scattered and relied on the active participation of private associations, teachers,

and parents. Food shortages during World War I, however, highlighted the importance of school meals for children's well-being and expedited the formalization of the national system.²³

In 1921, the law of compulsory education defined the arrangement of school mealtimes as a municipal responsibility. This law also affected elementary school funding: the state was now officially responsible for funding two-thirds of the costs of meals for students of limited means.²⁴ World War II brought a new round of difficulties in accessing sufficient healthy foods, and many people were displaced from their homes. After the experience of acute food shortages (1890–1930) came a period of managing the food supply through rationing and regulation (1940–1950). In 1943, the government extended the law to include a free meal for all schoolchildren every school day. Students were required to participate in food production and distribution, bringing milk and bread from home to supplement the school meal.²⁵ Finnish municipalities were given a five-year transition period to implement the program.²⁶ In 1948, Finland became the first country in the world to require a tax-funded school meal system.

During the 1960s and 1970s, school lunch programs sought to address nutritional challenges caused by overconsumption of unhealthy foods.²⁷ The 1980s and 1990s, characterized by a culture of flexibility, led to the need for school meal guidelines to acknowledge the various factors that influence people's daily food choices. Additionally, scientific studies revealed that the provision of health information on its own is not enough to change an individual's food behavior.²⁸

During the 2000s and 2010s, the range and number of professionals interested in addressing food education issues increased. In 2004, reflecting the growing interest in "food education" (*ruokakasvatus*) in Finnish public and scientific discussions, school mealtimes became part of the Finnish national core curriculum, strengthening their role in student welfare and coursework.⁴ Early childhood programs were among the first in the education field to incorporate food-related teaching by using the term "food education." These programs emphasized experiential, sensory (e.g., taste, touch), and emotional (e.g., joy) aspects of eating.²⁹ The availability of food education resources also expanded to allow for people-centered, context-dependent, and functional approaches. School mealtime shifts in Finland

at the beginning of the 2020s included the development of approaches that consider sustainability, for example, examining food choices not only at the individual level but also at societal and production levels.³⁰

Sustainability, albeit not labeled as such, has been a guiding aim of the Finnish school meal system since its inception. Table 4.1 provides a historical overview of how school mealtime developments are connected to the four dimensions of sustainability: social, cultural, economic, and ecological.³¹ We understand the social dimension of sustainability as concerning poverty reduction, social investment, and the building of safe and caring communities. The cultural dimension relates to the maintenance of cultural beliefs, practices, and heritage, and attempts to determine the future existence of any current culture. The economic dimension concerns the organization's impacts on the economic conditions of its stakeholders and on the economic systems at local, national, and global levels. Sustainability in relation to ecology means ensuring that climate and the environment are safeguarded worldwide.

Today, sustainability is written into policies, directing the meal program to promote social, economic, cultural, and, increasingly, environmental sustainability. The current Finnish nutritional recommendations, the national core curriculum, and the recommendations for school mealtimes all discuss sustainable development.³² The Finnish government promotes sustainable choices in public procurement,³³ and the promotion of nutritionally recommended food consumption is a central environmental and political measure.³⁴ Opportunities for increasing sustainability in public meal provision include serving more plant-based foods, decreasing meat consumption, reducing water and energy use, minimizing food waste,³⁵ and using seasonal, local, or organic foods. Organic products can be challenging to obtain due to limited availability and high prices.³⁶ A 2017 Finnish government decision (MMM/2017/93) tried to alleviate some of this difficulty by allocating funding to pay producers for providing organic school meal ingredients to the EU's school food delivery system (e.g., an increase of .18 euros per liter for organic milk products and a 10 percent increase allotted to the purchase of organic produce).

