



Beyond “vegetarian”: Exploring how menu words influence children’s perception of sustainable school meals

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Abstract

As agrifood systems account for an estimated third of global greenhouse gas emissions, with livestock as the single largest contributor, shifting diets toward plant-based alternatives has become an urgent sustainability priority. School meals in Sweden represent a strategic arena for this transition as dietary habits are formed early in life, and over a million meals are served daily across Swedish schools. Yet plant-based dishes consistently face low acceptance among children, making this shift challenging. One underexplored factor in this resistance is the role of menu words, and this study investigates how menu words influence school children's perceptions of a sustainable dish through an exploratory mixed methods design. The design comprised three complementary sub-studies and was conducted at a private school in Stockholm, Sweden.

A semi-structured interview with the school's head chef revealed that menu naming is an intuitive practice largely unsupported by formal guidance, and that the word "vegetarian" functions as a consistent deterrent among pupils. A classroom workshop with two grade five classes found that sensory and affective words generated the most positive associations with a vegetarian dish, while category-based and origin-based language produced confusion or negativity. An online preference ranking survey (grades 6-9, n = 125) confirmed these patterns, as the affective dish name was ranked significantly more appealing than all others ($p < .001$). The survey also revealed that sensory and affective dish names can make a vegetarian dish compete with a similar meat-based dish.

The findings suggest that emotional and sensory menu words are more effective than explicit vegetarian labelling or geographic quality markers in making sustainable dishes appealing to school children. A knowledge gap was also identified at the practitioner level. Given the exploratory and context-specific nature of the study, findings should be treated as indicative rather than generalisable, and as a foundation for future research and practical guidance in school food settings.

Keywords: menu words, children, perception, expectation, school meals

Table of contents

Table of contents	4
Introduction	7
1.1 Background	7
1.2. Aim & research questions	9
1.3. The role of school lunches in Sweden	10
2. Theoretical framework	11
2.1. Food choice.....	11
2.2. Menu wording as an extrinsic cue generating expectations	11
2.3. Goal-framing theory	14
2.4. Analytical framework.....	15
3. Methods	17
3.1. Overall methodological approach	17
3.2. Research paradigm.....	17
3.3. Ethical considerations	18
3.4. Interview with head chef	19
3.4.1. Design and sampling	19
3.4.2. Data analysis.....	19
3.5. Classroom workshop	20
3.5.1. Design, sampling, and material	20
3.5.2. Data analysis.....	22
3.6. Online preference rank test and forced choice survey	22
3.6.1. Design, sampling, and material	22
3.6.2. Data analysis.....	23
4. Results	24
4.1. Interview	24
4.1.1. Thematic analysis	25
4.2. Workshop	28
4.2.1. Creating dish names	28
4.2.2. Word associations	29
4.3. Online survey	31
4.3.1. Friedman test and pairwise comparisons	31
4.3.2. Regression analysis.....	33
4.3.3. Forced choice test	34
5. Discussion	36
5.1. Synthesis of results	36
5.2. Effectiveness of menu words	40
5.3. The “vegetarian” label and its consequences	42
5.4. Social and cultural factors	43
5.5. Implications for policy and practice	44
5.6. Methodological limitations	45
6. Conclusions	47
References	48
Popular science summary	53
Appendix 1	54
Interview guide	54

List of tables

Table 1 Menu words classification by Bai et al. (2022).	13
Table 2 The presented dish names for the word association experiment.	22
Table 3 Thematic analysis of children’s dish names.	29
Table 4 Pairwise comparisons between menu descriptions.....	33
Table 5 Multinomial logistic regression model fit.	35
Table 6 Likelihood ratio tests of predictors.	35
Table 7 Binomial test	36
Table 8 Synthesis of study’s main findings.	38

List of figures

Figure 1. Hierarchy of word influence (Behnke et al., 2024).	12
Figure 2. Analytical framework illustrating the process of how the cue of menu words may impact food choice.....	16
Figure 3. A visual example of the studied dish.	21
Figure 4. The school canteen.	24
Figure 5. Thematic analysis of interview with head chef. Background colour indicates theme association.....	27
Figure 6. Thematic analysis of word association workshop.	31
Figure 7 Mean rank of each menu description.	32
Figure 8. Forced choice results.....	35

Introduction

This chapter establishes the broader context and rationale for the study by outlining the environmental urgency of dietary change, the role of school meals in shaping children's food habits, and the complex barriers that stand in the way of children making more sustainable food choices. It then narrows toward the specific focus of the study, how menu words shape children's perceptions and expectations of sustainable dishes, and concludes by identifying the gap in existing research that this study seeks to fill.

