

Contents lists available at ScienceDirect

Appetite

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Children's experienced and imaginary stories about lunch packs and lunch breaks: Associations and perceptions of school lunch among primary school students in Norway

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ARTICLE INFO

Keywords:
Food and eating
Lunch pack
Lunch break
Associations
Conceptions
Values
Social relations
Student perspective

ABSTRACT

This article examined Norwegian students' associations with lunch packs and lunch breaks in primary schools, highlighting the Norwegian school meal system. Empathy-based stories were used; that is, participants were asked to write on a story about a good or a bad school lunch, either based on actual experiences or imagination. The data included stories from 181 fifth graders (105 girls and 76 boys) aged 10–11 years. Additionally, this study employed a social-constructivist approach. The analysis of the stories on the lunch packs resulted in four sub-themes: food and sensory properties of food; food norms and the violation of the norms; physical and psychological consequences of (not) eating lunch; and expressions of peer-relations and family bonds. The analysis of the stories on lunch breaks resulted in two sub-themes: social interaction and simultaneous activity, and contextual factors. In the stories the lunch pack was found to evoke both enthusiasm and discontent. Students' associations and perceptions of the food were often related to how it looked, smelled, and tasted. Furthermore, a clear feature of the stories concerning lunch break in the classroom was that the students were concerned with the social aspects of the eating situation, such as interacting with classmates by chatting, watching television, or listening to music together. This study can contribute to a deeper understanding of children's experiences with a school meal system used in countries within and outside the Nordic region.

1. Introduction

Most research on school meals in Nordic countries has focused ondietary effects or the nutritional content of food in school (Andersen et al., 2014; Stovgaard, Thorborg, Bjerge, Andersen, & Wistoft, 2017; Vik, Heslien, Van Lippevel, & Øverby, 2020). In Norway, health authorities have primarily communicated that concerning school meals, the most important task should be to improve and ensure children's diet and emphasise nutritional quality to prevent malnutrition or obesity among the youth (Norwegian Directorate of Health, 2015). A similar trend is observed in other countries in Europe (Dryden, Metcalfe, & Shipton, 2009). In a study of school dining halls in Britain, Pike (2008) demonstrated that health discourse takes precedence over social dining discourse in primary schools. Daniel and Gustafsson (2010) argued that one-sided nutritional focus creates a gap between the school's priorities and the social priorities placed by students on school meals. Earl and Lalli (2020) pointed out that the main objective of UK's school food policy after the turn of the millennium was to improve students' physical health and academic performance. They further noted that very little attention was given to the improvement of students' well-being and social skills. Several studies at both the school and policy levels have identified the differences existing between children's priority of spending time with friends during meals and adults' objectives to organise a healthy, well-mannered eating habit for several children in a short amount of time (Daniel & Gustafsson, 2010; Hart, 2016; Pike, 2008)

However, recently, the focus has expanded to include the social and cultural aspects of food and eating. An emerging group of research has highlighted the social value of school mealtimes as important occasions for the sharing and development of children's culture, where participants try to connect with their own social group (Baines & MacIntyre, 2019). Additionally, some researchers identified the school dining room as a significant social space (Lalli, 2017, 2019) and noted the importance of social interaction during mealtime from children's perspectives

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(Bruselius-Jensen, 2014; Ludvigsen & Scott, 2009). Examining children's perspectives on lunchtime practices, Mason (2020) captured how social participation occurred during school lunches: creating social spaces, engaging in social interaction, and reinforcing/modifying relationships. Focusing on children's perspectives about school meals in Sweden, Persson Osowski, Göranzon, and Fjellström (2012) found that children craved for social belonging during the meals. Lalli (2019) focused on social learning and the development of social competence and skills in the social space of school lunches. He found that the teaching staff made little reference to social competence but associated social learning with rules and regulations. The staff were more concerned with monitoring pupils than interacting with them. Berggren, Olsson, Talvia, Hörnell, Rönnlund and Waling (2019) examined how children made sense of and constructed meaning associated with school lunches, emphasising emotions and how their lived experiences were related to social and physical dimensions.

A common feature of several studies on the social dimensions of school meals is that they focus on meals that are served to students in a dining hall or in a school restaurant (Berggren et al., 2019; Lalli, 2020; Mason, 2020). Studies concerning individual lunch packs are lacking, even though in several countries, the lunch pack is the mainstay of many children's experiences of school and food (Metcalfe, Owen, Shipton, & Dryden, 2008). Similar to Norway, most primary school children in Canada, the Netherlands (Van Ansem, Schrijvers, Rodenburg, Schuit, & Van de Mheen, 2013), and Denmark (Andersen, Holm, & Baarts, 2015) bring lunch packs from home, while in the UK, approximately half of the primary school children bring lunch packs (Evans, Melia, Rippin, Neil Hancock, & Cade, 2019).

Metcalfe et al. (2008) examined the discourses surrounding school lunchboxes brought by children and addressed aspects related to the contents of the boxes and the ways in which children viewed food and food practices. The lunchbox could also extend the private sphere of care into the public sphere (Metcalfe et al., 2008); that is, the lunch box may also be a space or a 'container' into which various aspects of the school and the home—the public and the private sphere—can be packed. Andersen, Holm and Baarts (2015) analysed the social impacts of school meals and lunch packs brought from home. Burgess and Morrison (1998) concluded that consuming lunch packs was a social affair, and exchanging lunch pack items was a part of maintaining or reinforcing friendships among primary school children (Andersen et al., 2015).

1.1. The Norwegian model for school meals

The Norwegian system for school meals is built on a traditional practice in which pupils bring their lunch packs to school (Norwegian Directorate of Health, 2015). The tradition of eating a cold lunch was established in the 1920s; in the early 1930s, the largest cities in the country had implemented a free school meal, consisting of whole grain bread slices with cold cuts, milk, cod, fruit, or raw vegetables (Andresen & Elvbakken, 2007). Public responsibility ceased in the late 1950s, and as a parent's responsibility, the lunch pack has been dominant for the last 60–70 years. (Kainulainen, Benn, Fjellström, & Palojoki, 2012; Rutledge, 2015). In 2018, a survey of school meals in Norway, which was based on pupils' self-reports, reported that 93.5% of primary school students brought lunch packs from home (Medin & Andersen, 2019). Through parent-paid subscription schemes, schools provide fruit and milk on a daily basis to students who want it. Importantly, both fruit and milk are subsidised by the state (Norwegian Directorate of Health, 2015).