Yet mealtimes involve more than just procuring food to serve. We suggest that collaboration of multiple school-based stakeholders can widen sustainability learning aims. In this respect, the Finnish school system

Table 4.1 Sustainability and Finnish school meals in broader historical and societal context

Years	National food and dietary priorities	Emphasizing the four dimensions of sustainability through school meals
1890–1930	Preventing nutritional deficiencies and caring for economically disadvantaged populations.	<i>Social:</i> reducing poverty and malnourishment among children. <i>Economic:</i> encouraging school attendance.
1940–1950	Securing versatile diets and solving food shortages, followed by a focus on vitamins and minerals.	<i>Economic:</i> establishing and implementing the national system. <i>Cultural:</i> providing a unifying cultural experience for students during mealtimes.
1960–1970	Tackling the consequences of abundance and excess, followed by a focus on reducing consumption of salt and saturated fats.	<i>Social:</i> teaching proper table manners and broadening students' palates. <i>Economic:</i> economizing resources and processes for school meal preparation.
1980–1990	Reacting to a changing landscape of food availability while recognizing the sociocultural factors that influence food choices.	<i>Ecological:</i> examining global environmental issues in schools. <i>Social:</i> cultivating greater awareness of different food cultures.
2000–2010	Expanding forms of expertise and incorporating new perspectives; emphasizing active, people-oriented, and grassroots approaches to food education.	<i>Cultural:</i> deepening the aims for learning during and through school mealtimes. <i>Social:</i> integrating mealtimes and their learning aims more clearly into the educational work of schools.
2020–	Acknowledging the multilevel nature of change processes (e.g., food system, institutions, daily practices); strengthening collective, experimental, and participatory approaches to food education.	<i>Ecological:</i> incorporating ecological concerns into nutrition recommendations and national school meal guidelines. <i>Social:</i> fostering safe and caring communities through increased student voice and co-development of school meals.

has room to improve and can do so from within the supportive set of policy guidelines outlined above. Food education themes are already part of home economics teachers' university programs and in the content descriptions of school subjects in the national core curriculum. However, university-based teacher education for all teachers, especially for the elementary level, should include instruction in food education. Also, pedagogical training of school food service staff is crucial to increasing in-school adult participation in students' food learning.³⁷ In recent years, school-level initiatives and structures, such as school meal committees, have been increasingly supported in Finnish schools.³⁸ The members of these committees—typically representatives from the teaching staff, food catering staff, and the student body—develop the mealtime plans for their school (e.g., how to serve food, what menu items to offer, how to structure the mealtime, and so on). This is a positive trend and a form of collaboration that—together with classroom-based teaching and food education in the cafeteria—could accelerate the development of sustainable food practices in school communities.

FOOD EDUCATION ACROSS THE CLASSROOM-MEALTIME DIVIDE THROUGH PRAGMATISM AND FOOD SENSE

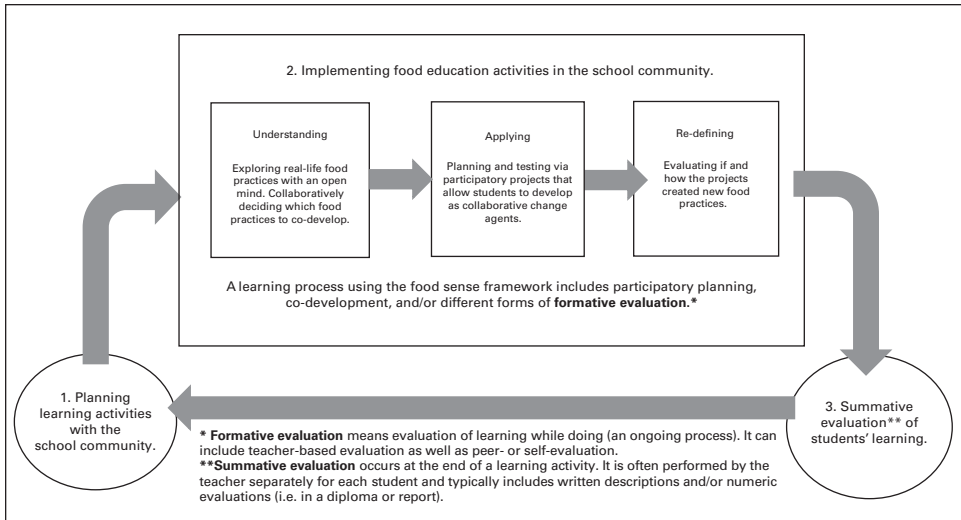
The Finnish national core curriculum for basic education states that school mealtimes have both recreational purposes and educational aims. There can be tensions between these two goals—to relax and socialize, and to learn.³⁹ Previous research has shown that students generally regard school mealtimes as personal time to hang out with friends, which might make them reluctant to engage with formal learning during mealtimes.⁴⁰ Previous studies have also shown that lunch periods are often not integrated into school educational activities, due in part to practical constraints such as a tight time frame.⁴¹ Therefore, it is important to identify creative ways to support students' food-related learning. Expanding food education collaborations between food catering staff and teachers provides an excellent opportunity to advance this aim. Such collaborations should draw on the different roles and strengths of both stakeholder groups. Food-related learning should focus not just on increasing individual students' health or nutrition knowledge⁴² but also on increasing students' opportunities to influence food issues that affect them daily in school. Ultimately, students