1.1 Background

The words used to describe food on a menu are more than labels, they are the first point of contact between a dish and the person who may choose to eat it. Before a meal is seen, smelled or tasted, it is imagined and that imagination is shaped by language. Menu descriptions create mental images, set expectations, and ultimately influence whether a dish is selected or passed over (Behnke et al., 2024; Bai et al., 2022). When those expectations are met, satisfaction follows. But when they are broken, disappointment or rejection is the result (Deliza & MacFie, 1996). In Swedish school cafeterias, where over 200 million meals are served annually (Eustachio Colombo et al., 2021), this dynamic plays out every single day. Yet, words used on school menus has received remarkably little scientific attention. If the right words can make a child curious enough to try a plant-based dish they might otherwise have ignored, then menu wording becomes not just a communication tool, but a lever for sustainable change.

The global food system is under mounting pressure to become more sustainable. Agrifood systems currently account for an estimated 32 per cent of anthropogenic greenhouse gas emissions, approximately 16.5 billion tonnes of CO₂ in 2023, with livestock representing one of the largest single contributors within this figure (FAO, 2025). Shifting diets toward more plant-based alternatives is therefore widely recognised as one of the most impactful levers available for reducing the environmental footprint of food consumption, as highlighted in the latest EAT-Lancet Report (2025) and its recommended “planetary health diet”.

Achieving this shift however, requires interventions at multiple levels. Early childhood represents a particularly strategic entry point, since food preferences formed during childhood tend to persist into adulthood, meaning that interventions targeting young people carry the potential for long-term dietary change (Beckerman et al., 2017). In the Swedish context, school meals offer an especially promising

arena for such interventions as around one million school meals are served every day (SKR, 2026), creating an opportunity to shape children's food choices at scale.

Yet promoting sustainable food in school settings is not straightforward. Research shows that school meals are generally perceived as unpalatable, with plant-based dishes receiving particularly low acceptance (Eustachio Colombo et al., 2021). Several factors contribute to this resistance. Visual appearance plays a major role in how food is initially received, with children tending to judge dishes at first glance before taste even enters the picture (Tuorila et al., 2015). Food neophobia (the fear of unfamiliar foods) presents a further barrier, particularly when introducing plant-based alternatives that many children have little prior experience with (ibid). Pupils have also been shown to prefer plant-based dishes that resemble meat-based food in appearance (Eustachio Colombo et al., 2021), and acceptance of vegetables increases when children themselves have a say in how they are prepared (D'Adamo et al., 2021). Taken together, these findings suggest that successfully shifting children's diets requires carefully navigating a complex set of sensory, social, and psychological obstacles.

One underexplored tool in this context is menu wording. In adult dining settings, research has established that the wording of menu descriptions can significantly influence food perception, expectations, and choice (Behnke et al., 2024; Bai et al., 2022). Menu words function not merely as informational labels but as tools for triggering mental imagery, and can create sensoric images (Lockyer, 2006), evoke feelings and expectations (Wansink, 2001) and activate associations to family and tradition (Guéguen & Jacob, 2012). The menu words help consumers envision the taste, texture, and experience of a dish before they order it (Boutonnet & Lupyan, 2015). This leads to meal anticipation, which then can lead to the selection of a dish and eventual satisfaction of consumption (Bai et al., 2022). Besides shaping expectations, menu words can also reduce the uncertainty of a food choice by reducing the information gap between the restaurant and the consumer (Behnke et al., 2024). Children are also sensitive to language and to the social cues embedded in how food is presented, and recognition of food names has been identified as an important factor in children's food choices (Murimi et al., 2016). Furthermore, resistance to vegetarian food has been linked in part to unfamiliarity with ingredients and their descriptions (Frödén, 2021).

Despite this, research on how children perceive and interpret menu words, and how different wordings shape their expectations of sustainable dishes, remains noticeably scarce. Existing intervention studies have tested nudging strategies such as fun names, colour coding, and health labels, but with mixed and often inconclusive results (Basak et al., 2019; Schneider et al., 2022; Kokkorou et al., 2024). Studies by Bai et al. (2022) and Behnke et al. (2024) have examined menu

word categories in adult restaurant contexts, but neither extends to school settings or to children as the target group. A Swedish qualitative study noted children's resistance to vegetarian food (Frödén, 2021), and one study explored children's understanding of sustainability terminology (Fretes et al., 2021), but neither examined how specific menu wording shapes children's perceptions and expectations of what they are about to eat. To our knowledge, no study has directly investigated how children interpret the words used to name sustainable school dishes and how those menu words might be consciously altered to increase consumption of more sustainable food.