There are national guidelines (Norwegian Directorate of Health, 2015) but no national legislation for school meal provision in Norwegian primary schools. According to the national guidelines (2015), while eating, students aged < 11 years should be supervised by a teacher. Teachers' responsibility during lunch breaks is limited to ensuring that students have enough time to eat their food. National guidelines (2015) emphasise the importance of equipping children with skills to choose healthy food and recommend that, apart from health, school officials

should facilitate a mealtime promoting socialising and enjoyment. Almost without an exception, school lunches at primary schools occur in students' classrooms. Students mostly sit at their own desks when they eat. Thus, the school lunch in primary school differs from the lunch that students had previously experienced in kindergarten and in school activities, wherein the kids gathered around a table during the meal. The national guidelines (2015) also contain recommendations for what schools should serve if they offer meals at school; however, there are no guidelines concerning lunches brought from home. Lunch boxes typically consist of a couple of bread slices with butter and toppings such as cheese, ham, mutton, or liver pie. Some children bring leftovers from the previous night's dinner (Fossgard, Wergedahl, Bjørkkjær, & Holthe, 2019). Food is made and packed by one of the parents or by the child. In recent years, school meals have reappeared on the political agenda of Norway (cf. 4.2).

1.2. Theoretical and conceptual framework

This study employed a social constructivist framework. Childhood is, in a certain sense, a social construction, and the meaning of 'being a child' varies in different societies. Childhood is, thus, a social variable relating to other social variables, such as children's gender roles; children are active co-creators in the construction of their lives (James, Jenks, & Prout, 1998). An important perspective in this research approach is to emphasise the insights of children's voices and perspectives in matters concerning them (James et al., 1998; Metcalfe et al., 2008). Children and adolescents are 'social beings and experts on their own lives' (Dryden et al., 2009, p. 70), and they have a personal view of their own practices, experiences, and needs. Terms such as 'children's voices' or 'children's own culture' may tend to 'homogenise' children (Tingstad, 2019). Therefore, it is important to explore the variety of children's experiences.

Sociocultural theory emphasises that children develop and construct their social reality through fellowship and social interaction with others in their cultural context; thus, they are not merely passive recipients who adapt to the society around them (Roth & Lee, 2007). Within schools, of the many arenas of interaction and meaning making, one is students' lunch breaks.

To understand and analyse how children construct meanings, concepts, and ideas about meals and food in school, the cultural activity theory may help in understanding how meaning is constructed, or specifically, how children construct meaning around meals, mealtime, and food in school (Mason, 2020). Cultural activity theory emphasises the relationship between the child, the context, and the activities involving the meal. The lunchbox at school represents an artefact with the potential to materialise the relationship between home and school, and between adults and children (Metcalfe et al., 2008). Experiences from these artefacts, contexts, and activities form the basis for concepts and ideas. These can be interesting prospects in countries that offer school lunches to everyone. Berggren points out that 'children's 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' (Berggren, 2021, p. 30).

This article highlights the school lunch with lunch packs and lunch breaks in the classroom from the students' perspective, which has not been previously studied in a Norwegian context (Fossgard et al., 2019). The overall aim is to contribute to a deeper understanding of how students in primary schools conceive and experience the school lunch situation. Our research question for this study was: What are 11-year-olds' associations and perceptions of lunch packs and lunch breaks in Norwegian primary schools, and how can these insights contribute to a discussion of the best school meal system?

2. Methods

2.1. Participants

The current study was a part of an interdisciplinary school-based research project called 'Prospects for Promoting Health and Performance by School Meals in Nordic Countries' (ProMeal), which was conducted in 2013/2014. This was a cross-sectional study of 830 students (born in 2003) in Sweden, Iceland, Finland, and Norway (for more information about the study design and methods, see Waling et al., 2016).

The Nordic study was conducted according to the guidelines laid down in the Helsinki Declaration of 1975, as revised in 2008, and all procedures involving human subjects were approved on September 2013 (Clearence number 35308) by the Data Protection Official for Research in Norway. Written informed consent was obtained from all participating caregivers/parents before the students entered the study. The students had the opportunity to refuse participation, if they did not want to participate in the project. The inclusion criteria for the Norwegian part of the research project were that the students should be at the age of 10-11, and in the 5th school year (and therefore supervised during lunch and able to express their opinions) at schools that had a packed lunch scheme.

The project recruited students in grade 5 in primary school, and this article is based on data collected in Norway. Of the 208 students who accepted the invitation to participate in the school food investigation, 183 students submitted written stories about lunch boxes and/or about the lunch break. The reduction in the number of stories was because on the day the stories were written, not all registered students were at school, and some of those present did not hand in their assignment sheets. After reading all the responses, two were excluded because they were incomprehensible. Thus, a total of 181 stories from students from six different primary schools in Western Norway were collected, of which 55 positive and 50 negative stories were written by girls, and 34 positive and 42 negative stories were written by boys. In the introduction to the writing assignment, the students were told that they could make drawings for the stories, if they wanted to and had the time for it. Drawings (N = 136) were included in 3/4 of the stories; of these, 43 and 40 drawings to positive and negative stories, respectively, were made by girls, and 21 and 31 drawings to positive and negative stories, respectively, were made by boys.

2.2. Empathy-based stories and drawings

Qualitative data of empathy-based stories were collected. In this method, the research participants are invited to write short stories by picturing themselves in a situation described to them as a frame story and letting them use their imagination (Särkelä & Suoranta, 2020). By varying one or more elements in the frame story, researchers can study how the stories differ when an element is replaced (Wallin, Koro-Ljungberg, & Eskola, 2019).