working together with teachers and staff is the only way to develop broad and sustainable collaborative school-level practices.

In Finland, policy supports these open-ended and bottom-up aims. However, there is currently a lack of practical tools to aid school-level practitioners in their implementation. To outline a framework for this potential school food educator collaboration, we draw inspiration both from Dewey's pragmatist theorizations of learning and from the concept of food sense. Dewey's pragmatism promotes active learning, often described as "learning-by-doing."⁴³ Van Poeck et al., explain that Dewey does not promote a linear process of learning "the right thing" but emphasizes, instead, the importance of learning through experience, experiment, and inquiry while focusing on the consequences of doing.⁴⁴ Thus, pragmatism provides tools—such as increased awareness and conflict resolution—for real-life problem-solving.⁴⁵ Dewey understands learning as dependent on context, both social and cultural.⁴⁶ Interactions, or transactions, between people and their environments are at the core of this theory. Learning from experience involves interaction and continuity, emphasizing that people and their environments are mutually interdependent and "transform continuously and reciprocally."⁴⁷

The concept of food sense builds on pragmatist aims of using tensions as opportunities to create further change.⁴⁸ Janhonen et al., define food sense as the ability to understand, apply, and potentially redefine the everyday routines and habits of food practices.⁵⁵ The framework allows tensions (e.g., frictions, conflicts, contradictions, disagreements, dissatisfactions, and so on) that arise to be the starting point for codeveloping school food practices. This approach supports students' sense that they are able to influence matters important to them and their development of skills for engaging in participatory processes. Consequently, the framework suggests a shift in aims and power structures for food education, wherein the role of the learner is not as a passive recipient of predefined (e.g., health, nutrition) knowledge but as an active, collaborative change agent. Supporting youth empowerment is crucial for transformative school food politics and for recognizing students as important social and political actors.

When planning, executing, and evaluating participatory learning processes in schools, it is useful to examine the different levels of food sense. Accordingly, figure 4.1 presents food education and collaborations with



4.1 Integrating the food sense framework into a school community.

food services as practices that are fully integrated into teachers' work and throughout the school year.

The aim of this framework is to provide tools that promote continuity, perseverance, and a comprehensive acknowledgement of the educational potential of school mealtimes. The overall purpose is to cooperatively develop real-life practices using participatory methods. The teacher's role in this process is to serve as a facilitator who creates optimal settings for student learning.⁴⁹ While this approach can be applied to many examples, we focus below on the design of a course for home economics that addresses sustainability through practice-based learning in collaboration with food catering.

PRACTICAL EXAMPLE: DESIGNING A COURSE FOR SUSTAINABILITY TRANSFORMATION

Using the food sense framework, we have created an example for a home economics curriculum called "Sustainability transformations in our school" (table 4.2). This school subject has been selected based on our own professional backgrounds and the current inclusion of food, eating, and cooking, or "food competence and food culture" as one of the three key focus areas

in the national core curriculum. We have designed this for grades 7 to 9. Its purpose is to promote sustainable food education through collaboration of home economics programs and food catering.

The curriculum could be implemented in a variety of ways. For example, sustainable food choices⁵⁰ could be the focus of activities and evaluations, which are informed by school-level and national curricula. However, students' interests and the school mealtime structure should inform learning activities and assignments. Table 4.2 demonstrates how the three components of food sense (understanding, applying, and redefining) could be used as sequential building blocks for the co-development of the course.