1.2. Aim & research questions

This explorative study aims to address the knowledge gap by examining how Swedish school children perceive and respond to different menu wordings for vegetarian dishes. The study seeks to generate both theoretical insight and practical guidance for schools seeking to use menu communication as an effective intervention tool, that could meaningfully contribute to the broader transition toward more sustainable food systems.

The overall research question for this study is: “How can menu descriptions make sustainable dishes more appealing to students?” with the following sub-questions:

- What associations do school children have with different menu words used to describe a sustainable dish?
- What experiences does a head chef have regarding how children react to different dish names?
- How does the wording of a dish name affect school children's perceived appeal of a sustainable dish, and does a preferred name influence their choice over a meat-based alternative?

The study contributes with new knowledge in this unexplored phenomenon and will provide implications for how menu wording can be used in school settings to promote sustainable consumption.

This study is made as a part of the EU Horizon-funded project SWITCH (Switching European food systems for a just, healthy and sustainable dietary transition through knowledge and innovation, project number 101060483), that promotes innovative strategies and technologies to help Europeans adopt healthier and more sustainable diets (SWITCH, 2021). By using research and innovation, SWITCH drives behavioural change and supports the transformation of food systems across Europe toward sustainability and accessibility. It is therefore of relevance to this project to investigate strategies to adopt more sustainable diets in school settings.

1.3. The role of school lunches in Sweden

For context, it is estimated that approximately one million school meals are served daily in Sweden (SKR, 2026). School meals bear importance as they can influence children during a critical phase of their life by forming positive dietary patterns which could follow into adulthood (Eustachio Colombo et al., 2021). Colombo et al. (2020) estimated that children aged five to eight in Swedish schools get around a quarter of their overall energy intake on weekdays from their school lunches. Here, it becomes clear how the school meal plays a substantial role in the dietary intake for a substantial amount of children daily in Sweden. Oostindjer et al. (2016) further argues how school meals can influence children in other life aspects. They mention how school meals can reach all children regardless of background, help children to maintain healthy diets and establish good eating habits in everyday life. They can also promote sustainable consumption (e.g. more plant-based food and less food waste) as well as being linked to teaching about health and the environment, which reinforces the effect. Since school meals constitute a large part of the food that children and adolescents eat in Sweden, it is therefore relevant to highlight that a change in diets to more sustainable ones would have a noticeable positive impact given the quantity consumed and the long-lasting dietary patterns that can be created.

2. Theoretical framework

The rationale behind this study is the assumption that menu wording influences school children's expectations and eventually the choice, or non-choice, of plant-based food dishes in school canteens. This section explains the theoretical backgrounds for this assumption, as well as an analytical framework that will be used to analyse this study's findings.

2.1. Food choice

There are many factors influencing food choice, and one model by Fernqvist et al. (2024) demonstrates how food choice can be analysed on a food environment level, social/community level, inter-personal level and individual level. On a food environmental level, factors such as store environments, food availability and food characteristics shape food choice. Norms and culture are factors shaping food choices on a social/community level, and family and friends can influence food choice on an interpersonal level (ibid).

Previous research indicates that taste is the strongest predictor of children's food choices, and that children typically choose food based on taste (Nguyen et al., 2015). The literature also suggests that the social environment influences the choices children make in a food setting, with parents and peers shaping children's eating habits (Ventura & Worobey, 2013). Social cues also teach children which foods are safe and socially acceptable (ibid).

This study explores how menu wording could affect children's food choices in a school setting. Of the levels presented by Fernqvist et al. (2024), this study therefore focuses on the food environment level, specifically the extrinsic cue of menu wording. It should however be acknowledged that the other levels in the food choice model are of relevance and moderate how children respond to that cue, yet they are not the primary focus of this study.

2.2. Menu wording as an extrinsic cue generating expectations

The menu serves multiple purposes and stands as a vital part of a restaurant's overall strategy (Behnke et al., 2024). Menu wording serves as a cue that the consumer faces before tasting a specific dish, generating expectations about how the food will taste, what it contains, and how enjoyable it will be (ibid). Menu wording can also be viewed as a form of nudging, meaning the choice architecture has been altered to nudge someone into making a certain decision without restricting their freedom (Thaler & Sunstein, 2021).