In the ProMeal study, this method of empathy-based stories was used to explore children's experiences and perspectives on school meal situations (Waling et al., 2016). All participants were asked to write a story about a good or bad school lunch, either based on actual experiences or fantasy. Thus, the method can provide insight into how children derive the meaning of their experiences (Mayaba & Wood, 2015). Berggren et al. (2019), who examined school meals in Sweden, argue that empathy-based stories are suitable for achieving a deeper understanding of children's lived experiences and how they relate to the social and physical dimensions of the school lunch. Berggren and colleagues noted that such knowledge is important when discussing children's well-being in school and in providing them with useful insights to people working in school lunch and school lunch environments (Berggren et al., 2019).

In Norwegian schools, the students were given a writing assignment on the first day of the project period—that is, before school lunch had become a topic of conversation or discussion at school. The teachers received a written guide on how to introduce assignments; additionally, the guide emphasised that they should avoid influencing the contents of students' stories. Half of the students in each class were asked to complete a positive story about the school lunch, while the other half was asked to write a negative story. The participants were assigned to one of the groups by a teacher and asked to take a polar stance that did not necessarily match their experiences.

The collected stories varied widely in terms of their content and length. The stories did not follow a specific pattern in the structure, and students independently decided on the length of the stories. The longest stories were about 200 words (about one page), while the shortest included two short sentences of 12 words. On average, girls wrote longer stories (67 words) than boys (44 words). In some classes, students worked hard to write neatly and clearly, and to illustrate their stories. The varying quality can be attributed to students' unique writing skills and different task-related instructions provided by teachers.

Most students were encouraged to draw or make cartoons to go with their stories. This provided children with another way to create and express their perspectives. Moreover, this could be useful for those who have difficulties in expressing themselves solely through words. As a method for generating data, drawings have been used in several studies. Children's drawings can reveal underlying aspects of their social practices and cultural backgrounds, and Dryden et al. (2009) noted that drawings can reflect children's feelings and preoccupations.

Empathy-based stories can be a good method to understand children's thoughts, ways of thinking, and actions in certain situations connected to school lunches, since they write about what they immediately associate with in school meals and lunch breaks. The approach of eliciting positive or negative empathy-based stories can provide the researcher with an opportunity to examine how a change in the stimuli (instructions) affects the respondents' associations and perceptions, and whether these are consistent or different.

The assignments were limited to describing either a good or a bad school lunch, which may have caused the students to exaggerate the stories and limit their source value. However, while the empathy-based stories do not pretend to be quantitatively representative of students' real experiences, the total number of stories (N=181) provides an understanding of culturally shared concepts and their variation among students. Providing the respondents with two different stimuli can give us a greater range of associations, than if they were given only one neutral instruction, such as 'write a story'.

The purpose of the selected stories and drawings, as shown in the figures below, is to provide the reader a close contact with the data and illustrate the themes as discussed. The quotes inserted in the text show the diversity of associations and how they are expressed under each subtheme; these are excerpts from longer stories.

2.3. Analysis

In the analysis of students' empathy-based stories, the aim was to examine students' associations to, perceptions of, and experiences from lunch packs and lunch breaks and to focus on finding meaningful parts of the stories. The analytic plan was prespecified, and data-driven analyses were identified and discussed. Open coding made it possible to discover the individual themes and create subthemes (Johannessen, Rafoss, & Rasmussen, 2018), and the transcripts of the stories were thoroughly read and analysed thematically by the first author. The codes and themes identified were based on the key issues described by the participants. Coding and themes were discussed with the co-authors. Some of the themes were reformulated or rewritten during the analysis. Since most stories were rather short, the list of textual codes (developed from data) was grouped into themes such as 'contents of lunch packs', 'good experiences', disturbing elements', and 'social interactions'. The transcribed qualitative data were systematically analysed for coding and analysis using Nvivo 11 software, QSR International (Paulus, Woods, Atkins, & Macklin, 2017).

The advantage of this computer program was that it was easier to see how often the different topics were discussed, and the kinds of themes that students were most concerned about, were clarified. The software provided a good overview of how frequently a topic appeared in the transcripts (see Fossgard et al., 2019).

All data were anonymised. The names of the schools and children were replaced with letters and numbers. The first letter indicates the story P (positive) or N (negative); the number in the middle refers to the pupil (P1, P2, N1 ...); and the last letter refers to children's biological sex (girls [g] or boys [b]; e.g. P1b).

3. Results

Our analysis aimed to identify the relevant portions in the stories. We maintained the two key themes provided in the task of the empathy-based stories—that is, 'packed lunches' and 'lunch breaks'—and developed several sub-themes within these themes. We did not systematically differentiate between the positive and negative stories.

The types of associations and perceptions that were triggered by the keywords 'good' or 'bad' lunch packs were analysed; the analysis resulted in the identification of the following sub-themes: foods and sensory properties of food; food norms and the violation of these norms; physical and psychological consequences of (not) eating lunch; and expressions of peer-relations and family bonds. The types of associations and perceptions triggered by 'good' or 'bad' lunch breaks were analysed in the following sub-themes: social interaction and simultaneous activity and contextual factors.

Nearly all the empathy-based stories considered the lunch packs: what students brought from home, how it looked and tasted, whether they liked it, and so on. Students described their lunch packs either positively or negatively, in accordance with the assignment. Half of the stories were about both the food and the break, referring to what happened in the classroom while students were eating, commenting on the noise level, how much time they had, what they did, and so on.

3.1. Lunch pack stories

3.1.1. Foods and sensory properties of food

Food and sensory properties of food were either the key theme or one of several themes in 4/5 of the stories. The stories about the lunch box primarily evoked associations with the food content, appearance, smell, and taste. Mostly, chicken, ham, pasta, and tacos with grilled meat and vegetables was featured as a favourite food in the lunchbox. In their

stories, students mentioned all or what dominated the lunch box; that is, 'I had two crispbreads with salami sausage' (P13g), or 'Usually I have three slices of brown cheese and pepper salami' (P38b). Many of the positive stories described a special food that the students were not given every day, such as 'Pasta salad with cream dressing and herbs' (P5g), and 'Wraps with minced meat, cheese, salad, corn and probably a little more' (P22g) and 'It was omelette and garlic bread' (P28g).

After an introductory sentence about the food, the subsequent associations were related to the food's appearance, taste, or smell. In the following story (Fig. 1), the visual impression of food is clear.