The three building blocks together can help promote sustainability transformation and active learning in schools. Alternatively, practitioners who are in the early phase of integrating forms of collaboration into their work could initially test one or two building blocks and then slowly broaden the scope. The transformative process illustrated through these three steps could be expanded to also introduce collaboration into several courses or class grades. In any execution, learning activities should be directed toward identifying and codeveloping existing tensions and practices within the school and with students.

Such a framework both compliments and expands on existing platforms that allow students to speak and be heard in school settings, such as student councils and school food councils. These platforms are typically built on the idea of representative participation; the councils typically include a limited number of democratically elected students. This framework could engage larger groups of students in participatory projects, students who could then understand themselves as agents of, and collaborators for, active change in their communities.

CONCLUSION

This chapter has highlighted the potential for collaboration between different stakeholders at the school level to support the aim of providing students with increased opportunities to influence and be part of changing food issues that affect and interest them. The framework outlined in this chapter aims to support such bottom-up and participatory development work, as well as to empower students as active change agents. Reorganization of

Table 4.2 Sequential building blocks for the course “Sustainability transformations in our school” using the food sense framework

Understanding	Applying	Redefining
<p>Examples of learning activities for building a shared understanding of project goals:</p> <ul style="list-style-type: none"> • Observe behavior of oneself and/or students in the school dining area (e.g., taking notes or photographs). • Interview food catering staff, teachers, health service professionals, guardians, and other stakeholders. • Conduct school-level surveys (e.g., attitudes toward and baseline knowledge of school mealtimes). • Review data collected by food services (e.g., number of people served, production records, waste). • Co-plan an evaluation. 	<p>Examples of learning activities for formulating and testing a change management action plan:</p> <ul style="list-style-type: none"> • Apply practical exercises in the home economics classroom (e.g., codeveloping school meal dishes and/or cooking assignments for food waste reduction or higher vegetable intake, emphasizing the social and cultural dimensions of food and eating). • Execute practice-based campaigns or other school-level initiatives with students. • Influence broader structures and decision-makers outside the local school environment (e.g., writing letters or organizing events). • Collect concise data that meets jointly agreed evaluation targets. 	<p>Examples of collaborative analysis of a codeveloped project for changing practices:</p> <ul style="list-style-type: none"> • Consider future steps and involve food catering and school administration. • Present and discuss results and future steps at school assemblies. • Involve guardians by presenting results at parent-teacher events. • Instituting collective problem-solving to identify ways to involve and motivate the whole school community; begin with one course then broaden the perspective. • Evaluate project goals (e.g., decreasing waste production, increasing vegetable consumption) and the students’ broader learning processes, including the social and cultural aspects of learning.

resources, through creative use of teaching time, more support for student participation, and multi-professional alliances, can aid the process of shifting students from the role of passive recipient of knowledge to the role of partner in processes that seek to solve real-world problems together with adults. In this work, teachers need action models like the one presented in this chapter, as well as tools for evaluation that help them justify integrating innovative activities into their teaching.⁵¹ The practical examples

presented in this chapter approach school mealtimes as a context for experiential and active learning—a novel view grounded in ongoing Finnish education reform and its movement toward student participation and co-development. Further research and development work should strive toward providing real-life examples of student participation in sustainable food education, as well as examples of how these projects have failed or succeeded in practice. In addition to creative reorganization of resources at the school level, it is crucial that collaborative initiatives for sustainable food education integrating student participation are also recognized as important at municipal and other governance levels, and that adequate resources are provided to schools for this work. Although student participation and collaborative endeavors within food education and school mealtimes are encouraged at the policy level in Finland, providing more extensive professional and in-service training in these areas to all potential school food educators will be key to creating real change in schools.

