



UMEÅ UNIVERSITY

“It’s not really about the food, it’s about everything else”:

Pupil, teacher and head teacher experiences
of school lunch in Sweden

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To all school children, including my own

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Abstract

The school lunch is often associated with food, nutrition and health while the social, physical, pedagogical and cultural dimensions of the school lunch situation have not been given as much attention. Sweden is one of few countries in the world where tax-funded school meals are served to all pupils in compulsory school. This thesis highlights the school lunch situation from the perspectives of pupils, teachers and head teachers in Sweden. The overall aim is to contribute a deeper understanding of how these school actors perceive and experience the school lunch situation. The thesis is compiled from four papers. Paper 1 examine Nordic pupil's perspectives on the healthiness of the meals in the context of school lunches. The remaining papers have been carried out in a Swedish context. Paper 2 examines pupil's lived experiences of school lunch and how they relate to the social and physical dimensions of school lunch. Paper 3 examines teachers' perceptions of the school lunch in terms of intentions and daily practice. Paper 4 examines head teachers' (also called principals and school leaders) perceptions and experiences of school lunch. The main theoretical base is based on Henri Lefebvre's theoretical framework of social production of space, applied mostly in Papers 2-4, together with an overarching conceptual framework of social constructivism, applied mostly in Paper 1. The thesis is based on a qualitative descriptive research design where the empirical part of the study is based on focus group discussions, empathy-based stories, a qualitative analysis of open comments from a questionnaire and in the fourth paper, individual interviews. Through the four papers performed within this thesis it is clear that the normative, social, emotional, physical and organizational dimensions are central to the way that school lunch is experienced and perceived. The results show that pupils, teachers and head teachers share the perception of school lunch as a space for socializing and eating. The results further show that the perceptions and experiences of school lunch are negatively affected by the way the school lunch is framed and organized at both school and municipality level, and that favorable conditions for the school lunch situation do not always exist. The main concerns are centered on the meal environment, time-restrictions, the logistics and the different structures that pupils, teachers and head teachers have to adapt to. These challenges may affect the possibility of influencing practices and adherence to policies. The physical and organizational dimensions of school lunch need to be acknowledged: specifically, time management and the extent to which school restaurants are purposively designed and built. This is something that should be also taken in consideration when designing and building new school restaurants.

Keywords: School lunch; Sweden; Pupils; Teachers; Head teachers; Social production of space.

Sammanfattning på svenska

Skollunchen associeras ofta med mat, näring och hälsa, medan matens och måltidssituationens sociala, fysiska, pedagogiska och kulturella betydelse ofta hamnar i skymundan. Sverige är ett av få länder i världen som erbjuder skattefinanserad skollunch till alla elever i grundskolan. De nationella riktlinjerna ger ett helhetsperspektiv på en bra skollunch (miljösmart, god, säker, näringsriktig, integrerad och trivsamt). Skollunchen utgör en viktig del av samhällets insatser för en god folkhälsa, där en pedagogisk ansats uppmuntras. I den här avhandlingen ges en inblick i hur elever, lärare och rektorer på ett antal svenska grundskolor uppfattar och upplever skollunchen, samt hur elever i Sverige, Norge, Finland och Island förstår skollunch i relation till hälsa. Dessa skolaktörers uppfattningar och upplevelser sätts i relation till normer och värderingar i samhället till såväl nationell och lokal skolmåltidspolicy och praktik. Hänsyn tas till sociala, fysiska och pedagogiska aspekter. Avhandlingen bidrar med kunskap om vilka förutsättningar som finns för skollunchen utifrån ett helhetsperspektiv.

Syfte med avhandlingen

Avhandlingens huvudsakliga syfte är att bidra med en djupare förståelse för hur elever, lärare och rektorer uppfattar och upplever skollunchen. För att uppnå det övergripande syftet har fyra delstudier genomförts vars delsyften är:

1. Att undersöka hur elever i Norden förstår skollunch i relation till hälsa.
2. Att undersöka hur elever i Sverige upplever skollunchen och hur upplevelser och känslor relaterar till sociala och fysiska aspekter av skollunchen.
3. Att bidra med djupare förståelse för hur lärare i Sverige uppfattar skollunchen med fokus på intentioner och den dagliga praktiken.
4. Att bidra med förståelse för hur rektorer i Sverige uppfattar och upplever skollunchen och mer specifikt hur rektorer uppfattar och upplever intentioner med skollunchen, den dagliga praktiken samt förutsättningar att förverkliga intentioner.

Metod inklusive teoretiska utgångspunkter

Avhandlingen består av fyra artiklar och en kapp. De fyra artiklarna presenterar varsin delstudie (se ovan) som baseras på olika empiri och olika metoder för datainsamling. I den första studien användes fokusgruppsdiskussioner med elever från Sverige, Norge, Finland och Island. Resterande delstudier är

genomförda enbart i svensk kontext. Den andra studien baseras på elevers berättelser om skollunchen. I den tredje studien belyses lärares perspektiv på skollunchen. I den studien genomfördes en kvalitativ analys av skrivna svar från en öppen enkätfråga. I den fjärde och sista studien intervjuades rektorer. I samtliga studier har tematisk analys använts som analysmetod. Avhandlingens huvudsakliga teoriram utgörs av Henri Lefebvre's teori om produktionen av det sociala rummet, vilket främst tillämpas i artikel 2–4, tillsammans med en övergripande konceptuell ram utifrån social konstruktivism, vilket främst tillämpas i artikel 1.

Resultat och slutsats

Resultat från denna avhandling visar att de normativa, sociala, emotionella, fysiska och organisatoriska dimensionerna är centrala för hur skollunchen upplevs och uppfattas. Den första och andra artikeln belyser skollunch utifrån elevens perspektiv. Den första artikeln visar att elevers uppfattning av skollunch är starkt kopplat till det hälsoorienterade tankesätt och fokus som finns kring maten i skolan. Eleverna i de nordiska länderna betonade vikten av att äta hälsosam, och god, mat i skolan. Den andra artikeln visar att de vardagliga upplevelserna av skollunchen handlar om mer än maten på tallriken, såsom de sociala och fysiska dimensionerna av skollunchen. Resultatet visar att en trivsamtidsupplevelse kräver en harmonisering mellan den sociala och den fysiska dimensionen och att spänningar mellan dessa dimensioner, såsom tidsbegränsningar och höga ljudnivåer, kan orsaka negativa känslor och påverka måltidsupplevelsen. Den tredje och fjärde artikeln belyser skollunchen från lärare respektive rektorers perspektiv. Den tredje artikeln visar att lärare ser den sociala och pedagogiska potentialen av skollunchen, men inte alltid har gynnsamma förutsättningar för att praktisera olika intentioner. Den fjärde artikeln visar att rektorer främst associerar syftet med skollunchen med ideologin om social jämlikhet som den skattefinansierade serverade skollunchen ger, och att det primära målet är att se till att alla elever äter och blir mätta. Resultatet från den artikeln visar vidare att rektorer upplever skollunchsituationen som utmanande på grund av logistik och det delade ansvaret mellan skola och måltidsverksamhet.

Sammantaget indikerar resultaten från denna avhandling att det råder utmaningar främst vad gällande en integrerad och trivsamt skollunch. Resultatet från denna avhandling visar att elevers, lärares och rektorers upplevelser och uppfattningar av skollunchen påverkas negativt av hur skollunchen är planerad och organiserad på både skol- och kommunnivå och att förutsättningarna för sociala och pedagogiska intentioner samt en trivsamt skollunchupplevelse inte alltid finns. De främsta utmaningarna kretsar kring måltidsmiljön, logistik och olika strukturer som eleverna, lärarna och rektorerna måste anpassa sig till. Dessa utmaningar kan ha betydelse för möjligheten att påverka praktiken och

möta olika intentioner och behov, det kan till exempel hindra avsikterna att göra skollunch till en trivsamt upplevelse, liksom en integrerad och samplanerad aktivitet i skolan, vilket i slutändan kan påverka alla aktörer som är involverade i skollunchen. Resultat från denna avhandling belyser vikten av att uppmärksamma de fysiska och organisatoriska dimensionerna av skollunch, särskilt i relation till tidsplanering av skollunchen och huruvida skolrestaurangen är ändamålsenligt utformad och byggd, något som bör beaktas även när man utformar och bygger nya skolrestauranger.

List of original publications

The thesis is based on the following papers, which are referred to in the text by their numbers.

1. Berggren, L., S. Talvia, E. Fossgard, U. B. Arnfjord, A. Hörnell, A. S. Olafsdottir, I. Gunnarsdottir, Wergedahl, H., Lagström, H., Waling, M., & Olsson, C. (2017). Nordic children's conceptualizations of healthy eating in relation to school Lunch. *Health Education, 117*(2), 130–147.

2. Berggren, L., Olsson, C., Talvia, S., Hörnell, A., Rönnlund, M., & Waling, M. (2019). The lived experiences of school lunch: an empathy-based study with children in Sweden. *Children's Geographies, 18*(3), 339-350.

3. Berggren, L., Olsson, C., Rönnlund, M., & Waling, M. (2020). Between good intentions and practical constraints: Swedish teachers' perceptions of school lunch. *Cambridge Journal of Education, 1-15*.

4. Berggren, L., Waling, M., Rönnlund, M., & Olsson, C. (2021). School lunch – not an integrated part of the educational work at school. Head teachers' perceptions and experiences of school lunch in Sweden.

Reprints of Papers 1, 2 and 3 were made with permission from the respective publishers.

Contribution of authors

The contributions of Linda Berggren to the papers included in the thesis are as follows:

Paper 1. Participated in the design and data collection.

Led the analysis process based on initial analysis of the data from each country and drafted the manuscript in discussion with the co-authors.

Paper 2. Participated in the design and data collection. Analyzed the data and drafted the manuscript in discussion with the co-authors.

Paper 3. Gave feedback on the study that was initiated and planned by Maria Waling and Cecilia Olsson. Maria Waling and Cecilia Olsson collected the data. Analyzed the data and drafted the manuscript in discussion with the co-authors.

Paper 4. Participated in the design and data collection. Administered, conducted and transcribed all the interviews in discussion with the co-authors. Analyzed the data and drafted the manuscript in discussion with the co-authors.

Preface

When I started this journey, I was pregnant with my second child and rather new to the world of research. My view on school lunch in general was more or less limited to my own experience as a pupil eating school lunch and, later on, also as a mother of children eating school lunch, and to some extent also as a teacher. Data collection for my first two studies was initiated and planned by the ProMeal research group. Being a rookie manager and researcher for the first paper, with colleagues and data collection in four different countries, was a challenging and extremely valuable time, from which I have learned a lot. I went from being a teacher and teacher educator in Home and Consumer Studies, to being a researcher and a member of a large research project with experienced senior researchers. Like every human being, I am a product of my background and contemporaries. Raised in an idyllic (and peaceful) village with a loving and sporty family, I found an early interest in food, meals and cooking. At one time, I dreamt of being a chef and starting a restaurant. Although I did not proceed with this career (even though I am the head chef in my house), I still love to plan and cook meals. Instead, I became a teacher in language and Home and Consumer studies. Many people have reacted to this choice of combination but it has always been the right path for me – I mean, why shouldn't you teach the subjects that you are most interested in? Both school subjects reflect my main interests such as everyday life, food and meals (in both formal and informal settings), culture, traditions and human interaction. I believe that my knowledge and experience as a teacher has been a great advantage for me when aiming to understand a phenomenon within the school context, and the perspectives and experiences of different school actors. The methodological approach and the focus of this thesis is very much a reflection of my background and interests, and I feel very grateful to have been given the opportunity to immerse myself in this field. Nowadays, I not only ask my children what they had for lunch, I ask how they felt before, during and after lunch; if they had enough time to eat and socialize; what they talked about with their friends and the adults; which senses they used; how they experienced the meal environment, and the list goes on. While this may be annoying to some, it is fun and interesting for me!