One of the girls emphasised the taste in her description: 'The best thing about the salad was the chicken, because it was seasoned with a special herb. There was a lot of pesto in the pasta, and it was also very good' (A10g). Enthusiasm is also expressed in the story in Fig. 2.

The stories describing tasty and 'unhealthy' food in the lunch box were usually presented as desires and fantasies, 'more than real' experiences, as was evident in P63g's description of bringing ice cream and hot sausages in her lunch pack. Wordings such as 'dream food' and 'best food ever' were used quite often. Some children mentioned 'delicious toast with French fried potatoes' (P26b); 'brownies' (P17b, P30g, P33b); 'pancakes, chocolate cookies, and juice' (P32g); "biscuits, berry yoghurt, milkshake' (P16b); and 'polar bread' (P44g).

Students who were required to write a story about a bad lunch pack mostly described the food's appearance, consistency, and its smell and taste. The worst scenario imagined by the children seemed to include bringing food that they despised, or getting the same food every day. Mayonnaise, caviar, pickles and onions, liver pate, mackerel in tomato, and smoked salmon were mentioned as foods they disliked (Fig. 3).

Whole grain bread in the lunch box (Fig. 4) was the most common example of food with which the students experienced negative associations; for example, 'Meal break was just over, and my mom had given me the world's poorest packed lunch. There was no fruit, just coarse slices with seeds in it, and the worst of all, was mayonnaise on the slice' (N12g).

Students' complaints and negative associations to lunch packs were also about the lack of variety in food: 'I always carry the same food every day! - I am actually fed up with my lunch box!' (N38g); or it was about the smell, taste, or appearance: 'Ahh, there was bread with cheese spread and egg, and it smelled bad' (N45g) and 'I got ham cheese; but I am not fond of ham. It tasted awful! I hope it never happens again' (N2g).

Some stories associated disgusting lunch packs to food that were old or had been mixed or pasted together in the lunch box: 'The lid of the lunch box had fallen off the bag and the food clung onto the books' (N46g) and 'White cheese was mixed with brown cheese' (N66g). There were also stories about food that had been spoiled (Fig. 5) in one way or another.

I have just finished a super lunch. My lunch box had three different spaces, and in the space was a sandwich with a liver paste topping, and since I love this, the sandwich was very good. - The waffles smelled like they were completely fresh. In the middle space, there were some purple grapes with a delicious taste of summer, and they were just the right size. The grapes were cut into halves, so I saw that there were no stones in them. In the last and smallest room, there were two pieces of dark chocolate that tasted very good. (P8g)



Fig. 1. A girl's story which associates to the food's appearance, smell and, taste.

Mmm, it was good lunch pack! I had wraps
[no. lefse] with sour cream, cucumber,
peppers, meat, and corn. I'm looking forward
because it's going to be the best day of the
week. I hope to get such food on the remaining
days because this is my favourite food. The
food is so good that I almost faint[ed]. (P7g)

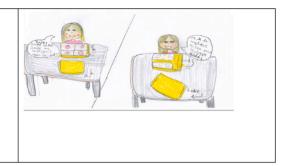


Fig. 2. The best taste ever.

Today my lunch box was absolutely disgusting. I always carry the same food every day! Every single day I have to endure eating two coarse and nasty bread slices. It is usually stinky ham or soft, unpalatable cheese. Actually, I am so fed up with my lunch box! (N38g)

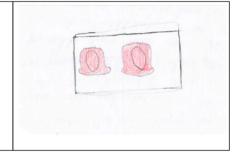
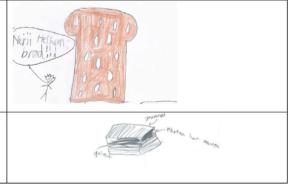


Fig. 3. Monotonous and lousy lunch pack.

The food was awful! today I thought that I would get something good; but then I got bread with whole grains—the worst I know! (N3b)

The worst was all the whole grain slices that I hated the most. I was angry throughout the lunch break. (N72g)



 $\textbf{Fig. 4.} \ \ \textbf{Stories about whole wheat bread that ruined the lunch pack}.$

The stories about the contents of the lunch boxes were primarily about what students conceived as or associated with good and bad food and what they regarded as the very best and worst.

One-tenth of the students chose to write pure fantasy stories about what happened to them at lunch or after they opened the lunch box. The stories were about food that could talk or attack them, about mysterious and supernatural beings who wanted to steal the food, or that they had to eat insects, rats, and snakes for lunch (Fig. 6).

3.1.2. Food norms and the violation of the norms

In the students' descriptions of compliance to or violation of food norms, there were examples of students associating lunch packs with established norms about healthy and unhealthy food, and with cultural norms about what was accepted or not accepted as food that could be brought to school. The norm of tasty food being synonymous with healthy food appeared in the stories in Fig. 7.

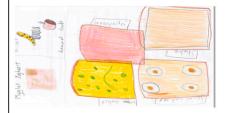
Some of the positive stories about the best food included dishes and food items that are recommended for children's lunch packs, and based on health arguments, foods that are not advised to be in lunch packs. In these stories, students seemed to be aware of the norm set by the health

authorities regarding food that is suitable as school lunch. One of the girls drew a prohibition sign on the unapproved food to illustrate the contradiction between healthy and unhealthy lunch packs; for instance, fruit and vegetables in contrast to chips and burgers, respectively (Fig. 8). The story describes that she had a lot of healthy food in her lunch box.

Another theme appearing in some of the lunch pack stories included unhealthy food that they liked or would like to have in the lunch box, if allowed. The stories in this category were a combination of their experiences and wishes: 'It would have been great if I had pancakes with sugar. I also want ice cream and strawberries with sauce' (P47g).

However, the stories of lunch boxes containing chocolate cakes, biscuits, and wheat buns also had clear associations with the norms. Apart from mentioning the good cakes they brought, the students often included an additional explanation describing why they brought this particular food: 'I got chocolate cake and pizza buns. The cake was good. I got cake because we had dessert the day before, and there was a lot left, and because Dad had baked the pizza buns the day before' (P62g); and 'I opened the packed lunch, it was ham sandwiches, chocolate chip cookies and a piece of chocolate, and a smoothie. This was probably because it was Dad's

This lunch box was very bad because I had forgotten to replace the food from yesterday, so I had rotten slices, mouldy yoghurt and only old fruit (N50g).