Behnke et al. (2024) and Bai et al. (2022) have clarified types of menu words and their effectiveness in increasing appeal by classifying menu words into hierarchies and categories (see Figure 1). These two frameworks are particularly relevant to the present study as they provide a structured vocabulary for analysing how menu language shapes food perception. It should however be mentioned that both Bai et al. (2022) and Behnke et al. (2024) focused on single menu words, meaning this study could broaden the context created by also assessing full dish names. Also, these studies are observational and conducted in adult restaurant settings so they will in this study be analysed whether they are applicable in school settings.

Behnke et al. (2024) empirically examined the effect of menu word description categories in restaurant settings and developed a hierarchy of word influence, see Figure 1.

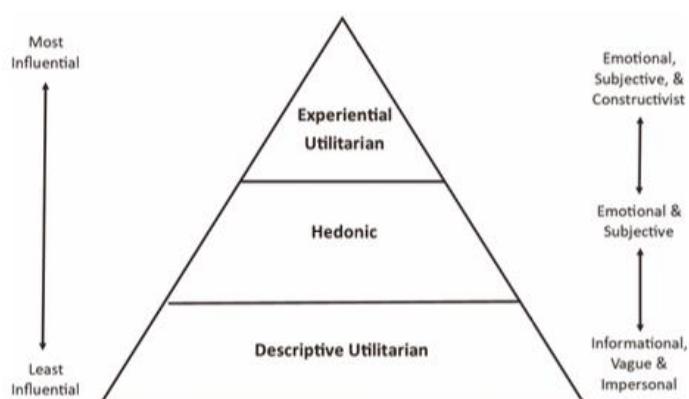


Figure 1. Hierarchy of word influence (Behnke et al., 2024).

These categories within the model include experiential-utilitarian, hedonic, and descriptive-utilitarian and represent different ways menu language influences consumer perception (Behnke et al., 2024). Experiential-utilitarian words provide functional information that helps consumers visualize the food through familiar experiences, such as cooking methods like “grilled,” which evoke personal memories and concrete images. Hedonic words appeal to emotions and pleasure, using subjective terms like “delicious” to create expectations of enjoyment rather than conveying specific information. Descriptive-utilitarian words provide basic factual details about a dish, but they are often more ambiguous and lack the personal or emotional connection found in experiential or hedonic language. As a result, consumers tend to find experiential-utilitarian words most influential, followed by hedonic words, while descriptive-utilitarian words are typically the least impactful (ibid). This hierarchy will be used to analyse in the present study’s findings, as well as evaluate whether the hierarchy also is adaptable to children and school settings.

The observational study of menu words by Bai et al. (2022) is also fundamental to this study, as it provides a categorisation of menu words, see Table 1. The categorisations will be used as foundation for the method design of this study, to enable comparability and also serve as an analytical lens for coding and comparing the menu names examined.

Table 1. Menu words classification by Bai et al. (2022).

Categories	Definition
Culinary	Words describe cooking or serving techniques, ingredient state, size, and level of quality.
Dish Component	Words that described plate components or specific sub-recipes.
Affective	Words that are emotion laden and/or can trigger feelings.
Sensory	Words describe taste, smell, or texture of food.
Descriptive	Words describe an attribute.

These five menu word classifications include affective, descriptive, sensory, culinary and dish component and represent different ways words convey meaning in menu descriptions (Bai et al., 2022). Affective words express emotions or evoke feelings, including those related to health and nutrition. Sensory words describe the taste, smell, or texture of food. Descriptive words highlight features or characteristics of a dish, such as style or origin. Culinary words focus on cooking methods, ingredient states, portion sizes, or quality indicators. Finally, dish component words refer to accompanying elements or sub-recipes (like sides or garnishes) that complete a meal (ibid).

Menu wording is an extrinsic quality attribute describing the food, which can generate expectations (Fernqvist et al., 2024). Previous research in adults shows that menu words affect consumers in several ways. Menu words can create sensory images (Lockyer, 2006), activate associations to family and tradition (Guéguen & Jacob, 2012) and evoke feelings and expectations (Wansink, 2001). An expectation is a belief that something will happen or is likely to happen (Britannica Dictionary, n.d.). In a food context, expectation serves as how the food is perceived before consumption and can both enhance and detract from the overall impression of the food the consumer is about to eat. Deliza and MacFie (1996) explain two types of food expectations; hedonic expectations and sensory expectations. Hedonic expectations explain how much a person believes they will like or dislike the product, and sensory expectations explain the characteristics the product is believed to possess (taste, texture, etc.). Sensory expectations also influence how the consumer experiences the food during consumption (ibid). Although this study does not verbally capture children's expectations of dishes based on menu words, this study will collect data that may indicate the expectations that the menu words have generated.