Introduction

This thesis is written within the interdisciplinary field of food, nutrition and culinary science. This comprises many different elements, from natural science and a health-orientated approach, where there is a focus on food as energy and nutritional value, to social science where food and meals are understood as part of culture, identity, community, communication, and as an experience. Food and meals are feature of everyday life, whether they take place at home, in school or at a restaurant. This thesis is about school lunch experiences: these take place within an educational setting, which involves both formal and informal spaces. In this thesis, the main focus is not on teaching and learning per se, rather on the wider everyday experiences of the school lunch situation. Research on school lunch can be found within different disciplines, such as nutrition and health, anthropology, sociology and education. Traditionally, there has been a nutritional focus on school lunch, both in research, policies and in society more generally. Much research has a focus on health promotion, understanding food choices at lunchtime as well as children's understanding of healthy eating, food and nutrition (Earl, 2020). School lunch and learning have, in general, been discussed in relation to healthy eating habits, mainly in association with food education and nutrition education. Today, food and meals are still of interest within natural science but there is also a growing interest within social science, especially in terms of sociology of food and food education (Earl, 2020; Lalli, 2020a). In recent years, school lunch has also been addressed in relation to sustainability (He & Mikkelsen, 2014; Höijer et al., 2020). Everyday experiences and the meanings given to school lunch are complex, contextual and multifaceted. It is, therefore relevant to broaden the perspectives and to give voice to those involved. Better understanding of pupils, as well as the adults involved, constructed meanings and understandings of school lunch can provide important insights into the complexity of everyday experiences and perceptions of the school lunch situation.

Although school lunch is a feature of many societies, its context differs between countries in terms of ideologies, purposes and the ways it is organized. This varies from pupils eating lunch at home, bringing food from home, buying food at school to being provided with food at school. Thus, worldwide, the responsibility for feeding pupils lunch varies between parents, the school and the government. Some countries provide tax-funded lunch to some age groups. Very few countries, to my knowledge only Finland, Estonia and Sweden, provide free (tax-funded) school lunch to all pupils in compulsory school regardless of parental income. In general, school lunch is perceived as an arena for the solution to problems where the main concern is children's food intake and its consequences for health as well as for their education (Andresen & Elvbakken, 2007). In developing countries dealing with poverty and malnutrition, meals at school, are of great significance

for health, especially for disadvantaged children. Health outcomes are in focus also among developed countries with problems such as obesity and malnourishment. In some countries, school lunch is generally thought of as a service, while some also consider school lunch as a social event with learning opportunities. In most countries it is common to have an adult presence during the lunch, but this occupation and function varies across countries.

The main part of this thesis is undertaken in Sweden where school lunch is part of public health efforts and where a pedagogic approach is encouraged. It is further emphasized that school lunch should be tasty, nutritious, sustainable, pleasant, integrated and safe (National Food Agency [NFA], 2019). This thesis also studies school lunch in a Nordic setting, as the first paper is undertaken not only in Sweden but also Norway, Finland and Iceland. These countries have somewhat different history, ideology and systems for school lunch provision (Kainulainen et al., 2012), but with similar culture, dietary habits and shared nutrition recommendations (Nordic Council of Ministers, 2014), where the importance of the healthiness of the meal is emphasized in guidelines for school lunches in each country. Although physical and nutritional health is part of the tradition for free school lunch, and underpins the policy in Sweden, this thesis does not explicitly explore school lunch from this health perspective. However, psychosocial aspects of health and conceptualizations of healthy eating in relation to school lunch are included. Furthermore, the overall school lunch situation, including the social and physical meal environment, which is part of this thesis, is important in relation to all aspects of health.

In this thesis I start from the idea that school lunch is socially produced and that different spatial dimensions interact in the production of the social space for school lunch. This is brought out in the background section in terms of the context of school lunch in Sweden, and research about school lunches. In this, I present the idea that there are norms, values and intentions associated with school lunch which are emphasized in different policies (the conceived space). Those who plan, organize and participate in school lunch on a daily basis, such as the pupils, teachers and head teachers, perceive and experience the school lunch in various ways (the perceived and lived space).

Aims and research questions

This thesis examines the perceptions and experiences of school actors who, on an everyday basis, come into close contact with the school lunch context in Sweden. This is problematized in relation to the conceived space of school lunch. i.e. norms, values and intentions linked with the school lunch as expressed in policies and in wider society. In the social production of school lunch, the people involved have a significant role. This includes not only the pupils but also the adults in charge of, or involved with, school lunch: they are co-constructors of the meal situation. The school lunch concept is viewed comprehensively and should be understood as being broader than the food and drinks served and eaten. It includes also other dimensions of the meal situation such as intentions, physical and social factors, and the overall context of school lunch. The literature on school actors' perspectives on, and experiences of, school lunch is rather scarce. This thesis bring together the perspectives of pupils, teachers and head teachers who form an important part of the context for school lunch in Sweden.

The overall aim of this thesis is to contribute with a deeper understanding of pupils, teachers and head teachers experiences and perceptions of the school lunch in Sweden. The specific aims of the studies were:

Paper 1) To explore Nordic pupil's perspectives on the healthiness of the meals in the school lunch context.

Paper 2) To explore pupils' lived experiences and how they relate to the social and physical dimensions of school lunch in Sweden. Further, pupils' emotions in relation to school lunch were explored as well as how they relate to both the physical and social dimensions of school lunch.

Paper 3) To better understand how teachers in Sweden perceive the school lunch in terms of intentions and daily practice.

Paper 4) To contribute to an understanding of how head teachers' in Sweden perceive and experience the school lunch. Thus, there was a focus on the settings for meals and how head teachers themselves perceived the intentions of school lunch in relation to local conditions and national intentions.

Background

School lunch in Sweden

Organization and ideology

School lunch is deeply embedded in Swedish culture, a national symbol of a well-developed welfare system and a part of public health efforts where a pedagogic approach is encouraged (Gullberg, 2004; Lucas et al., 2017; Persson Osowski & Fjellström, 2019). Sweden is a developed Nordic European country with relatively high taxes, and is one of few countries in the world that provide tax-funded school meals to all pupils in compulsory school. Every year over 260 million meals are served in Swedish schools with an average price of 6400 SEK per person per year (NFA, 2020). Reasoning for the introduction and continuance, of free school lunches is multifaceted and encompasses arguments based on welfare, health, sustainability and learning, as well as the social and physical environment (Persson Osowski & Fjellström, 2019). In wider society, school lunch is perceived as an investment in children's health and in the school system. The idea of schools providing a served lunch was first introduced to foster healthy citizens, promote social equality and address the problem with malnutrition (Gullberg, 2006; Persson Osowski & Fjellström, 2019). Today, these health-related problems have shifted but school lunch is still perceived as part of the public health strategy by the authorities, and by wider society. Here, the compulsory school is considered a suitable arena since all children are reached and opportunities exist for equality and learning. Tax-funded school lunch also provides opportunities to prevent health-related problems as well as stigma in relation to pupil's socioeconomic background. Young people spend a large part of their time in school and therefore meals eaten during school hours are of great importance for the pupil's well-being and health. Thus, schools can play an active role in making healthy eating environments (He & Mikkelsen, 2014). For a number of years, school lunch is significant for pupils' overall diet. It has been concluded that school lunches make a positive contribution to the diets of Swedish children and that school lunches may decrease social inequalities in dietary intake (Colombo et al., 2020).

Local authorities, i.e. municipalities, or for independent schools, the companies that own them, are responsible for the delivery of many services, including resource allocation and daily operations, which includes both education and the school lunch. Among the 290 municipalities in Sweden, school lunch organization varies. A national report covering over 90% of the municipalities in Sweden showed that most had a unified meal organization, while the rest were divided over several administrations (Grausne & Quetel, 2018). The responsibility for school lunch is often divided between the head teacher of the

school and a local municipal unit headed by a food service manager. The food service unit is usually accountable for the planning, preparing and serving of meals. Head teachers hold responsibility for their schools, including the school lunch location and delivery of the meal (i.e. the meal environment, scheduling, pupil flow, seating and teacher roles). The food is either prepared in the school kitchen, or in a centralized catering kitchen; either from scratch, or from semi-processed components.

Legislation and guidelines

School lunch is bounded by policies and regulations constituted by the Swedish government, administrative authorities and local municipalities. These, in turn, are of significance for daily practice, and perceptions of school lunch among those involved. Policy, in this thesis defined as both legislation and guidelines, is an important consideration since it is part of the overall context and represents social, cultural and political concerns and the fusion of ideas and plans, which are interpreted and translated into action by various actors (Ball et al., 2012). Policy also shapes the expectations of actors involved and it is, therefore, important to explore what these expectations are (Earl, 2020).

Legislation is made centrally, and the government is responsible for this legislation, i.e. the Education Act and curricula. The provision of a free school lunch has a long tradition in Sweden, and has been a legal requirement since 1997. This centralized approach means that school lunch is, by law, fully funded by the government and thereby free of charge to all pupils in compulsory school (preschool class to grade nine, age 6-15): this is independent of their guardian's income (Swedish Education Act 2010, p.800). Since 2011, the legislation has required that the lunch should also be nutritious, i.e. meet Swedish nutritional recommendations. As part of the legislation of a free and nutritious school lunch, the Swedish Education Act requires all schools to have an internal quality management system (IQM). The IQM can be defined as a collective process within school comprising obligations to plan, perform, follow-up and document systematic improvement work with the aim of meeting the national goals stated in the Swedish curriculum for compulsory school (National Agency for Education, 2018; NFA, 2019). This process includes all activities covered by the concept of education, and the authorities have emphasized that school lunch is considered such an activity (National Agency for Education & National Food Agency, 2015; NFA 2019). Since school lunch is tax-funded, there is an obligation for the money to be spent responsibly. The Swedish Schools Inspectorate is responsible for checking that schools comply with all aspects of the Education Act.

In Sweden, authorities provide voluntary non-binding national guidelines and advice for schools to support their work in meeting the legislation (see National Agency For Education, 2020; National Food Agency, 2020). The provision of these guidelines also aims to inspire and help head teachers, pedagogues and other school actors to integrate a nutritious meal with curricular activities and to plan, evaluate and monitor the school lunch accordingly (National Agency For Education & National Food Agency, 2015; NFA, 2019). Internationally, school lunch policies often share the aim of improving children's health. However, the guidelines provided by the National Agency for Education and the National Food Agency do not exclusively focus on health and nutrition; they also encourage an integration of meals and curricular activities together with a recommendation that the meal should be tasty, safe, sustainable, nutritious and pleasant. These perspectives have an intrinsic value and could also serve as a means to an end, i.e. to meet different regulations and recommended purposes of school lunch. The term integrated is defined in terms of using school lunch as a resource and as part of the pedagogical activities. The guidelines also cover aspects of the meal environment and food hygiene. The authorities further stress that a well-functioning organization, and good communication between different school lunch actors, is required to be able to achieve these goals. It has been reported that unsupportive organizations, make it hard to integrate food and meals as a tool for learning in preschools (Sepp & Höjjer, 2016).

According to the guidelines, pupils should have at least 20 minutes to eat. After lunch it is common that pupils go out to play in the school yard. School meals are generally eaten in a room that is designed for eating and sharing meals together. This room is often, as in this thesis, referred to as the school restaurant. The name had been changed from canteen to school restaurant to erase negative connotations of canteens and school food, and promote a more professional tone with the feeling of being in a restaurant. School restaurants differ in size but they are generally built to enable many pupils to eat at the same time. The food is usually "self-service" where the pupils often stand in line with their class, serve themselves with food, and then go to their places. For younger pupils, seats are often designated by teachers. A typical Swedish school lunch includes a hot meal with vegetables, bread and milk or water.