It was lunch break and I took out my food. Then, I saw that the bread was mouldy; but I thought I could at least eat the cheese. But the cheese was also mouldy and rotten. Then, I got a slice of bread from a classmate; but it smelled old. Then, I gave up(N64b).



When it was lunch break, I opened the lunch box: the sandwich with jam had become musty, blue, and brown, and hairy. I was sick. Oh, I thought, It smelled worse than cow dung. I wanted to report to the teacher; but the teacher was not there (N15g).

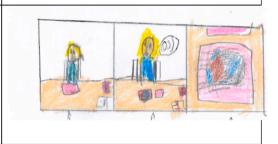
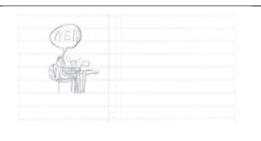


Fig. 5. Stories about miserable, sticky, and musty food.

There was once a boy named Vegard, who usually brought good food with him. But today the food jumped up in his face. And all the others began to laugh. When rumours about what had happened was spread, he was bullied - and that was the end of the fairy tale (N65b).



My food! When it was time to eat today, I had to eat a snake. Now the lunch break was over. I felt tired and nauseous, I thought the food was bad and disgusting, but I promised Dad I would eat everything. - I tried as best I could but failed. I threw away what was left! (N11g).

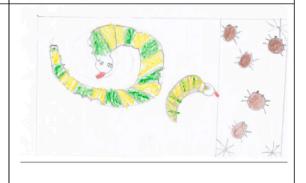


Fig. 6. Imaginary stories.

Today the packed lunch was super. I brought with me something I do not always get, pasta and some salad. The food was quite healthy and good. Although I always tend to get good food, I think this one was exceptionally good. This food package / food was green, fresh, healthy, and tasted good. (P9g)

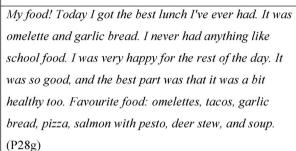






Fig. 7. Tasty food is mostly healthy.

Today my packed lunch was very good! I brought pasta with ham, salad, cucumber, and mini grissini (bread sticks with sea salt). It was very good! (P46g)



Fig. 8. Drawing reflecting norms about healthy and unhealthy foods.

This day was great. At lunch, my mom had forgotten the rules of food at school! She had added chocolate cake and chocolate bowl [to the] lunch box, and no bread slices! For drink I got cocoa. This is not like my mom—she always gives me bread slices. - I did not want any adults to see my packed lunch. What should I have done? I ran and hid and ate my food as fast as I could. It was the best school food I've ever had. This incident happened when I was in the second grade. (P36g)



 $\textbf{Fig. 9.} \ \ \textbf{Story about the delicious but not accepted food.}$

birthday yesterday' (P43g). In the following story (Fig. 9), the reason for the unhealthy lunch is that the mother may have forgotten the rules for school meals.

The students described the unhealthy food as something they brought with them from time to time or associated with special occasions. However, a similar reasoning for the preferred healthy food could

not be found in the stories.

3.1.3. Physical and psychological consequences of (not) eating lunch

In the assessments of taste and smell in the packed lunch, several students described how good or bad food physically or mentally affected them. A 'proper' lunch pack made them 'feel well and full for the rest of the

day' (P1g), or 'I was full and I looked forward to going out in the long break. - I go out and have a good feeling, because now I will not get hungry for many hours' (P13g). One of the stories was hypothetical: 'If the lunch pack had been good, I would feel full of energy and be ready for action' (P83b).

In stories where they had either forgotten their food or did not want to eat their food because it was miserable, they described that they became hungry, tired, and were in a bad mood for the rest of the day in school. One of the boys described the consequences when he chose to not eat his food: 'The food was disgusting. It was so repulsive that I was in a bad mood for the rest of the break. I did not bother to eat any of it, just sat alone, and was angry and grumpy' (N41b). The stories also describe instances where they had forgotten to bring food, as in Fig. 10.

Bad or nasty tastes are depicted as disgusting and situations that require students to vomit. About 15% of the negative stories described students going to the toilet to vomit after tasting or smelling the bad food, or situations when they were close to vomiting. One of the boys made a cartoon of the consequence of tasting some disgusting whole grain bread food, and another of the result of eating musty food (Fig. 11).

3.1.4. Expressions of peer-relations and family bonds

Sometimes, the stories narrate situations where the contents of the lunch box were the subject of attention in the classrooms as they evoked both admiration and envy. The stories often stated that fresh strawberries, blueberries, or grapes were quite popular as contents of the lunch box; such lunch items tasted good and attracted the desired attention from classmates:

'I had such good food that everyone came up to me and wanted to taste' (P64g).

'I brought the best food in the world: leftovers from dinner at home the day before. These were chicken wings and noodles. Everyone looked at me and they thought I was lucky' (P34g).

Some students associated bad lunch packs with negative comments they had received from others. One of the girls wrote: 'Sometimes I try to hide my food because I do not like others criticising my food' (N38g); one of the boys expressed envy and dissatisfaction saying, 'Everyone around me had something exciting in their packed lunch. I was the only one who had brought some boring sandwiches' (P17b).

Some stories were about situations wherein students shared fruits and berries with their best friends (Fig. 12).

In stories where someone either forgot to bring lunch or arrived with a lunch pack that they disliked, classmates would usually offer them something: 'I have such good friends; I got a piece of bread from one of them' (N18g). It was not always that the friends had any food to give away (Fig. 13).

Offering or receiving food was mostly reserved for close friends in class. If someone wanted to take or taste something from another child's lunch box, it was negatively described by the child. One student wrote that she was annoyed when it happened and then she finished the entire lunch package by herself (P8g).

Sometimes, the contents of the lunch packs were described as a kind of silent agreement between children and their parents. For example, stories about the students bringing cakes or biscuits leading to a situation wherein the food did not follow the norms of a good school meal. A caring mother appears in the following story, Fig. 14.