NOTES

1. Kristiina Janhonen and Johanna Mäkelä, “To Connect and Be Heard: Informal Dimension of School Mealtimes Represented by Students’ Self-Initiated YouTube Videos,” *YOUNG*, June 18, 2021, <https://doi.org/10.1177/11033088211015802>.
2. For more information about the Finnish education system and organization of school mealtimes, see Katri Pellikka, Marjaana Manninen, and Sanna-Liisa Taivalmaa, *School Meals for All: School Feeding: Investment in Effective Learning—Case Finland* (Ministry for Foreign Affairs of Finland and Finnish National Agency for Education (EDUFI), June 2019), <https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all>.
3. National Nutrition Council (NNC), *Syödään Ja Opitaan Yhdessä—Kouluruokailusuositus [Eating and learning together—Recommendations for school meals]* (Helsinki, Finland: National Nutrition Council and National Institute for Health and Welfare, 2017), https://www.julkari.fi/bitstream/handle/10024/134867/URN_ISBN_978-952-302-844-9.pdf?sequence=1&isAllowed=y.
4. Home economics begins in grades 7–9 (thirteen-to-sixteen-year-olds) and in 2014 became an optional subject for grades 1–6 (six-to-twelve-year-olds). The EDUFI, “Perusopetuksen opetussuunnitelman perusteet,” Opetushallitus, 2014, <https://www.oph.fi/fi/koulutus-ja-tutkinnot/perusopetuksen-opetussuunnitelman-perusteet>.
5. See Kristiina Henrietta Janhonen, Johanna Mäkelä, and Päivi Palojoiki, “Adolescents’ School Lunch Practices as an Educational Resource,” *Health Education* 116, no. 3 (January 1, 2016a): 292–309, <https://doi.org/10.1108/HE-10-2014-0090>.

6. We define the key aim of sustainability as progress that meets current requirements without compromising the ability of future generations to meet their own needs—see World Commission on Environment and Development (WCED), *Our Common Future (The Brundtland Report)* (Oxford: Oxford University Press, 1987). Sustainability themes are acknowledged also in the Finnish National Curriculum for Basic Education and National school meal recommendations.

7. Seija Lintukangas, “Kouluruokailuhenkilöstö matkalla kasvattajaksi,” November 20, 2009, <https://helda.helsinki.fi/handle/10138/20045>; Katri Pellikka, Marjaana Manninen, and Sanna-Liisa Taivalmaa, *School Meals for All: School feeding: Investment in Effective Learning—Case Finland*; Ritva Prattala, “North European Meals: Observations from Denmark, Finland, Norway and Sweden,” in *Dimensions of the Meal: The Science, Culture, Business and Art of Eating*, ed. Herbert L. Meiselman (Gaithersburg, MD: Aspen Publishers, 2000), 191–201; Susanna Raulio, Eva Roos, and Ritva Prättälä, “School and Workplace Meals Promote Healthy Food Habits,” *Public Health Nutrition* 13, no. 6A (June 2010): 987–992, <https://doi.org/10.1017/S1368980010001199>.

8. Janhonen, Mäkelä, and Palojoki, “Adolescents’ School Lunch Practices,” 292–309; Kristiina Janhonen, Johanna Mäkelä, and Päivi Palojoki, “Food Education: From Normative Models to Promoting Agency,” in *Learning, Food, and Sustainability*, ed. Jennifer Sumner (New York: Palgrave Macmillan, 2016), 93–110, https://doi.org/10.1057/978-1-137-53904-5_6.

9. Lintukangas, “Kouluruokailuhenkilöstö matkalla kasvattajaksi”; Minna Kaljonen, Taru Peltola, Marja Salo, and Eeva Furman, “Attentive, Speculative Experimental Research for Sustainability Transitions: An Exploration in Sustainable Eating,” *Journal of Cleaner Production* 206 (January 1, 2019): 365–373, <https://doi.org/10.1016/j.jclepro.2018.09.206>.

10. John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Macmillan, 1916); John Dewey, *Experience and Education* (New York: Macmillan, 1938); Janhonen, Mäkelä, and Palojoki, “Food Education”; Kristiina Janhonen, Kaisa Torkkeli, and Johanna Mäkelä, “Informal Learning and Food Sense in Home Cooking,” *Appetite* 130 (November 1, 2018): 190–198, <https://doi.org/10.1016/j.appet.2018.08.019>.

11. The Finnish term *ruokapalveluhenkilöstö* would directly translate into “food service personnel.” However, some academics/school meal advocates have argued that this translation undermines the professionalism of these employees because of its connotations to the terms “servant” or “maid.” Because of this, we have opted to use the term school food caterer.