Actual adherence to policies regulating Swedish school lunches varies in practice. The proportion of municipalities with a meal policy for compulsory school has increased, today about 80 % of the municipalities in Sweden have a meal policy with political goals (Grausne & Quetel, 2018). However, the report from 2018 (Grausne & Quetel, 2018) showed that fewer municipalities followed up on the meal policies. An inspection in 2012 revealed that many municipalities did not systematically document or follow up the nutritional quality of the meals they served (The Swedish Schools Inspectorate, 2012). About 25% of the policies lack

objectives on the integration of meals with schooling (Grausne & Quetel, 2018). The report from 2018 further showed that food service managers primarily used the national guidelines (NFA) as the basis for menus, for policy documents and as distribution material. Guideline usage was at its highest where food service staff had better education levels, where there was a food service manager and where there was school lunch policy stated was politically framed. A quantitative study showed that only half of the 216 participating schools in Sweden met the requirement for including school lunch in the quality management system (Olsson & Waling, 2016). This was also reflected in the extent to which head teachers knew about and implemented the objectives stated in the guidelines (NFA). A study investigating teachers' attitudes towards the use of school lunch for educational purposes indicated that it was unregulated at school level (Waling & Olsson, 2017). In that study, although lunches were subsidized to encourage the teachers to eat with pupils, it was not always an explicitly-communicated requirement by school management.

The pedagogic meal

Traditionally, the school lunch in Sweden has been seen as a teaching occasion (Gullberg, 2006; Persson Osowski & Fjellström, 2019). In 1987 the Swedish Government assigned the National Agency for Education to look at the conditions for operating pedagogical meals, earlier referred to as scheduled school lunches, to gain a better understanding of how school lunches might be incorporated into school learning activities. The National Food Agency, which provides policy documents about school meals, emphasizes the potential of school lunch as a arena to promote healthy eating, practice social interaction and also teach about the environment and different cultures (NFA, 2019). The authorities advise that school lunches should be integrated and utilized as a resource in pedagogic activities: it is emphasized that the adults present, most often teachers, have a central role. This approach is usually associated with the concept of pedagogic meals, where teachers eat an often subsidized school lunch together with the pupils (NFA, 2019; Persson Osowski et al., 2013; Sepp et al., 2006; Waling & Olsson, 2017). It is common for teachers in Sweden to eat with their pupils and get lunch fully or partially subsidized (Waling & Olsson, 2017). A national report from 2015 showed that 65 % of schools had an adult present during lunch and that it had an educational purpose (Centrum för epidemiologi och samhällsmedicin – Stockholms läns landsting, 2015). For some teachers, eating with pupils is a requirement by the school management while for others the decision is made by the individual teacher and/or the staff group.

The pedagogic meal is a well-established concept of Swedish schools, but how it is perceived and practiced varies. The pedagogic meal, or the school lunch generally, is not part of the curriculum nor is it included in Swedish teacher

education: the somewhat vague definition can therefore be interpreted in different ways. Also, schools are not required to provide pedagogic meals and, apart from the guidelines, there are no formal instructions about the organization of a pedagogic meal. There are, however, a few somewhat different definitions of pedagogical meals. In general, the concept refers to the link between school food, learning and teacher interactions with the pupils during the meals (Lalli, 2020a). The most common definition derives from the National Food Agency and the National Agency for Education which say that, during their scheduled work hours, the adult present are supposed to act as role models for healthy eating, contribute to a calm and peaceful environment, and demonstrate a positive attitude towards food and discussion of food-related topics listed in the Swedish curriculum for compulsory school (National Agency for Education & National Food Agency, 2015; NFA, 2019). One important benefit of integrating meal time and education seen by the National Food Agency is the prospect of pupils learning by imitating the adults. School lunch is also described as an opportunity to build and strengthen relationships between teachers and pupils, as well as between pupils (National Agency for Education & National Food Agency, 2015; NFA, 2019). One report showed that 78% of schools in Sweden had guidelines for the pedagogic meal and these most often involved school staff having lunch at the same table as pupils (Patterson et al., 2012). Another study showed that a majority of participating teachers saw school lunch as part of the school's pedagogical work, and as a general resource when working towards goals stated in the curriculum regarding health and the environment (Waling & Olsson, 2017). Fewer teachers saw the connection with goals concerning fundamental values. A study conducted in Swedish preschools and schools on teachers' interactions during school lunch showed that participating teachers took on different roles (the educational teacher, the evasive teacher and the sociable teacher) when eating and interacting with pupils (Persson Osowski et al., 2013). A study of Swedish preschool teachers' attitudes towards food in relation to the pedagogic meal showed that even though none of the teachers reported having any instructions regarding the practice of the preschool meals, they still had a clear understanding of what it meant to practice pedagogic meal (Sepp et al., 2006). For them, a pedagogic meal was defined in terms of being a role model, helping and encouraging children to help themselves. Meals were associated with both learning and care although sometimes there was insufficient time to be pedagogic during the meal.

The pedagogical dimensions of school lunch

Discussing school lunch in relation to pedagogical dimensions is of interest not only within the Swedish context or in relation to the concept of pedagogic meal. Generally, researchers and authorities conceive of school lunch as a pedagogic space. The pedagogical dimensions of school lunch refer to both teaching and

learning. This approach is often related to the concepts of food education and nutrition education, in Sweden the term is *måltidspedagogik*. There is a lack of studies exploring school lunch as a teaching occasion and the integration of food and meals in school. In Sweden, the available studies have mainly been conducted in preschool (children up to 6 years old).

Learning is an ongoing process with both informal and formal dimensions. Thus, learning also takes place beyond classrooms. The school yard, for example, is an informal time in a formal setting, a time of care, recess and at the same time, a pedagogical space (Larsson & Rönnlund, 2020). School lunch, and the pedagogical meal, has also been labelled as a form of edu-care, as it involves both education and care (Johansson & Pramling Samuelsson, 2001; Sepp, et al., 2006). Torres and Benn (2017) saw care as a crucial dimension of the school lunch potential for learning. School lunch is a space that holds potential for teaching and learning, both in a formal and more informal sense (see e.g. Andersen et al., 2017; Benn & Karlsson, 2014; Lalli, 2020a; Weaver-Hightower, 2011). In school, pupils are taught about food-related topics, both explicitly and through the hidden curriculum which includes interaction with adults and learning about sustainability, ethics, culture and societal values (Weaver-Hightower, 2011). School lunch has been considered as a space for improving children's social development and social learning (Lalli, 2020b; Pike, 2008). Pupils can learn how to be part of a group and an organized community, where they can practice social skills, learning how to behave and navigate the world outside of school (Earl, 2020; Lalli, 2020a; 2020b). Today, there is a growing interest in food pedagogy (Earl, 2020; Lalli, 2020a) and it has been argued there is a need for recognizing the learning potential of the school lunch and taking advantage of it (Torres & Benn, 2017). However, it is debatable what kind of learning, or teaching, can or should take place during, and in relation to, school lunch. Torres & Benn (2017) have argued that teachers and pupils might disagree that school lunch is a learning space where pedagogic goals are integrated. Forero et al., (2009) in an UK study of school meals found that teachers perceived the pupils' lunch time as free from adult monitoring. In the book on schools, food and social learning, Lalli (2020a) explored the potential of school restaurants for social learning through interactions between pupils and teachers, where pupils, dining hall attendants, school leadership, teachers and parents are included in the process, Lalli concluded that school lunch is not necessarily seen as being a space for learning, but of consumption in a culture which continues to see pupils as machines for productivity. In the book *Schools and food education in the 21st century*, on food experiences and food education opportunities in primary schools over a school day (not only school lunch but also breakfast, food learning in classrooms as well as kitchen preparation), Lexi Earl argued that schools need to view school lunch as part of learning, rather than separate to learning and the school (Earl, 2020). Benn and Carlsson (2014) problematize formal and informal

learning of school lunch and question whether school lunch constituted a formal learning occasion or whether it should be a break from education. A study on the social aspects of school lunches in Norway reported that the pupils wished school lunch was not included in any school-oriented activities (Fossgard et al., 2018). Andersen et al. (2017) divided research on teacher handling of school lunch into two positions: the discipline position which focuses on the meal situation as an instrument for social control and discipline; and the dialogue position framing the meals as a time for talk with the pupils. Andersen and colleagues concluded that most teacher interactions with pupils dealt with rule-setting and maintaining order. Similarly, Lalli (2020b) found that teachers associated social learning during school lunch with rules and regulations and were more concerned with monitoring pupils than interacting with them. In the literature, teachers have been described as playing a key role in school lunch health-promoting activities (Mita et al., 2015). Studies have indicated that teachers struggled to understand and/or enact their role as pedagogic mediators at mealtime and felt they needed more knowledge (Alberqueque et al., 2013; Persson Osowski et al., 2013; Sepp et al., 2006; Øvrebø, 2017). A study conducted in Denmark showed that it was more common for teachers to view school lunch as part of school health policy and practice, and less likely to be seen as part of education and learning (Benn & Carlsson, 2014).

The social and physical dimensions of school lunch

The school lunch has both social and physical dimensions. These are important to the overall school lunch situation since pleasant surroundings, including both social, temporal and physical aspects, provides good conditions for social interaction and a positive meal experience (Moore et al., 2010). The social and physical dimensions shape the everyday experiences and perceptions of school lunch (Daniel & Gustafsson, 2010) and influence social relations during the lunch (Moore et al., 2010; Pike & Colquhoun, 2009). Tørslev et al. (2017) explored Danish pupils' feelings about eating lunch at school and found that they experienced school lunch as noisy and hectic. Noise has been identified as a barrier to socializing during lunch (Pike, 2010). Researchers who have studied schools from a social and physical perspective have looked at, for example, the classroom (Höijer et al., 2013; McGregor, 2004) and outdoor spaces (Larsson & Rönnlund, 2020; Rönnlund, 2015; Thomson, 2005). Studies of the social and physical dimensions of school lunch have explored the interconnectedness between people, environment and food (see e.g. Moss & Petrie, 2002; Pike, 2008, 2010), often illustrated by the concept of foodscape (Brembeck et al., 2013; Johansson et al., 2009; Mikkelsen, 2011; Persson Osowski et al., 2012). School lunch environments have been further highlighted by the concept of commensality (Andersen et al., 2015), which refers to sharing food together.

Sharing meals in schools creates opportunities for pupils to socialize and many studies have recognized that sociality and friendship are essential parts of the pupil experience of school lunch (Andersen et al., 2015; Bruselius Jensen, 2014; Ludvigsen & Scott, 2009). Neely et al. (2014) who conducted a synthesis of different qualitative studies exploring young people's food practices found that these are important for their social relationships. It has been recognized that pupils view school lunch as a chance to create their own space, a children's space, in the otherwise adult-controlled day (Daniel & Gustafsson, 2010; Moss & Petrie, 2002; Pike, 2008; Rasmussen, 2004). At the same time, school lunches have been characterised as being controlled and governed by adults, mostly teachers (Fossgard et al., 2018; Metcalfe et al., 2008; Pike, 2008). This can influence how pupils experience the school lunch situation. It has been found that pupils in Norway experienced that the lunch break as being governed by an adult agenda which limited their desire to socialize and to create their own spaces (Fossgard et al., 2018). Similar results were found in a study by Janhonen et al. (2016) in Finland where the pupils experienced lunch time as their own time and did not want to be disturbed by teachers.

Theoretical framework

In this section I present how I interpret and apply the theoretical framework that underpins this thesis. An important starting point has been to address and understand the study object in its national and local context and, in the first paper, also the broader Nordic context. Taking a specific context into account is important since school lunch is contextually and socially entrenched in everyday life (Delormier et al., 2009) and how people act and construct meaning is specific to particular times, contexts and places (Berger & Luckmann, 1966; Burr, 2005). Context is also important in relation to policy, since how policy is interpreted and translated into action depends on the context (Ball et al., 2012). How people experience and perceive and conceptualize the world is affected by their surroundings so everyday practices and experiences are often situation bound.