The descriptions mostly included stories of good food prepared by mothers and fathers: 'Today, the food was superb. In the lunch box, I got chocolate cake and pizza balls. I got cake because we had dessert the day before, and there was a lot left. The pizza balls were completely fresh because Dad had fried them the night before' (P62b).

3.2. Lunch break stories

Three-fourth of the stories were associated with lunch breaks and events during the lunch break. These stories were about students' experiences in the classroom's dining environment and the social aspects of the lunch break.

3.2.1. Social interaction and simultaneous activity

Desire for companionship during the lunch break was a conspicuous and recurring feature of many stories. A number of them were about being allowed to sit with one or more friends while they ate, by moving their chairs a little or trading places with their classmates. For students, the best lunch breaks were those wherein they decided where they would sit: 'We had great fun; we were also allowed to sit with whoever we wanted' (P81g); 'A super lunch break, I was allowed to talk to my friend who was sitting next to me' (P53g); and 'I talked to the other boys in the class' (P85b). What they talked about was rarely expressed in empathy-based stories. The presence of friends was extremely important for them: 'I also like to whisper a little to friends sitting next to me. I think that's cosy' (P57g). This is shown in Fig. 15.

However, according to the stories, most days during lunch break the students had to sit and eat at their own desks. They were not allowed to move or swap seats. In the stories, class activities, such as telling jokes, listening to music and audiobooks, or watching TV, seemed to be associated with sociality and simultaneous activity in the classroom.

One of the most popular joint activities during the lunch break described in the stories was based on the students watching television on the smart board, particularly among some of the boys. They described how much they enjoyed funny movies or TV shows while they ate: 'I thought the lunch break was fun because we were watching Mr. Bean on [the] Smartboard' (P60b); and 'Today the food and the break were really good. I watched Super-news and my food was very good' (P6b).

When the teacher agreed to play music during the lunch break, several students expressed in the stories that it made the lunch break 'superb, we were allowed to listen to music from the speaker system and I got to choose a great fun song I love' (P67b) and in Fig. 16.

An example of lunch breaks described in the stories that students disliked was when the teacher made all the decisions about these breaks, without considering what the students wanted. Therefore, when the teacher was reading from a book or playing a movie, many students expressed in the stories that it was boring: 'It was the dullest day of my life; after eating, everyone was in a bad mood because we had to listen to a dull story' (N71g). In the stories the teacher often interrupted while playing a movie or music, if someone started disturbing the class. Many students

Once when I opened my lunch box, it was completely empty. I had forgotten to prepare my food / packed lunch. Then, I was hungry for the rest of the day. My stomach rumbled until I got home. (P24b)



Fig. 10. Physical malaise without food.

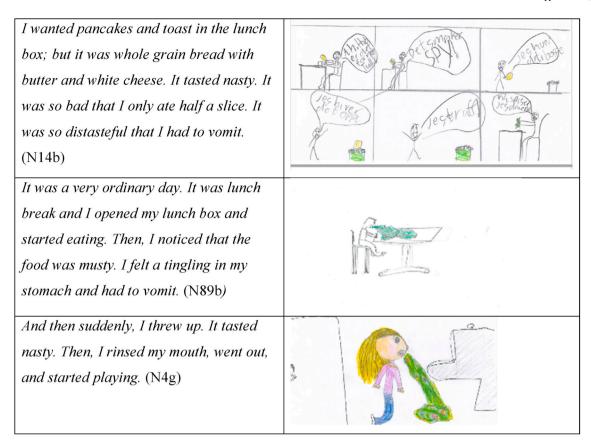


Fig. 11. Stories about food that compelled students to vomit.

I sat down and enjoyed my food. There were banana, strawberry, blueberry, melon, and raspberry in the fruit salad. My friend looked at my lunch box and I looked at hers. It seemed like she was going to give me something, and she gave me a grape. Then, I ate some grapes; it tasted a bit strange. I picked up a strawberry and gave it to my girlfriend. She tasted it and smiled at me, and I smiled at her. Then, she put the whole strawberry in her mouth. (P42g)

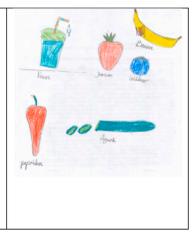


Fig. 12. Sharing the best food in the lunch box symbolises close friendships.

wrote that annoying the teacher was a silly behaviour.

Thus, the associations to a good lunch break were primarily linked to the social interactions between students and class activities.

3.2.2. Contextual factors

Some stories focused on where and how the students sat in the classroom, the noise level, and the time and duration of the lunch break. In many classrooms, the desks were individually placed in rows, implying that the students could not decide where to sit during lunch.

The time and duration of the lunch break was described as crucial for the students to enjoy their meals in the classroom: 'I brought some delicious food and the lunch break lasted 30 min' (P84g). Some of the negative stories ended with describing the consequences of not being able to eat due to insufficient time: 'The lunch break was awful because I did not get to eat anything. Everyone was noisy and we had very little time' (N67b); and 'I was grumpy and in a bad mood after the break' (N41b).

Furthermore, many of the students commented that the sounds or noise levels in the room affected their experiences during the lunch break: 'It was noisy in the classroom' (B37g); and 'There was a lot of noise that made it unpleasant' (B41b). Poor lunch breaks were characterised by turmoil, disturbances, and bad moods. Some students created stories about lunch breaks that started well and seemed to be enjoyable, before the situation suddenly changed due to the disruptions of some students (Fig. 17).

The best lunch breaks were associated with a calm atmosphere in the classroom without disturbances or interferences from others. 'No one

I once had a lousy lunch break due to some mouldy slices of bread in the lunch box. I had nothing else to eat, and no one had anything they could share with me. I had a poor meal. Ps. This story is not true; it is fictional. (N39g)



Fig. 13. Story that nobody had food to give away.

When we were about to start eating, I found my lunch box and opened it. There were some good biscuits in the box.

Whatever the bread slices used to be, there was a note from my mom saying: Hi Anna, hope you like your food, have a nice day.

Greetings from mom. I loved the food; it was lovely, and now I feel good and full. (P15g)



Fig. 14. Story about a lunch pack as an expression of parental care.