12. Law on Compulsory Education 628/1998, 31§.

13. EDUFI, “Perusopetuksen opetussuunnitelman perusteet.”

14. NNC, *Syödään Ja Opitaan Yhdessä*.

15. EDUFI, “Perusopetuksen opetussuunnitelman perusteet”; NNC, *Syodaan Ja Opitaan Yhdessä*.

16. Lintukangas, “Kouluruokailuhenkilöstö matkalla kasvattajaksi,” <https://helda.helsinki.fi/handle/10138/20045>; Kristiina Janhonen and Bente Elkjaer, “Exploring

Sustainable Food Education as Multiprofessional Collaboration between Home Economics and School Food Catering,” *Journal of Education for Sustainable Development* 16, no. 1–2 (2022): 19–41, <https://doi.org/10.1177/09734082221120101>.

17. The Finnish Institute for Health and Welfare (FIIHW), “School Health Promotion Study,” 2019, <https://thl.fi/en/web/thlfi-en/research-and-development/research-and-projects/school-health-promotion-study>; The Finnish Institute for Health and Welfare (FIIHW), “TEAvisari—Benchmarking System of Health Promotion Capacity Building in Municipalities,” 2020, <http://teaviisari.fi/teaviisari/en/index>.

18. NNC, *Syödään Ja Opitaan Yhdessä*, 40.

19. Lintukangas, “Kouluruokailuhenkilöstö matkalla kasvattajaksi.”

20. Katri Pellikka, Marjaana Manninen, and Sanna-Liisa Taivalmaa, *School Meals for All: School feeding: Investment in Effective Learning—Case Finland*, <https://www.oph.fi/en/statistics-and-publications/publications/school-meals-all>.

21. Pellikka, Manninen, Taivalmaa, *School Meals for All*.

22. EDUFI, “Perusopetuksen opetussuunnitelman perusteet.”

23. Kaija Rautavirta, “Petusta pitsaan: Ruokahuollon järjestelyt kriisiaikojen Suomessa” (doctoral diss., University of Helsinki, June 11, 2010), <https://helda.helsinki.fi/handle/10138/20862>.

24. Pellikka, Manninen, and Taivalmaa, *School Meals for All*.

25. Pellikka, Manninen, and Taivalmaa, *School Meals for All*.

26. Lintukangas, “Kouluruokailuhenkilöstö matkalla kasvattajaksi”; R. Prättala, “North European Meals: Observations from Denmark, Finland, Norway and Sweden”; Raulio, Roos, and Prättälä, “School and Workplace Meals Promote Healthy Food Habits.”

27. Kristiina Janhonen, Johanna Mäkelä, and Päivi Palojoiki, “Perusopetuksen Ruokakasvatus Ravintotiedosta Ruokatajuun [Food Education in the Basic Education Context—from Nutrition Knowledge to Food Sense],” in *Luova Ja Vastuullinen Kotitalousopetus, Kotitalous- Ja Käsiyötieteiden Julkaisuja* 38 (Helsinki: Kirjoittajat, 2015), 107–121; see also Kaija Rautavirta, “Petusta pitsaan.”

28. Mäkelä Janhonen and Päivi Palojoiki, “Perusopetuksen Ruokakasvatus Ravintotiedosta Ruokatajuun” [Food education in the basic education context—From nutrition knowledge to food sense]; Janhonen, Mäkelä, and Palojoiki, “Food Education.”

29. A. Koistinen and L. Ruhanen, eds., “Aistien Avulla Ruokamaailmaan. Sapere-Menetelmä Päivähoidon Ravitseminen Ja Ruokakasvatuksen Tukena” [Entering the world of food through the senses. The Sapere-Method as a support in the nutrition and food education in the daycare context] (Jyväskylän kaupungin sosiaali- ja terveystieteiden tutkimuskeskuksen raportteja, 2009), http://www.sitra.fi/julkaisut/uuut/Sapere_tyo_kirja.pdf.

30. For example, see Minna Kaljonen et al., “From Isolated Labels and Nudges to Sustained Tinkering: Assessing Long-Term Changes in Sustainable Eating at a Lunch Restaurant,” *British Food Journal* 122, no. 11 (January 1, 2020): 3313–3329, <https://doi.org/10.1108/BFJ-10-2019-0816>; Taru Peltola, Minna Kaljonen, and Marita Kettunen, “Embodied Public Experiments on Sustainable Eating: Demonstrating

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