The concept of school lunch is understood in broad terms, as a social and physical space incorporating the food (sensory aspects etc.), the practices (serving, eating, relations, interaction etc.) as well as the school restaurant, the physical setting where all this takes place (time, interior, sound etc.). This thesis is underpinned by Henri Lefebvre's theoretical framework for the social production of space, most evident in Papers 2-4, together with an overarching conceptual framework of social constructivism. A social constructivist perspective on school lunch is specifically emphasized in the first paper. It could also be seen as a metaperspective throughout the whole thesis since it has guided the focus of interest, the choice of study objects and methods. A social constructivist perspective draw attention to construction or, with Lefebvre's terminology,

production. In this thesis, there is a consideration of how school lunch is produced by policies etc., and also through the actions, perceptions and lived experiences of those who participate in it on daily basis. Lefebvre's theory highlights the physical and material dimensions of construction/production, for example, the importance of school restaurant design for the experience of the physical dimensions of school lunch. I wanted to shed light on how the school lunch situation is perceived and experienced by pupils, teachers and head teachers and discuss, for example, how these school actors make sense of and reconstruct school lunch in terms of intentions and practices. Within this framework, it is important to acknowledge that, as a researcher, I analyze and interpret social reality based on my perspectives and background. In this case, it is the context of school lunch in Sweden (and in the Nordic context). With the theoretical framework of social production of space, applied explicitly in Papers 2-4, I acknowledge that physical dimensions are of significance when exploring a phenomenon. During data collection and initial analysis of the second paper, social and physical dimensions of school lunch emerged which motivated a spatial approach and the theory of social production of space was considered insightful and appropriate for meeting the aims.

A social constructivist perspective

A socio-constructivist perspective and epistemological relativism (e.g. Burr, 2005) is specifically emphasized in Paper 1. In that study, interest lies in what is being constructed, how and why, with the premise that the ideas, the perspectives and the knowledge we have about the world are constructed and internalized by those involved (Berger & Luckman, 1966; Burr, 2005). In Paper 1, the focus was on how pupils constructed and reconstructed their understanding of school lunch in general. The discussion about school lunch was viewed as a social construction of common-sense knowledge, or social representation of school lunch, including the taken-for-granted and unquestioned ways of seeing everyday life as influenced by societal, cultural and historical realities. The focus was on participant-constructed knowledge, what they know and experience as reality rather than their theoretical knowledge (facts etc.).

Social production of space

To understand perceptions and experiences of school lunch from various perspectives, I have been influenced by the French philosopher and sociologist Henri Lefebvre's (1991, 2002) theoretical framework of social production of space and his focus on everyday life. According to Lefebvre (1991), space is socially produced but simultaneously also produces social life. Henri Lefebvre's theories on social space and everyday life has been used in both social, educational and childhood studies (see e.g. Gulson & Symes, 2007; Kellock & Sexton, 2018; Kullman & Paaludan, 2011; Middleton, 2014, 2016). Bruselius Jensen (2014)

used Henri Lefebvre's theories and literature on sociology when exploring how pupils in Denmark constitute a good school meal. The theory of social production of space focuses on meaning making and social knowledge constructed in a context in relation to both physical and conceptual dimensions. According to Lefebvre, social space is produced in a tripartite dialectic between different spatial dimensions: 1) the conceived space 2) the perceived space and 3) the lived space.

The conceived space, also known as the representations of space, constitutes the norms, values and abstract ideas of the space represented in different policy documents such as models, plans and theories constituted by policymakers (Lefebvre, 1991). The conceived space is important since it is part of the context of school lunch and affects how the school lunch take place. Here, policy context is also of interest since they highlight teacher and head teacher roles and assignments as well as what school lunch should be for the pupils. Policy context is present in all four papers. In Paper 1, however, the social production of space theoretical framework had not yet been applied: thus, the policy context is not there defined as the conceived space. In Paper 2, the conceived space of school lunch is discussed and problematized in relation to pupils' lived experiences of school lunch. In Paper 3, the conceived space is discussed in relation to how teachers perceive school lunch. In Paper 4, the conceived space is discussed in relation to how head teachers perceive and experience the school lunch situation.

The perceived space comprises the everyday routine- and practice-based space perceived by the senses. Pupils, teachers and head teachers have agency and capacity to negotiate how they make sense of school lunch, through the ways that they view, talk and act in relation to the event. This often has its starting point in the cultural space of school, in personal experiences and values as well as in abstract representations e.g. norms, policies, organization (i.e. the conceived space). Thus, how pupils, teachers and head teachers perceive school lunch is influenced by a number of individual, institutional and representational processes. This meaning-making process has great impact, for example, when putting policies into practice and for the interactions and practices that take place before, after and during school lunch. The perceived space is especially emphasized in Papers 3 and 4.

The lived space, comprise the space where experiences, relations, practices, meaning making and emotions are created and practiced through everyday life. The lived space is always produced in interaction with the perceived and conceived space. It is located in time and space and created through interaction. The lived experiences are for instance affected by the rhythms and routines of the everyday embodied perceived space, as well as underlying norms, values and intentions in terms of conceived space. The lived space is especially emphasized

in Paper 2, where pupils' lived experiences of school lunch is explored. In that paper, emotions are of interest, since it was part of the data collection framing, and also since emotions are an important part of the lived experiences in everyday life, and the meaning making that takes place in school spaces (Blazek, 2018; Hacket et al., 2015; Lefebvre, 1991).

Knowledge about the social production of space can be reached by exploring these three dimensions to provide a whole-approach understanding of space. This is also the core idea in this thesis. The three dimensions (conceived, perceived and lived) are emphasized to different degrees in each paper, although also continuously problematized in relation to each other. With this approach, it is possible to gain knowledge of social space, in this case the social space of school lunch, by exploring these dimensions. According to Lefebvre, social space is produced by physical, social and mental dimensions, and is in constant change – continuously created and transformed via the interaction between these spatial dimensions. In this thesis, the social and physical aspects of the social space of school lunch is specifically highlighted, although the mental space, in this thesis the conceived space, is also included. By understanding school lunch as social space I understand the school lunch as not having a fixed identity, it is continuously under production where these spatial dimensions interact. This makes it important to explore these dimensions, both separately and in relation to each other thereby gaining a comprehensive understanding of school lunch, with a specific emphasis on the perspectives of pupils, teachers and head teachers.

Methods and analysis

Research design

This thesis has a qualitative descriptive design. Qualitative methods were used and considered appropriate in relation to the aims, the approach and the focus of interest. For all papers, purposive sampling has been used, which has been identified as a mayor key to success within qualitative research (Cohen et al., 2011). An overview of the thesis study design, methods and participants is displayed in Table 1.

Table 1. An overview of the thesis study design, methods and participants.

	Paper 1	Paper 2	Paper 3	Paper 4
Country Context	School lunch in Sweden, Norway, Iceland and Finland		School lunch in Sweden	
Aim	To explore Nordic pupils' perspectives on the healthiness of meals in the context of school lunches	To explore pupils' lived experiences of school lunch	To better understand how teachers perceive school lunch	To contribute with an understanding about how head teachers perceive and experience the school lunch.
Participants	10-11-year-old pupils (N=457) from Sweden, Finland, Iceland and Norway data from the Pro-Meal project	10-11-year-old pupils (N=171) from Sweden data from the Pro-Meal project	Teachers (n=823) in compulsory school (grade 1-9)	Head teachers (n=10) in compulsory school (preschool class-9)
Method	Focus group discussions	Empathy-based stories	Written answers from an open-ended question part of a questionnaire	Individual interviews
Analysis method	Thematic analysis			

Papers 1 and 2 are based on data from a larger research project named Prospects for Promoting Health and Performance by School Meals in Nordic Countries (ProMeal). ProMeal was a cross-sectional, multidisciplinary study undertaken in Finland, Iceland, Norway, and Sweden in the years 2013-2014 (see Waling et al., 2016). The main aim of that study was to determine whether overall healthiness

of the diet, classroom learning behavior, concentration and working memory capacity in 10-year old pupils was associated with school lunches, and to capture main school lunch concerns among pupils in a Nordic context. Both qualitative and quantitative methods were used within the whole ProMeal project, although this thesis only includes the parts of this project where qualitative methods were used. Papers 1 and 2 aimed to capture pupils' views and experiences of school lunch, but in different ways. The first paper is based on focus group discussions and the second paper is based on empathy-based stories. Paper 1 and 2 bring forth pupil perspectives and experiences of school lunch. It has previously been argued that children should have a more active role when their food and meals are being studied; that children should be viewed as a resource and a co-researcher rather than as an object being studied (Janhonen et al., 2016; Johansson et al., 2009). Pupils are one category of actors most concerned with school lunch on a daily basis. Pupil perspectives are rooted in the concrete and practical everyday life in which they participate, their perspectives therefore generate knowledge about everyday meanings and practices associated with the meal. Studies of their everyday life, such as the norms and values of school lunch, can further describe the society (Lefebvre, 2002). Although pupils should have influence in the overall school situation, they have limited influence over where and what they eat for lunch during the weekdays, and how this take place. This motivated a qualitative approach and use of participatory, creative and flexible methods where pupils could feel comfortable expressing themselves.

Papers 3 and 4 explores school lunch from adult perspectives. Paper 3 highlights teacher perspectives and is based on data from a questionnaire study where a qualitative analysis of a narrative part of the questionnaire was conducted. Paper 4 is based on individual interviews with head teachers. Exploring teacher and head teacher perspectives on school lunch is important for the overall context of school lunch in Sweden. These perspectives also encompass their experiences of the working environment and the practical conditions for school lunch including the implementation of different objectives.

Participants

Papers 1 and 2 were part of the ProMeal project. In that study, the aim was to recruit 200 pupils born in 2003 (grade 4 in Sweden). Schools were recruited at each study site in each participating country. Head teachers, and then teachers, were contacted and informed about the study. Information letters and informed consent forms were thereafter sent home to caregivers and pupils for them to consider participation.

In Paper 1, covering data from Finland, Iceland, Norway and Sweden, 78 focus groups were conducted with a total of 457 pupils aged 10-11 years (Table 2). In

each class, pupils were randomly selected either from the whole ProMeal population or explicitly from those who wanted to participate in the focus groups. The aim was to get at least two focus groups in each participating school class.

Table 2. Number of schools, focus group discussions and participants in Paper 1.

Participants	Finland	Iceland	Norway	Sweden	Total
Schools	9	6	6	8	29
Focus groups	19	18	25	16	78
Participants	111	90	164	92	457

In Paper 2, participants consisted of 171 pupils aged 10-11 years. They belonged to fourteen classes from nine Swedish compulsory schools situated in a county in northern Sweden. A total of 193 empathy-stories were collected, but of these, 22 stories were removed from the analysis as the pupils chose to drop out of the ProMeal-study completely ($n = 3$), or because of difficulties in linking the stories to the correct individuals ($n = 19$).

In Paper 3, participants consisted of 823 teachers from compulsory schools (grade 1-9, ages 7-15). E-mail addresses for compulsory schools in Sweden were provided by Statistics Sweden which at the time had e-mail addresses for 58% of all schools in Sweden. These were general e-mail addresses for schools or school administrators, and the person receiving the e-mail was encouraged to forward it to those it concerned (i.e. teachers of pupils aged 7-15 years in grades 1-9). A total of 3629 teachers answered a web-based questionnaire about attitudes towards the use of school lunch for educational purposes (Waling & Olsson, 2017). Of these 3629 participants, 823 teachers responded to an open-ended question at the end of the questionnaire where they were offered a chance to make additional comments. This provides the data set for Paper 3.

Paper 4 considered the experiences of ten head teachers from compulsory municipality schools (preschool class to year 9, ages 6-15) where they are responsible for the early as well as the later part of compulsory school. The intention was to recruit head teachers representing schools that were situated in different regions in Sweden. Municipalities and schools were randomly selected from all three main groups (A, B and C) in the classification of Swedish municipalities (Swedish Association of Local Authorities and Regions, 2017, SALAR, in Swedish SKL), ranging from larger cities to smaller urban areas. Initially the plan was to recruit at least five schools/head teachers from each main

group. Many of the head teachers that were contacted did not respond and some declined to participate due to lack of time. With these recruitment difficulties, the procedure was modified in order to recruit as many participants as possible, thus, the intent to recruit at least five head teachers from each main group was adjusted. A majority of the participating head teachers worked in group B, some in group C and very few in group A. Participants were contacted by email with information about the study including the procedure and the ethical details. No one dropped out once they had decided to participate.

Data collection

To understand pupil perspectives and their experiences of school lunch, focus group discussions and the method of empathy-based stories were chosen. Both methods can combine activities such as drawing, speaking, using pictures (Cohen et al., 2011). This was considered appropriate especially when undertaking research with children.