During the lunch break, I sat and played cards with friends, which was very nice. We joked and laughed a little, and I won two or four times.

(P10g)



Fig. 15. Story about an enjoyable lunch break playing cards and having fun.

fooled about or made it uncomfortable for me. That's why I had a nice and enjoyable lunch break' (P40b). Typically, inconsiderate behaviour by some students led to poor lunch breaks.

3.3. Methodological considerations

The study stands out because it does not consider the perspective of the authorities or school leaders, but that of the students. Importantly, children's perspectives should be included in matters concerning them.

By focusing on children's stories, we have also highlighted that the classroom's dining environment and the social context of the lunch break has an impact on how students experience the school lunch. Interestingly, students' associations to good and bad school lunches have been drawn in the discussion about the organisation of future school meal schemes.

With a few exceptions (Fossgard et al., 2019; Ludvigsen & Scott, 2009), in a Nordic context, there is a lack of studies on the social

dimensions of individual lunch packs from students' perspectives, as most are related to meals served in a dining room. Therefore, we believe that exploring school lunch stories makes an interesting contribution to the understanding and interpretation of students' perceptions of their school meal arrangements. None of the stories involved a lunch break outside the classroom. Although some of the stories were fictitious and without reference to students' actual situations, none of the students fantasised about school restaurants or canteens where they helped themselves from a buffet or were served hot school lunches. This is clarified when the Norwegian stories are compared with the exploration of corresponding Swedish stories (Berggren et al., 2019), which mostly related to social experiences from meals in the school restaurants. This culture is unknown to Norwegian children. In sum, the students' stories were delimited and primarily reflected the realities and experiences with which they were familiar with. Thus, they are 'conditioned' to think about school lunches within a certain parameter and not fantasise about entirely different situations, such as hot school meals.

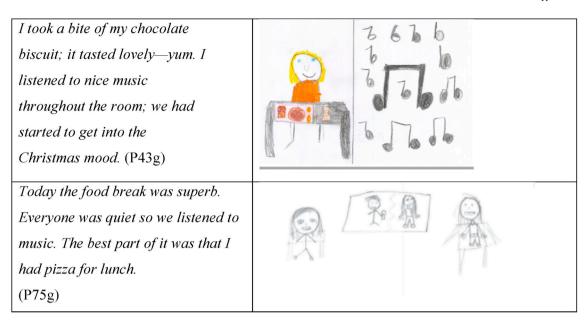


Fig. 16. Stories about students listening to music.

The teacher shouted that it was dinner time. I ran and washed my hands and then came back to my seat. Then, the teacher would read to us, but there were many who talked and chuckled; thus, the reading did not last long. I hope it gets better next time. (N52 g)

This lunch break was bad because Kim (the teacher) was very annoyed. He was angry because someone had cracked a pencil and a ruler. He usually reads to us; but he was too angry to read. (N47g)

Fig. 17. Stories about noisy lunch breaks.

These stories alone do not prove whether the students were satisfied or dissatisfied with the school lunch scheme, since they were not asked to write about their thoughts on this matter. If they had been asked to write about good and bad experiences related to the school lunch, or describe a regular school lunch, the stories would probably be less extreme and more nuanced. In addition, by combining the stories with interviews and observations, one would have gained a broader basis for drawing conclusions about students' attitudes and perceptions of the Norwegian school lunch tradition.

4. Discussion

In our analysis—through the stories that 11-year-old students wrote about school lunches in Norway—we elucidated the students' associations, perceptions, and experiences concerning lunch packs and lunch breaks. In this article, we aimed to answer the following questions: a) What are 11-year-olds' associations and perceptions of lunch packs and

lunch breaks in Norwegian primary schools? and (b) How can these insights contribute to a discussion of the best school meal system?

4.1. Associations and perceptions of lunch packs and lunch breaks

The results reported in section 3 present how values and norms connected to food and eating in school were expressed in children's associations and perceptions of lunch packs and lunch breaks. Specifically, lunch boxes were most often related to the sensory aspects of food. In their stories, the students used comparisons and contrasts when associating with good or bad foods.

This was probably due to the way the assignments were formulated—either good or bad—and children's tendency to present contrasting classifications of food and exaggerate stories about them (Persson Osowski et al., 2012).

The students' descriptions of compliance or violation of food norms indicate that the 11-year-olds were aware of the norms of healthy food,

as seen in several other studies (Berggren et al., 2017; Johansson et al., 2009). Protudjer, Marchessault, Kozyrskyj, and Becker (2010) explored US children's beliefs about foods and concluded that they recognised the role of healthy foods; however, unhealthy foods were a source of pleasure and part of social interaction (Protudjer et al., 2010). The students' stories regarding their favourite foods can also be interpreted as students' ambivalent attitudes toward the issue of healthy and unhealthy foods and their reaction to the hegemonic food norms in school (Bugge, 2011). Dryden et al. (2009) argue that the emphasis on unhealthy food may reflect the individualism of our time and children's rights to make their choices and control their lives.

As described in some of the stories the students used food items from a lunch box for several purposes. Food gifts—for example, a couple of strawberries or grapes—were a way to express emotions and feelings of sympathy and friendship, or gain attention, be liked and socially accepted by the other classmates. Moreover, these gifts could also be a way to exclude others when they choose to share with some in the class and not others (Andersen et al., 2015). According to the stories, salads, pizza, or tacos in the lunch box could lead to positive attention from peers, which is different from the findings of a Danish study with the same age group (Ludvigsen & Scott, 2009). For example, according to their findings, a salad from home was the cause of ridicule and teasing in many schools (Ludvigsen & Scott, 2009), since among Danish students, only rye bread sandwiches were recognised as normal and proper (Tørslev, Nørredam & Vitus, 2017). At times, the contents of the lunch packs represented a kind of secret agreement between children and their parents, especially when the food did not follow the norms of a good school meal. In some of the stories, the lunch box is portrayed as a link between the child and the parent, and can be conceived as a reflection of parental love and concern (Andersen et al., 2015; Metcalfe et al., 2008), thus bringing homes into the school (Døving, 2003).