Focus group discussions were considered as suitable when exploring young people's perceptions, as it can avoid power imbalances between researchers and participants and hopefully also create a safe peer environment (Adler et al., 2019). The fact that the participants knew each other makes it likely that they experienced the situation as safe and comfortable. Focus group discussions were further considered suitable since the research focused on participants' own constructions, understandings and meanings as well as the language and concepts they use (Berger & Luckman, 1966; Burr, 2005; Cohen et al., 2011; Wilkinson, 1998). For Paper 1, focus group discussions were conducted in a similar way in each participating country. These lasted between 25-50 minutes and consisted of three parts: introduction, photo-based discussion and paper-pencil assignment. To avoid single answer type of response, open-ended questions were employed (Cohen et al., 2011). In this case, a flexible discussion guide and stimulus material in the form of 14 photographs displaying different school lunch contexts were used. The diversity of the photos, that presented different school lunch situations from different countries and decades, was used to give input and inspire the pupils. Each child voted for two of these photos that they found the most interesting, and the photos with most votes were then used as the basis for discussion. During the third and last part of the interview, the pupils were asked to write and/or draw what they perceived as most important regarding school lunch, this activity was followed by a discussion about what they had written and/or drawn. Discussions about school lunch was viewed as social constructions of common-sense knowledge. No prompting questions about health were given by the researchers. The data collection took place between October 2013 and May 2014.

For Paper 2, the method of empathy-based stories was used. This was a passive role-playing method, where pupils were asked to imagine themselves in a specific situation. Passive imaginary types of role-playing methods are considered suitable for research with children (Cohen et al., 2011). Empathy-based stories are a rather novel method and seen as effective in exploring experiences and capturing the meanings people assign to a phenomenon. They put emphasis on issues that are relevant for the people studied (Wallin et al., 2018). This is something that is closely related to emotions and the lived experiences associated with a phenomenon, which were central to Paper 2. This data collection was part of the ProMeal project, although for this particular paper, the only data used were from Sweden. Participating pupils were provided with an introductory frame story and were then asked to imagine themselves in a situation then write, and draw, a story about an imaginary but possible school lunch experience.

The frame story: *Imagine that today's school lunch is just over and you are leaving the school restaurant. You feel satisfied and happy (Positive frame story)/It does not feel good (Negative frame story)*. Write a short story about what happened during the lunch to make you feel like this. You can also draw a picture/pictures/cartoon about your story after finishing the writing.

Pupils were randomized to one out of these two different frame stories (positive, negative). Their stories were written in the classroom during a regular lesson. The term “empathy” in this context indicates that participants imagine themselves in a situation described through the frame story and write a short story. The stories did not have to be 100% “true” representations of a real-life experience, although the pupils were encouraged to use their own experiences when writing the story. Thus, pupils were not necessarily expected to imagine themselves in someone else’s situation or role, which is common to the method as well as within the concept of empathy (Wallin et al., 2018). The data collection took place between October 2013 and May 2014.

In Paper 3, data from a web-based questionnaire conducted in Swedish compulsory schools used to study teacher attitudes towards the use of school lunch for educational purposes, and the extent to which they saw themselves as role models in that situation (Waling & Olsson, 2017). The questionnaire comprised a total of 20 questions with the main focus on questions about school lunch as a pedagogical activity, as outlined in different policy documents. The data analysed for this paper were collected in response to an open-ended question at the end of the questionnaire inviting additional comments. The material comprised a broad variety of comments and vivid depictions from teachers about their daily experiences of school lunch. These rich data suggested a qualitative approach to get a better understanding of how teachers perceive school lunch intentions and their daily practices. Data collection took place in May 2015.

In Paper 4, semi-structured interviews were used to explore head teacher perceptions and their experiences of school lunch. Individual telephone interviews via Skype were conducted with ten head teachers. During the interviews a semi-structured interview guide was used. This comprised background questions about the head teacher and the school (how long he/she had worked there; number of pupils at the school etc.) and was followed by questions based on the aim and study research questions. These ranged from head teachers' perceptions and their experiences of local and national intentions for school lunch and their daily implementation. The interview guide allowed follow-up questions based on the participant's answers and focus of interest. Some of the questions in the interview guide was revised and clarified in the early stages of data collection. Interviews were audio recorded and lasted around 30-45 minutes. Data collection took place between December 2019 and April 2020.

Analysis

In this section, it is outlined how and why the thematic analysis (Braun & Clarke, 2006) method has been used. In all studies, analysis was performed with the intention of looking for both semantic (descriptive) and latent (interpretative) content within the data. The analysis focused on latent content and themes strongly linked to the data. The results are based on researcher interpretations of the data and the analysis is therefore not just a description. By applying thematic analysis within a constructivist framework, the intention is to interpret and theorize contexts and structural conditions which are significant for the actors involved (Braun & Clark, 2006).

All four papers were guided by the phases of analysis explained by Braun and Clark (2006) but differ slightly in relation to the different empiric material and the aims of these studies. In general, after transcription, data were read a number of times and initial ideas (preliminary themes) were noted, coded and discussed within the research group. Codes were thereafter organized into themes following a phase where the themes were analyzed in relation to each other. In choosing thematic analysis, the intention was to eliminate the risk of losing the 'big picture' to abstract categorizations and to provide 'true' images of, for example, the pupils' stories (including the drawings), and pupil discussions about school lunch. A comprehensive analysis approach to the data was chosen, meaning that data were not differentiated by school, class, frame story and gender and no attempt was made to categorize specific individuals. Initial readings and analysis of the material, were initially inductive and very close to the original data, aiming to understand the material and give it a fair representation. However, the analysis process was conducted through the lens of theoretical perspectives. In practice, these had influence on the formulation of the specific study aims and area of focus

during the analysis. The results are based on theory-informed interpretations of the data.

In Paper 1, after conducting the focus group discussions, transcription and initial analysis was first undertaken in each country. Transcripts were written in the native language and made available to all co-authors. Pragmatically, each country translated some of the transcripts into English as a basis for general discussion. When analyzing focus group discussions, thematic analysis was found particularly useful given the large amount of data and organization factors (including data from all ProMeal project countries). Thus, the analysis method was chosen of fitness of purpose (Cohen et al., 2011), and enabled an analysis based on all the material. Clear features were observed already during the first readings of the data. The specific aim of the study was formulated based on the fact that the pupils themselves focused on different health issues, which motivated a more specific aim to explore their reasoning for this. The analysis procedure was elaborated by using two main questions: how do children make categories of healthy and unhealthy food and eating understandable? and how do children construct the wider role of healthy food and eating at school lunch?

In Paper 2, analysis of the empathy-based stories that pupils wrote (and drew) was initially inductive where preliminary themes emerged. The drawings were included in the coding process. Most often drawings confirmed the codes already written. At this stage, it was noticed that the stories revolved around the social and physical dimensions of school lunch, which motivated an application of the social production of space theory (Lefebvre, 1991, 2002). The analysis process was followed by a theory-informed synthesizing analysis of the themes where concepts derived from the theoretical perspective were used.

In Paper 3, the data, i.e. the teachers written comments, were emotionally charged and full of opinions. These comments were often in relation to the previous questions and answers in the questionnaire which was about different objectives for school lunch, i.e. the conceived space. The material was analyzed as a whole, and independently of the questions in the questionnaire.

In Paper 4, the data were analyzed as a whole, the material was not divided into categories based on the focus areas in the interview guide. Thematic analysis results represent head teachers' perceptions and experiences which are discussed in relation to policy representations (the conceived space). The theoretical framework has been used as a contextual background and one of the focus of interest, e.g. in the construction of research and interview questions the analysis and discussion of results.

Ethical considerations

The studies were conducted in accordance with ethical guidelines stated by the Swedish Research Council (SRC, 2017). These are based on the declaration of Helsinki and encompass requirements to inform the participant, to collect consents and requirements regarding confidentiality. All collection and storage of data that could be linked to participants was handled with care according to the General Data Protection Regulation [GDPR] (2018). The different data materials did not conflict with the conditions mentioned in the Swedish law of ethical concerns (SFS: 2003:460). As the different papers are based on data from different projects/data collections, I will in this section, explain the ethical considerations for each paper.

Papers 1 and 2 were based on data from the ProMeal project. For that project, ethical approval was sought and granted (2013-212-31Ö) before data collection started. Ethical issues mainly concerned parts of the project that are not part of this thesis, such as pupils' diet and health including measurements of height, weight and cognitive tests. In line with the Swedish Research Council (SRC, 2017), researchers always have to weigh the personal costs and possible benefits with the research, a common and central dilemma for the researcher (Cohen et al., 2011). The ProMeal project was motivated by many reasons: 1) there was a lack of research within the field of school lunch; 2) several social challenges in relation to school lunch and children's eating habits had been previously identified such as overweight, food waste and social costs; 3) the personal costs were identified as small compared to research benefits. All procedures involving human subjects were approved by the ethics committees in each participating university. Written informed consent was obtained from all parents/caregivers. All pupils were also informed about the study, including the fact that participation was voluntary, and gave their consent. All names used in citations are pseudonyms. Using qualitative methods to explore young people's experiences stands in line with children's right to be heard stated in the Convention on the Rights of the Child (UNICEF, 1989). Data collection methods that allowed pupils to express themselves and feel comfortable i.e. focus group discussions and empathy-based stories were chosen. Empathy based stories are considered a particularly ethical data collection method as it allows children to express themselves without disclosing private information.

The third paper was based on data from a cross-sectional quantitative study. Ethical aspects of the study were reviewed and approved by the Research Committee at the Department of Food and Nutrition, Umeå University. Before engaging with the questionnaire, teachers were informed in writing about the aim of the study and that it would not be possible for researchers to link answers to specific teachers or schools. Information had also been given about contexts in

which the results would be presented i.e. in scientific journals and popular science papers.

In the fourth paper, head teachers were interviewed via telephone. Information about the study was sent via email to the participants and repeated at the time of the telephone interview, including consent. Consent was collected and recorded before the interview started.

Results

Pupil perspectives and experiences of school lunch

Papers 1 and 2 aimed to explore school lunch from the perspective of the pupil. In the first paper, the focus was Nordic pupils' perspectives on the healthiness of the meals in the context of school lunches. During data collection and first readings of the transcripts, it became clear that the pupils themselves focused on school lunch in relation to health. This was especially noticeable during the photo-based discussion, and this motivated further exploration. The pupils showed good knowledge and awareness of food and health, and many pupils used concepts and terms used by professionals. The analysis resulted in two main themes related to the way that pupils conceptualized and reasoned about the healthiness of school lunches. The first was "*conceptualizing healthy and unhealthy food*" and describes how pupils made categories of healthy and unhealthy eating in the school context understandable. The second theme, "*acceptance of healthy and unhealthy eating in the school lunch context*" describes the wider perspective of healthy eating in the school context.

The main discussion centered on what was considered healthy and unhealthy eating in the context of school. Pupils emphasized the importance of eating healthy (and tasty) food at school by, for example, stating (unfavorable) properties of the food as well as short- and long-term effects of their eating behaviour. They reasoned and understood healthy eating in the context of school by categorizing and labelling food and the meal as healthy or unhealthy, and talked about these two categories in different ways. When they discussed healthy foods they spoke very rationally, correctly and normatively. Unhealthy food was more emotionally and morally charged and perceived as unacceptable in school except on special occasions. In the last part of the interview, the paper-pencil assignment, the importance of a both healthy and tasty school meal emerged. Pupils discussed and negotiated these two dimensions in relation to each other.

"It is good – because they [fish sticks] are bad for your health. Therefore, it is good that we have fish sticks so seldom [...] but they are just sooo tasty [...] they taste so good"

Though there are somewhat different school meal systems in the four participating countries, - these Nordic pupils seem to share the adult-set discourse of healthy eating in the school context as a socio-cultural norm and have embodied the generally accepted policies and ideology around school lunch as an arena for health promotion.

In the second paper, the aim was to explore Swedish pupils' lived experiences of school lunch and how they relate to the social and physical dimensions of school lunch. Pupils' stories were rich and emotional and gave a two-sided (positive and negative) view of the features that emerged. The analysis resulted in three themes: *Interaction and exposure*, *Routines and restrictions* and *Food and eating*. The emotions and associations that arose in relation to school lunch were clearly linked to social and physical dimensions and contributed to the overall lived experiences of school lunch and what was considered a bad versus a good school lunch experience. Here, food and food-related issues were mentioned in the stories, but in relation to dimensions other than health, such as sensations, serving, presentation and cooking. The results from Paper 2 showed that the social and physical aspects of eating in the school restaurant were crucial for the way that pupils experience the school lunch. The sociality of sharing a meal with a friend was highly valued:

"I am sitting in my seat and observing what the people sitting next to me are talking about. We are talking about fun things we have been doing, and everyone is laughing and having fun. Everybody is talking and nobody is left out"

School lunch was often described as a time and place to socialize with other pupils, and adults were rarely mentioned in the pupils' stories. The few adults mentioned were more often kitchen staff than teachers. Having the opportunity to socialize with others gave rise to positive feelings, and not having the opportunity gave rise to more negative feelings which could affect how much pupils ate, and how long they sat and ate. Socializing and sharing a meal with friends was sometimes disturbed by loud noises, lack of cleanliness and time. The space of school lunch was sometimes described as an environment where you might feel exposed and vulnerable (see Figure 1). A pleasant meal experience seemed to require harmonization between the physical and social space whilst negative experiences contain tensions between them.

"I'm sitting on my seat in the school restaurant, it was disgusting food, people screamed and threw peas and other disgusting things. I'm not sitting next to the one I want to sit with. I was very unhappy with everything in the school restaurant that day. It's really dirty on the tables."

School lunch was also highlighted as a routinized event where the pupils followed times and routines set by adults. The results from Paper 2, show how the framing and organization of school lunch, with a special emphasis on the social and physical features, are of significance for the pupils' everyday lived experiences of school lunch.



Figure 1. Example of a drawing by a pupil participating in study 2 where Empathy-based stories were used to explore pupils lived experiences of school lunch.

Papers 1 and 2 brought out different dimensions of school lunch from the perspective of the pupil. One of the main features that these papers have in common, is that they highlight pupil perceptions and experiences in relation to the conceived space of school lunch in terms of norms and discourses in wider society and organizational structures, frames and practices at individual schools. One concrete example of how Papers 1 and 2 provided different perspectives on school lunch was how different dishes were discussed. Dishes such as pancakes, taco, pizza and hamburger were mentioned by the pupils in both Papers 1 and 2, but in different ways. In the first paper, where the discussions on school lunch focused on health, those kinds of dishes were often labelled as bad. In the second paper, those dishes were mentioned in a positive sense and as part of a positive meal experience.

Teachers perceptions of school lunch

In Paper 3, the aim was to explore how teachers in Sweden perceive the school lunch in terms of national policy intentions and daily practices. The analysis resulted in two themes: *School lunch as a means for social interaction with pupils* and *The school lunch – a challenging activity*. In this paper, the results are to a large extent based on teachers' reactions to different policy intentions for school lunch, i.e. the conceived space. Participating teachers generally saw the potential with school lunch and seemed to perceive school lunch as a time and place for social interaction and also, in some cases, as a pedagogic activity. School lunch was seen as an opportunity to converse and strengthen relationships, and for meeting pupils in an informal setting.

“Lunch is a great opportunity to talk about things around the pupil. Give the pupil the time to talk about an interest or an event that concerns him or her. Getting to know each other better, which also gives a better learning situation.”

Many teachers had a child-centered approach, where pupil needs for recreation and peer interaction was mentioned. However, how the teachers perceived the school lunch situation often involved the relationship and tensions between intentions and the teacher's daily reality. This was crucial for the way that teachers perceived the overall school lunch situation.

“I choose to eat my own meal after the school lunch because it is too stressful to observe and discipline 22 pupils and to eat at the same time, in a noisy and unpleasant environment. If the food was free of charge and hygienically managed, and if the eating environment was calmer, more adults would eat in the school restaurant.”

The analysis indicates that teachers were not always provided with favorable conditions for school lunch interactions. These less-favorable conditions often included the meal environment, factors in the teacher's working environment such as time and payment as well as the need for a break, but also referenced the food being served. This was often seen as deficient, making it harder for teachers to act as role models. The issue of time featured in many of comments and it was clear that teachers found school lunch as time-restricted and stressful. Also, the general meal environment, such as loud noise levels, was said to cause interactional difficulties and constrain school lunch becoming both pleasant and successful. Thus, the non-favorable conditions were of significance for if, and how, teachers perceived school lunch as a pleasant time and a pedagogical activity.

Head teachers' perceptions and experiences of school lunch

In Paper 4, the aim was to explore head teachers' perceptions and experiences of school lunch in their daily setting and also their perceptions about the intentions of school lunch, i.e. the conceived space. The analysis resulted in two themes: *The school lunch – a means for getting all pupils fed and energized* and *The importance of a well-functioning cooperation between food service and school*. Both themes deal with how head teachers' perceived the daily practice of school lunch, and the different aims and intentions along with the conditions to reach those. It was found that head teachers primarily perceived, and valued, the school lunch as a means for getting all pupils fed and energized. The compensatory purpose that the tax-funded school lunch was said to provide, i.e. that the school provide good conditions for all pupils regardless of their socio-economic background, was expressed as much-needed and seen as the main purpose of school lunch.

“The purpose of the school lunch for me is equality, that all pupils get to eat a proper lunch, that it does not depend on the parents and the pupil's situation at home. We have school lunch so that everyone will get the same conditions for knowledge acquisition in school. That is the purpose for me”

School lunch was in general not considered a pedagogic activity by head teachers. Rather, it was seen as a time for pupils and a social meeting place, where they could interact and share a meal. School lunch was important for learning and for pupil performance after the lunch: it serves to give pupils energy for the rest of the school day. The study further showed that the head teachers did not generally manage the school lunch as a systematically part of the pedagogical activities and policy documents, both local and national, did not have a significant role on head teachers' involvement with school lunch. The analysis indicated that the reason it was not seen as a pedagogic and integrated part of school operations was multifaceted. First, participating head teachers generally put emphasis elsewhere

and had not reflected much on school lunch as a social and pedagogical activity, claiming insufficient knowledge.

“To begin with, you have to have some kind of knowledge so that it is generally known that there are clear goals other than that the food should be good and you should be full and you should have a place to sit...”

It was also found that the organization of school lunch and the cooperation (or rather lack of cooperation as well as understanding) with the food service unit, were of significance for the way that head teachers perceived and experienced the school lunch situation. Many saw school lunch as an activity that was not jointly planned, something that hindered intentions and daily practice. The need for better cooperation between the units was emphasized.

“It would be good to create better forms and culture for collaboration between school and food service. It feels like they do their job with their guidelines, now they just present this information to us and, but, in practice, who does the work? School personnel! It is a barrier between the administrations, and this is on a higher (management) level, not really the kitchen staff at our school. School lunch is not a co-planned activity, they just inform us about changes and so on. Maybe we are too far apart from each other, we should really use each other as resources”

Although the food itself was mentioned, it was clear that other aspects were more central to school lunch perceptions and experiences: *“It’s not really about the food, it’s about everything else”*. Alongside the issues highlighted in relation to the organization of school lunch, many head teachers also referred to logistical challenges. This specifically concerned time-management in relation to the set time-frames, as well as number of pupils and the size of the school restaurant. These too were said to constitute non-favorable conditions for the overall school lunch situation.

Discussion

Results from the four studies, when considered jointly, show that the experiences and perceptions of school lunch is multifaceted and not simply a time and place where pupils eat. When discussing school lunch as a social, physical, and pedagogical space, as well as the overall conditions for school lunch, we need to understand the different perspectives that potentially emerge among those involved. The four papers highlight somewhat different perspectives on school lunch, but at the same time also suggest several similar features contributing to pupils, teachers and head teachers' perceptions and experiences. The thesis provides an understanding of what the school lunch is, and can be, according to pupils, teachers and head teachers.

The social production of space theoretical framework enabled a whole-approach of the school lunch highlighting its lived, perceived and conceived dimensions. This approach has made it possible to contribute a better understanding of the multifaceted character of the school lunch, and also its processual character. The school lunch does not have a fixed identity, it is under production via the interaction between these different dimensions and the actors involved (Lefebvre, 1991). Pupils, teachers and head teachers are co-constructors and contribute to the way that school lunch is produced through their actions, perceptions and lived experiences. The theoretical framework further contributes to an understanding of tensions and harmonizations in relation to school lunches. Overall, the theoretical framework has helped to illustrate that the lunch is not only about the food, it is also about much else.

All three spatial dimensions that, according to the theoretical framework, contribute to the production of school lunch, have been addressed in the thesis, although to varying degrees in the various papers. In Paper 2, the focus was on lived space and in Papers 3-4, and to some degree also in Paper 1, on perceived space. The third dimension, conceived space, has been addressed in all papers but more as a background and something to relate to in the interpretation of the results of the perceived and lived school lunch. It was also used as a stimulus. In Paper 1, the pupils were not asked to discuss different intentions with school lunch, but the stimuli material (the photos) portrayed school lunch in different contexts and countries. Results from that study show how pupils perceive a "proper" school lunch, reflecting the norms, values and ideals, i.e. the conceived space. In Paper 2, the intent was not to prompt the conceived space of school lunch but the pupils were asked to imagine a positive or negative school lunch situation, which brought out ideas about a "proper" school lunch situation. In Paper 3, the conceived space in terms of national policy intentions was prompted through prior questions in the questionnaire, and the main results from that

study include teachers' reactions in relation to those intentions. However, the results further showed that the conceived space, in terms of organizational frames and structures, was crucial to teacher perceptions of the school lunch situation. In Paper 4, the head teachers were asked about intentions, how they perceived the intentions of school lunch, and in relation to national policy intentions and to some degree also to local ones.

The results indicate a measure of agreement among school actors concerning how they perceive and experience school lunch generally. Organizational structures such as time frames and the physical room, are of importance for all actors and the norms, values and ideals (the conceived space) associated with school lunch are visible through the organizational structures within the municipality and at the school. All three school actors have limited power and influence over the overall school lunch situation. Even head teachers, who hold overall responsibility for the individual school, reported that they did not always have mandate to change the situation. Overall school lunch experiences encompassed, not only the physical room, but the people involved and present in the school restaurant. For example, head teachers and teachers emphasized the importance of how the kitchen staff treated and talked to pupils and teachers. Kitchen staff were also mentioned by the pupils, but their focus was on peers. In terms of tensions, the perceived purposes of school lunch were not unanimously agreed, although all actors emphasized the social dimension. It was clear that teachers and head teachers did not see the school lunch as an pedagogically integrated part of school to the same extent.

When looking back at the different papers in this thesis, there are some common key results that I specifically want to emphasize and discuss:

The divided organization and responsibility of school lunch

Results indicate that the way school lunch is framed and organized, complicates and educes non-favorable conditions for the school lunch situation. This was something that was mentioned by all three school actors. Thus, the whole "meal chain" at school level, starting with the school's head teacher, then to the teacher, who is supposed to act according to way school lunch is framed, has an effect on the meal guest, i.e. the pupil. In the results, it was clear that the overall framing and organization of school lunch had great significance for the perception and experience of school lunch for all three school actors.

The effects of school lunch organization within the municipality was particularly emphasized in Paper 4 when exploring head teachers' perceptions and experiences on school lunch. Interviews with head teachers showed that they experience a lack of cooperation and understanding between school personnel

and food service personnel. This made it harder to put intentions in practice, whether these were individual, local or national policy intentions. It has previously been shown that food service managers also perceive organizational factors as one of their main concerns and a barrier to cooperation between different staff groups at school (Holmberg, 2019). Difficulties in cooperation between food service and the school are associated with different perceived means, different cultures, and a lack of opportunities to meet and discuss these issues (Eriksson, 2014). This corresponds with the results from this thesis. Thus, it seems that head teachers and food service managers share this perception.