Lunch breaks were associated with the social aspects of school lunches, such as chatting with friends, watching television, or listening to music, and a relaxing atmosphere. They were experienced as opportunities to socialise with classmates, which is similar to the findings of other studies on children's school meals (Andersen et al., 2015; Berggren et al., 2019; Bruselius-Jensen, 2014). Central to the descriptions of bad lunch breaks were time pressures, disturbances, and restrictions where everyone had to sit at their desks in a quiet classroom, supervised by the teacher (Berggren, 2019; Fossgard et al., 2018).

4.2. How can these insights contribute to a discussion of the best school meal system?

For many decades, there has been a debate in Norway about school meals, without any revision of major plans. Currently, there is a broad consensus regarding the food that is required for maintaining children's energy levels and concentration throughout the day and the importance of a good diet for their development and learning.

The disagreement is concerning the distribution of financial (and moral) responsibility for the children's school food. Should it be a private responsibility entrusted to the parents or the responsibility of the state or municipal governments? Supporters of the lunch pack arrangement argue that if more than 95% of students bring packed lunches that are 'healthy enough', the measures should be limited to those who need them. The supporters believe that money should be spent on getting good teachers and not on food. Although there may be an agreement that the classroom is not an ideal setting for the school lunch, little political will exists to cover the cost of building dining rooms, kitchen facilities, and hiring staff to take care of food services. Contrarily, supporters of school lunches believe that it should be the responsibility of the government and argue for government investment in school meals and canteens, to promote social equalisation and ensure that everyone has equal access to healthy food.

The consideration of students' values in a discussion of future school meal scheme may be an interesting topic, as these are based on what the students emphasised when describing school meals. Can we, with some adaptations of lunch pack meals in the classroom, comply with the students' values, or will an organised school meal in canteens satisfy these values in a better way?

The students emphasised that the food should appear appetising, should smell and taste good, and be sufficient. From our data, it cannot be deduced that lunch packages always satisfy these wishes, since it seems to depend on the raw materials and the effort put in by parents or students into preparing the lunch package. The desire for the food to taste good and look appetising can also be challenging to achieve in a served school meal, as Persson Osowski et al. (2011) and Berggren et al. (2019) noted. They reported that children expressed scepticism about the content of the food or claimed that it tasted bad and was of low quality. A successful school meal requires a budget and guidelines to ensure that quality and taste are maintained. Nevertheless, it may be easier to implement systematic improvements in served meals that are under public responsibility than by setting general requirements for the 'private' food packages. Therefore—as a topic requiring further discussion—in these packages, one must ensure experimental schemes and exchange of experience to practically maintain a standard.

We observed that some foods, such as berries and fruits, are valuable for students to strike a friendship and achieve social status in the classroom. This value of using food for exchanging symbolic gifts and mutual attention is difficult to transfer to an eating situation with served lunch. However, in the situation with packed lunch this possibility of exchanging social symbols was for the benefit of those who had brought the 'finest' lunch packs, i.e., of the most resourceful homes. Thus, this practice can also be a basis for social differences, whereas served lunches can provide more equal opportunities for all. The results above demonstrate also that the students could experience the food pack as an expression of parental care. This bond between parents and children cannot be substituted by a served meal.

As we have seen, many students associated good lunch breaks in the classroom with those that occurred without any haste or fuss, either by fellow students or the teacher. Students want freedom and not oversteering. However, simultaneously, they want supervision to avoid noise and disturbances. Such values can be more easily complied with in classrooms with a smaller number of students, than in larger canteens with students from several classes sitting together.

Some of the stories emphasised the value of having a pleasant lunch break where they could communicate and be with their classmates, as shown in 3.1.2.. However, to create an amicable situation, facilitation must take place physically and organisationally. The pupils must be given the opportunity to organise themselves during the meal so that they can socialise. Additionally, food should be moved away from the pupils' desks and a separate place must be provided for lunch. Here, a school canteen can provide better conditions for friends to share a table.

5. Implications for further research

Findings from this study must be included in a further discussion about the most beneficial school meal arrangements for students. Furthermore, since associations, wishes, and dreams depend fundamentally on actual experiences, further discussions on alternative school meal arrangements should presuppose a comparative and systematic study of different meal settings. This will shed light on how students experience and perceive different school meal systems.

Future investigations—providing a better and more secure research basis for far-reaching decisions—should facilitate such research. Additionally, the Norwegian school meal system should be compared with other 'lunch pack schemes in different countries' to explore which cultural frameworks—other than the school meal system—influence students' experiences and perceptions.

Author contributions

This article is a publication from the ProMeal project, which was designed by a cross-national Nordic group of researchers. All contributing authors of the article took part in the data collection in Norway and discussed the transcribed stories and the results. The first author analysed the data and wrote the article that was discussed and commented on by the co-authors.

Funding

This study was funded by NordForsk (Grant number 54761) and Western Norway University of Applied Sciences. The study is part of NordForsk's research program 'Education for tomorrow'.

Ethical statement

The study was conducted according to the guidelines laid down in the Helsinki Declaration of 1975, as revised in 2008, and all procedures involving human subjects were approved September 2013 (clearence number 35308) by the Data Protection Official for Research in Norway. Written informed consent was obtained from all participating caregivers/parents before the students entered the study. The students were able to deny participation if they did not want to be part of the project. The inclusion criteria for the Norwegian part of the research project were students born in 2003 from predominantly urban schools where the students had lunch pack arrangements.

This manuscript has not been published or presented elsewhere in part or in entirety and is not under consideration by another journal. All the authors approve the manuscript, agree with its submission to your esteemed journal, contributed significantly to its creation, and accept full responsibility for all aspects of the work. All study participants provided informed consent, and the study design was approved by the appropriate ethics review board. We have read and understood your journal's policies, and we believe that neither the manuscript nor the study violates any of these. There are no conflicts of interest to declare. The corresponding author can provide all original data for review.

Declaration of competing interest

The authors have declared that no competing interests exist.

Acknowledgements

The authors are grateful to the students, teachers, and schools that participated in this study, as well as all the colleagues and collaborators in the ProMeal study. The authors would especially like to thank the anonymous reviewers for thorough and constructive comments that undoubtedly contributed to improvements and clarifications in the article.

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