One interesting result, was that local and national policy documents, and the intentions included in those documents, generally had no significant role for the head teacher in relation to school lunch. Actually, many of the head teachers did not know of their existence and, those who did, said it was part of the responsibility of the food service personnel. These results correspond with a previous study showing many head teachers were not familiar with the national guidelines (NFA) (Olsson & Waling, 2016). Results from the present thesis further confirm Olsson and Waling's (2016) speculations that this is related to lack of awareness of the guidelines, and that head teachers sometimes assume this is part of the responsibility of others. Also, results from the present thesis show that the organization of school lunch constitutes a challenge in terms of logistics, especially in relation to time management and the meal environment. This was highlighted as a daily challenge for the head teacher as well as the teachers. Teacher perceptions of school lunch, and their role during the lunch, were not perceived as being clearly and consistently defined, and the organization, logistics and daily practice of school lunch was perceived as challenging and problematic especially in relation to their working environment. Teachers stressed that they were not always provided with favorable conditions for the school lunch situation (interactions, practices, intentions), which also corresponds with pupil experiences of school lunch.

Results from this thesis confirm the importance of having a well-functioning organization and good communication between different school lunch actors to be able to achieve different goals and to manage the school lunch situation (NFA, 2019). It has been reported that the lack of a supportive organization, makes it hard to integrate food and meals as a tool for learning in preschools and that a supportive organization is key to this integration (Sepp & Højjer, 2016). A project report on meal experiences in Swedish school restaurants showed that the kitchen staff stressed the importance of a collaboration between all personnel and that the head teacher was important for the overall school lunch experience (Prim & Broberg, 2014). Results from this thesis reinforce concerns that divided organization and responsibility for school lunch can educe a risk of losing the whole (Olsson & Waling, 2016). About 25% of the meal policies for Swedish

compulsory schools lack objectives for how the school lunch should be integrated. The results also reinforce the idea that a positive and successful school lunch situation requires a team effort, where different professions collaborate (Grausne & Quetel, 2018). Further, it is not just a question of collaboration and communication between school and food service personnel, but between head teachers and teachers. This, as well as having common goals, is especially important in the municipalities where there is a separate administration (Grausne & Quetel, 2018). Well-functioning cooperation is needed when aiming to integrate the school lunch into other parts of the school day, where all school lunch actors, including the food service personnel, are involved. Kitchen staff members are important to the school lunch situation (Day et al., 2015; Earl, 2020). Kitchen staff were seen by all participating actors, and especially the head teachers, as crucial to the school lunch situation. Head teachers in general were positively disposed to making kitchen staff a more integrated part of the school, but the division between school and food service caused tensions for the integration of staff groups. The role of kitchen staff could be expanded, for example by visiting classes and talking about school lunch related topics, in literature this is referred to as an expanded educator approach (Lintukangas, 2009).

The (different) perceptions of the purposes of school lunch

There are both similarities and differences for how participating pupils, teachers and head teachers perceived the purposes of school lunch. Something that they all had in common was that school lunch was seen as a social meeting place, an opportunity for pupils to recover and socialize and share a meal together. In general, school lunch was perceived as the pupils' recess and leisure-time. All three school actors also referred to the importance of school lunch for the rest of the school day. The results, taken together, show that the meaning of school lunch for pupils generally was to socialize and eat a tasty (and healthy) meal in a pleasant environment. Teachers emphasized social aspects of school lunch, not only for the sake of pupils, but also for learning opportunities and to strengthen relationships between adults and the pupils, which in turn could have wider positive effects. Head teachers acknowledged social dimensions of the school lunch but did not in general perceive school lunch to be a teaching occasion, rather it was a service to feed all pupils. The compensatory effect that school lunch provide, i.e. schools provide good conditions for all pupils regardless of their socio-economic background, was highly valued by teachers and particularly so by head teachers. Participating head teachers had not reflected much on the wider potentials for school lunch, such as learning, teaching and the connection with other school subjects. The results overall indicate that it is more common among teachers, as compared to head teachers, to think of school lunch as a possible pedagogic activity. However, it is clear that not all teachers perceive school lunch

as a learning space (Forero et al., 2009; Torres & Benn, 2017). It seems that, to a larger extent, head teachers associate the purpose of school lunch with the traditional ideology of promoting social equality (Persson Osowski & Fjellström, 2019), rather than the current and wider intentions emphasized in the national guidelines (National Agency for Education & National Food Agency, 2015; NFA, 2019). On the other hand, teachers had been exposed to questions regarding school lunch as a pedagogic activity with prior questions in the questionnaire. Further, it was more common among teachers and head teachers to perceive school lunch as part of the pedagogic activities with younger grades. This has been seen also from the teacher perspective when exploring teachers attitudes towards school lunch as a pedagogic activity (Waling & Olsson, 2017); and teachers' interactions during school lunch (Persson Osowski et al., 2013).

In Sweden, in wider society, by tradition, in policies, the concept of serving a nutritious school lunch is seen as a service to provide social equality, healthy lifestyles, and to teach pupils about various topics (NFA, 2019; Persson Osowski & Fjellström, 2019). In research, and in the national guidelines, school lunch is further portrayed as an opportunity for learning, where the adults present, most often teachers, have a significant role (NFA 2019; Waling & Olsson, 2017). At the same time, school lunch is also seen as a time where pupils are able to relax and socialize. In this thesis, pupils, teachers and head teachers had somewhat different ideas about what constitutes the purpose of school lunch, which may complicate the possibilities of reaching both individual and policy intentions. It might, for example, create the risk that pupil and teacher agendas and needs are over-ridden. However, perceiving and managing the school lunch as a learning opportunity does not necessarily have to result in a restriction of the pupil's time. For example, pedagogic activities do not solely need to be practiced during the meal and could just as well be practiced during other parts of the school day. By employing a whole-school and cross-disciplinary approach where food service personnel, other school personnel and school subjects are included, the school lunch could become a better integrated and natural part of school life. A whole-school approach of school lunch had been emphasized also by Lalli (2020a) and has further been reported as critical to health promotion interventions (Day et al., 2015). The National Agency for Education and National Food Agency (2015) provides support for head teachers and schools that include the connection between school lunch and several school subjects. Head teachers are crucial for the overall school lunch situation (Earl, 2020; Holmberg, 2019; Prim & Broberg, 2014). If the head teacher does not see school lunch an important social and pedagogical part of school, it is less likely that it is communicated as such to the pedagogues that work at school and share school lunch with the pupils. It is also less likely that teachers are being provided with the conditions to manage school lunch as a pedagogic activity. Besides a deeper understanding of how pupils, teachers and head teachers perceive the purpose of school lunch, the results

presented in Paper 4 provide a hypothesis that there are tensions between school and food service personnel in the way that the purpose of school lunch is perceived - for example in relation to what is considered best from the pupil perspective.

Time restrictions and non-favorable environments in school restaurants

The meal environment, and specifically issues regarding time and the physical space, was mentioned by all three school actors. The physical room, i.e. the school restaurant, was clearly crucial to how school lunch was perceived and experienced. The results indicate that the way school lunch is framed and organized at the individual school is of significance for a pleasant school lunch experience, and this seems to require harmonization between social and physical dimensions. Social interaction, for example, was highly valued by all three school actors, but was said to be constrained by the social and physical dimensions and overall conditions for school lunch interactions. School lunch was by all participating school actors portrayed as a routinized, noisy and time-pressured event, that could produce stress and negative emotions. This corresponds to what had been seen in previous research (Hart, 2016; Torslev et al., 2017). The results from this thesis are a practical example of how individual rhythms often clash with the rhythms of the conceived space (Lefebvre, 1991; Middleton, 2016). Time management and the logistics of school lunch, which had effect on the overall meal environment, were said to be a daily challenge for teachers and head teachers, and shortage of time was said to be a problem for managing school lunch, and the way it was perceived. For example, the physical aspects (time, space) caused restrictions on individual needs and for both social and pedagogic intentions. Thus, the timetabled routines of school lunch were not always in line with pupil or teacher lived rhythms. Unfavorable conditions often caused tensions, which these school actors dealt with in different ways and to varying degrees, for example by adapting to the time restrictions and the noise level.

Time restrictions has been reported in other studies, and it seems as though it also constitutes a challenge internationally. Structural factors such as time and poorly-designed school restaurants have been identified as one of the most problematic issues associated with school lunch and a barrier for meeting policy aspirations (Devi et al., 2010; Lalli, 2020a). School is regulated and governed by timetables: this has also been seen in studies on school lunch (Brembeck et al., 2013; Hart, 2016; Torslev et al., 2017). In those studies, time negatively impacted pupil experiences of school lunch, which corresponds with results from this thesis. Shortage of time has also been identified as an obstacle to working with food as a tool for learning among preschool teachers (Sepp & Höjjer, 2016), and a problem for social learning during lunch (Lalli, 2020a). It has been recognized

that schools using school lunch for both eating and teaching significantly reduced time for eating and socializing (Wills et al., 2015). It is clear that time-pressured school restaurants can be detrimental to meal experiences and obstruct possibilities of interaction. Time restrictions not only affect the social and pedagogical aspects of school lunch, but could also have meaning for health. Feeding large number of pupils in a short time is a challenge, and it has been previously reported that pupils have to eat quickly to finish their meal and go to play or return to class (Earl, 2020), and that time constraints are a barrier to eating nutritious food (Bauer et al., 2004). Results from this thesis indicate that the conceived space of school lunch, in terms of time frames and non-favorable environments in school restaurants, causes tensions that impact the experiences and perceptions of school lunch. Similarly, it was seen in a project on meal experiences in Swedish school restaurants that pupils, pedagogues and meal staff wished the school lunch situation would improve in terms of, for example, the meal environment, time to eat, the food as well as the commitment and treatment of all involved (Prim & Broberg, 2014). This could indicate that the school restaurants are not always purposively designed. Ideologies as well as stated and perceived purposes of school lunch may shift, but the physical space of school restaurants may not change as often. In accordance with Moore et al., (2010), policy should place greater emphasis on the overall meal environment including the time-management, and schools should consider extending the mealtime (Lalli, 2020a).

Pupils everyday experiences of an adult-controlled space

School lunch is planned and controlled by adults (Fossgard et al., 2018; Metcalfe et al., 2008; Pike, 2008) but is, at the same time, a school activity that concerns pupils the most. This thesis shows how pupil perspectives are rooted in the concrete and practical everyday life in which they participate. Although the framework of social production of space had not yet applied when working with Paper 1, the dimensions and concepts within the framework were relevant also for that paper. Pupil perceptions of school lunch were strongly related to the abstract ideas and dominating discourses in society, i.e. the conceived space, something that clearly had meaning for the way they saw school lunch. The social production of school lunch not only takes place in school, the experiences and perceptions of school lunch are a reflection of the norms, ideals and values in society more generally (Lefebvre, 2002). This was especially evident in Paper 1 where participating Nordic pupils associated school lunch with rules and norms and had internalized the socio-cultural ideal of healthy eating in the school context. The results confirm the well-established idea that the value of food is often defined in dichotomies of good and bad in school settings, something that has been seen as part of the pupils' foodscape at school (see e.g. Johansson et al. 2009; Karrebaek, 2011; Noble et al., 2000; Persson Osowski et al., 2012). In

Paper 1, conceptualizations of healthy eating were connected to nutritional, socio-cultural, emotional and normative factors, and healthy eating was constructed as the “proper” eating behavior. Although pupils expressed the importance of a healthy (and tasty) school lunch, it is important to be aware that health carries cultural, social and moral meanings and that the discourse of health and nutrition shape perceptions and experiences of school (Earl, 2020).

Young people’s everyday meal experiences and how they value and construct meaning in relation to school lunch is broader than health and involves the social, physical, emotional and sensuous dimensions of school lunch. Paper 2 shows how the pupil foodscape is broader than the food itself and includes physical and organizational factors (Mikkelsen, 2011), such as the meal environment including both time and location (Earl, 2020). In Paper 2, where pupils’ lived experiences were explored, it was clear that the social and physical aspects had great meaning for how pupils experienced school lunch. This confirmed previous research reporting the social aspects of school lunch as a top priority for the pupils (see e.g. Andersen et al., 2015; Bruselius Jensen, 2014; Fossgard et al. 2018; Ludvigsen & Scott, 2009). Also, sensations have been identified as crucial for pupils’ meal experiences (Brembeck et al., 2013; Bruselius Jensen, 2014). This corresponds to the results in both papers in this thesis exploring school lunch from the perspective of the pupil. Pike (2008), Daniel and Gustafsson (2010) and Welch et al. (2012) point out that a strong focus on dietary health can hinder consideration of the social aspects of eating, as well as the wide pedagogical meanings of food in school. It has also been suggested that proper behavioral codes overshadow the social aspects of eating together (Hansen, 2016). Results discussed in this thesis also indicate that there are physical and organizational constraints that may act as a barrier to the pupils’ social agenda. The barriers were more obviously determined by others than the pupils themselves. For instance, the time-tabled routines of school lunch planned by the adults were not always in line with the pupils’ agenda and daily rhythms: this, in turn, permeated their perceptions and experiences of the food, eating, and the overall meal environment. The results indicate that schools do not always live up to their responsibilities for the physical and psychosocial environment in the school restaurant. Thus, it seems that not only the teachers and the head teachers, but also the pupils, are displeased with the unfavorable conditions, that to some extent originate in the way that school lunch has been conceived.

Methodological considerations

In this thesis, four quite different qualitative methods has been used. One lesson that I have personally learned from this journey, is that the methods chosen really have great significance for the approach and the outcomes. This was especially clear when exploring pupil perspective on school lunch, where the two different methods resulted in different outcomes, and dimensions of school lunch. It is important to be aware that the choice of method may affect the outcome, especially when undertaking research with younger people, and where the aim is to capture their everyday experiences. It is especially important to choose a method that allows the pupils to feel comfortable, included and also inspired.

Paper 1 drew on focus group discussions with pupils, in which pictures of school lunch in different contexts were used. Using pictures when interviewing children can be difficult as children are easily distracted (Cohen et al., 2011), and this was something that was noticed also in this study. Participating pupils focused a lot on the stimulus material, the pictures used during the focus group discussions, which made it difficult for them, as well as the moderator, to talk about other aspects of school lunch besides those provided through the photos. On the other hand, pupils found the photos interesting and it inspired them to discuss. Our interpretation is that the pupils in some cases provided sociable desirable answers, as interviews may do (Wallin et al., 2018). In this case, these were in relation to how the social constructions of school lunch often deal with health, nutrition and the body. Thus, pupils' discussions about school lunch were viewed as a social construction of common-sense knowledge or social representations, which are interpreted as being provoked by the stimulus material, and not necessarily something that is central to pupils' everyday lived experiences of school lunches. Data collection and analysis for Paper 1 was challenging as it involved a large research group with researchers from different countries with different personal and academic backgrounds. This made it crucial to frequently discuss the procedures and the different steps of the analysis within the research group.

In comparison with the focus group discussions, where salient topics may have been inadvertently omitted (Cohen et al., 2011), the empathy- based stories (and the theoretical framework) in Paper 2 opened up new perspectives and dimensions of pupil perspectives and experiences of school lunch. Although the stories did not necessarily need to be "true", the themes that emerged are interpreted as a reflection of their everyday lived experiences of school lunch where the constructed meanings primarily focused on the relation between social and physical aspects. Also, compared to the focus group discussions, pupils often used the first-person in their stories which often included themselves and friends.

The method was considered as an ethically-appropriate data collection method as it allowed the pupils to express themselves without disclosing private information. This method was considered fruitful in accessing pupils lived experiences of school lunch, and I believe that the framing of the task contributed to its success. For example, the stories were written during a regular lesson in school and I think that the task itself was experienced as similar to a regular school assignment. Also, the presence of the pupil's teacher, contributed to a positive and safe environment where the pupils felt comfortable expressing themselves.

Paper 3 was based on an open-ended question in a questionnaire. Even though the participating teachers could choose freely what to write, it was clear that the questions in the questionnaire before the open-ended question had an effect on, and provoked, participant comments. Many of the teachers wrote about perceived intentions of school lunch that originated from previous questions and answers in the questionnaire (Waling & Olsson, 2017). Others were expanding their thoughts on the wider potential of school lunch and, specifically, the overall conditions for the school lunch. This examination of the 'further comments' data was valuable as it brought out depictions of teacher experience outside the scope of the questionnaire (Waling & Olsson, 2017). This material made the analysis process both inspiring and challenging, and it was initially quite intense to go through the material. Further, this study shows how an optional open-ended question in a quantitative questionnaire can contribute to rich qualitative data.

Paper 4 was based on individual semi-structured telephone interviews with head teachers. Individual interviews made it possible to get closer to the head teacher's perceptions and experiences of school lunch at their individual school. Although motivation to participate may be lower than for a personal interview (Cohen et al., 2011), telephone interviews were chosen for practical reasons. There are many advantages of telephone interviews for the researchers; for instance, they are cheaper and less time-consuming. There are some differences between conducting interviews via telephone and face-to face. For example, respondents may not wish to spend a long time on the telephone, thus, telephone interviews tend to be shorter (Cohen et al., 2011). In this particular substudy, I believe that the flexible character of telephone-interviews made head teachers more willing to participate. Some of the interviews were rather short, but still covered all aspects in the study guide. However, recruitment for the Paper 4 project was challenging, one possible reason for this was the ongoing pandemic (Covid 19), another reason could be head teachers already strained work situation. It could be argued that the sample is not very large, however, the interviews were fruitful and participants introduced experiences and ideas that could, and should, be taken seriously for future research. Also, similar features and clear themes emerged, which indicated that saturation was reached. However, the shortage of literature

on head teacher perceptions and experiences of school lunch, might usefully stimulate further research. Interview questions were slightly modified to fit the participants, for example, when noticed that the head teachers has some trouble discussing different intentions of school lunch provision.

Trustworthiness

The trustworthiness of this thesis is discussed in relation to the different concerns that are common within qualitative traditions, namely the matter of dependability, credibility, transferability and confirmability (Lincoln & Guba, 1985). Purposive sampling was applied where the aim was to capture perspectives of school actors who were believed to have had experience of school lunch. The thesis highlights school lunch from the perspective of pupils, teachers and head teachers, and the results were believable and credible from their perspective. However, accuracy and care in the process of interpreting the material, is something that is important in the field of social science, and especially so within a qualitative design (Cohen et al., 2011). Analysis and results will never be free of values and interest, and as a researcher is it crucial to be aware of the trustworthiness of the study and the processes included, including the researcher's own background and values (Cohen et al., 2011). It could be argued if the focus group discussions in Paper 1, with photos as stimulus material, really measured what was supposed to be measured. Although I would state the information collected as reliable and "true", I am certain that the stimulus material, and perhaps also peer pressure, steered the conversations into perspectives that may not be as crucial for all pupils in their everyday experiences of school lunch. Both focus group discussions and empathy-based stories were considered suitable methods when undertaking research with children and to capture the data intended. This, too, is part of the study's credibility (Cohen et al., 2011).

In relation to the aim and theoretical approach of this thesis, it is important to highlight that, as a researcher, I have my own experiences and perceptions of school lunch: as a researcher I take part in the production of the conceived space of school lunch. In general, the conceived space was often problematized as national policy intentions. In Paper 1, where the theoretical framework had not yet been applied, the original intent was not to explore how the pupils perceived the school lunch in relation to the conceived space. However, the method and the outcome which, to a large degree, is based on the stimulus material, reflect the conceived space of school lunch in terms of norms and values. In Paper 2, where pupils wrote stories about school lunch, the intent was not to prompt the conceived space of school lunch. However, pupils were instructed to imagine a positive or negative school lunch situation, which could be problematized as a reflection of the conceived space of school lunch, and the results that emerged from those stories provide information about their lived experiences in relation to the conceived space. In Paper 3, the conceived space was prompted as the data material was, to a large extent, based on teacher reactions to policy intentions, but also to wider conditions and expectations at the individual school that were

not prompted and also constitute part of the conceived space. In Paper 4, the interview guide contained questions about head teachers' experiences of daily practice and of the intentions of school lunch, from the head teacher's own perspective and in relation to local and national policy documents.

Regarding transferability of the results, this thesis is undertaken in a Swedish context which is rather unique from an international perspective. Therefore, repeating the study in another context might yield different results. However, there are common grounds that could provide a starting point for other studies, such as the meal environment, purposes of school lunch and the roles and agendas of different school actors. Further, the methodology of the study, including the theoretical underpinnings, is transparent for the reader by providing thick descriptions in the specific papers, which will also help others to confirm that the results follow logically from the data and the analysis. As with the matter of dependability, the results and the overall research process have been checked and discussed within the research group to ensure that the results are consistent with the data. The analysis process included going back and forth in the original data material, to check that the findings are dependable and give a fair representation of the participants' statements. So far, Papers 1, 2 and 3 have been peer reviewed.

Conclusion and future perspectives

The starting point of this thesis was to highlight the pupils, teachers and head teachers who on an everyday basis come in close contact with school lunch arrangements, in combination with the idea that lunch is socially produced and that the spatial dimensions lived, perceived and conceived, interact in the production of the social space of school lunch. The national guidelines provide an image of what constitutes a good school lunch - sustainable, tasty, safe, nutritious, integrated and pleasant. Overall, the results from this research suggest that the dimensions for making school lunch integrated and pleasant, need to be given more attention in order to improve the school lunch situation and the experiences of those involved. However, it is important to acknowledge that there are contextual variations and individual conditions at each school. Through the four papers presented within this thesis it is clear that the normative, social, emotional, physical and organizational dimensions are central to the way that school lunch is experienced and perceived.

The first and second papers highlight school lunch from the perspective of the pupil. The first paper shows that pupil perceptions of school lunch are influenced by the strong adult-set discourse and socio-cultural norm of healthy eating in the school context. The second paper shows that the everyday lived experiences of school and the overall meal experience go beyond the actual food on the plate, and that pupil-constructed meaning of school lunch is associated also with social and physical dimensions. Tensions between the social and physical dimensions, such as time restrictions and noise, could cause negative emotions and influence the overall meal and eating experience. A pleasant school lunch experience seems to require a harmonization between the social and the physical dimensions. The third and fourth papers respectively highlight school lunch from the teacher and head teacher perspectives. The third paper shows that teachers see the social and pedagogic potential of school lunch but are not always provided with favorable conditions to practice the intentions. The fourth paper shows that head teachers' constructed meaning of school lunch is mainly associated with the ideology of social equality that the tax-funded school lunch provides, and that the primary goal is to make sure that all pupils are fed. This paper further shows that head teachers perceive the school lunch situation as challenging due to the logistics and the divided responsibility between school and food service personnel. This, in turn, hinders the integration of school lunch with the educational activities at school.

Pupils, teachers and head teacher share the perception of school lunch as a space for socializing and eating, and that the conditions for a pleasant school lunch experience do not always exist. This thesis shows that the perceptions and

experiences of school lunch are negatively affected by the way the school lunch is framed and organized at both school and municipality level. The main concerns revolve around the meal environment, time-restrictions, logistics and the different organizational structures that pupils, teachers and head teachers have to adapt to. These challenges may affect the possibility of influence practices and adhering to policies. It can, for example, hinder the intentions of making school lunch a pleasant experience, or an integrated and co-planned school activity - something that may ultimately affect all actors involved with school lunches.

This thesis indicates that the school lunch is not always planned, designed and organized with pupil, teacher and head teacher perspectives taken into consideration and that these school actors do not always have the prerequisites needed to meet the individual intentions and needs, as well as the local and national policy intentions. One starting point to make school lunch a more acknowledged and integrated part of school would be to include school lunch in the school curriculum, teacher education, and the obligatory National School Leadership Training Programme for head teachers. The overall conditions for school lunch need to be acknowledged. I would encourage further research to examine the organization of school lunch and, specifically, the implications of the way school lunch is organized. I also encourage further research to examine the physical dimensions of school lunch, specifically time management and also to what extent the school restaurants are purposively designed and built. This work could be taken in consideration when designing and building new school restaurants.

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