Deliza and MacFie (1996) describe a two-stage process about how expectations affect food selection and consumption, divided into pre-consumption and post-consumption. In this study, this process will be used in our analytical framework to analyse the findings. In the pre-consumption stage, prior experiences and extrinsic cues such as labels, packaging, advertising, price, and menu descriptions generate expectations which then determines whether the product is chosen or rejected. In the post-consumption stage, the consumer compares the actual sensory experience with the expected one. When expectations are met, the experience leads to satisfaction and repeat use, whereas unmet expectations result in rejection (Deliza & MacFie, 1996). Further research by Piqueras-Fiszman and Spence (2015) shows that cues such as product names and menu descriptions create expectations that influence both how we perceive taste and how much we enjoy something. Their findings suggest that such changes can affect activity in the brain regions responsible for taste, smell, and reward.

Much of the literature in the field of this study focuses on how adult consumers make decisions in a restaurant setting depending on menu name settings. However, the underlying mechanism through which extrinsic cues influence pre-consumption expectations is not necessarily specific to adults or restaurant settings and could be applicable to school cafeterias as well. Murimi et al. (2016) found that menu names are an important factor in children's food choices, and Frödén (2021) noted that aversions to certain foods are related to unfamiliarity with ingredients and their descriptions. This indicates that menu words can have an impact on children's perceptions of sustainable food, therefore this study will see if findings from literature in adults can be meaningful when designing dish names for school settings.

2.3. Goal-framing theory

While Bai et al. (2022) categorises menu words and Behnke et al. (2024) show which words are the most effective, they do not fully explain why certain words activate stronger responses than others. Goal-framing theory offers such an explanation by proposing that human behaviour is guided by three motivational frames; hedonic, gain, and normative (Lindenberg & Steg, 2007). The hedonic goal frame focuses on immediate pleasure and enjoyment, the gain goal frame relates to personal benefits such as value, energy, or health, and the normative goal frame concerns acting appropriately according to social norms or perceived obligations (ibid). At any given moment, one of these goal frames tends to be dominant and influences how individuals evaluate options and cues in their environment. In the context of menu words and food choice, this theory will mainly focus on how menu wording evokes different goal frames. By identifying which goal a given dish name activates, the theory will be used to guide the design and evaluation of menu language that strategically appeals to children's dominant motivational frames. It is

however acknowledged that the activated goal frame in this context is not solely determined by the specific words used to describe a dish. Several other factors, such as the cultural and social factors mentioned in section 2.1, can also evoke certain goal frames that may dominate food choice rather than the menu wording.

It is however not enough to know which words appeal to children, one must also understand how these words are perceived and why they evoke certain expectations or emotions. The "Why?" cannot be answered solely through survey or workshop data, but interviews can provide clues that point in the right direction. This exploratory study therefore draws on three complementary perspectives to address the question; theoretical perspectives on menu wording, behaviour and food choice, qualitative and quantitative data from the students themselves and the head chef's reflections of children's responses to menu names.

2.4. Analytical framework

Given the multifaceted nature of menu perception and food choice, no single theory is sufficient to capture the full complexity of how children interpret and respond to dish names. By combining goal-framing theory (Lindenberg & Steg, 2007), the food choice model (Fernqvist et al., 2024), expectations theory (Deliza & MacFie, 1996), and the menu word classifications (Bai et al., 2022) and hierarchy of word influence (Behnke et al., 2024) into an integrated analytical framework, the analysis is grounded in a theoretically coherent structure. This allows findings from all three sub-studies to be interpreted through a common lens, ensuring that the results are not only empirically meaningful but also theoretically anchored.

The developed analytical framework (Figure 2) follows a process that describes how a menu item can become a choice based on the cue of menu words. In short, it describes how an individual encounters words on a menu, the expectations those words generate (Deliza & MacFie, 1996) and the response that follows once the information has been processed and interpreted through the goal frames proposed by Lindenberg and Steg (2007). This is all under the social and cultural context of that individual (Fernqvist et al., 2024).

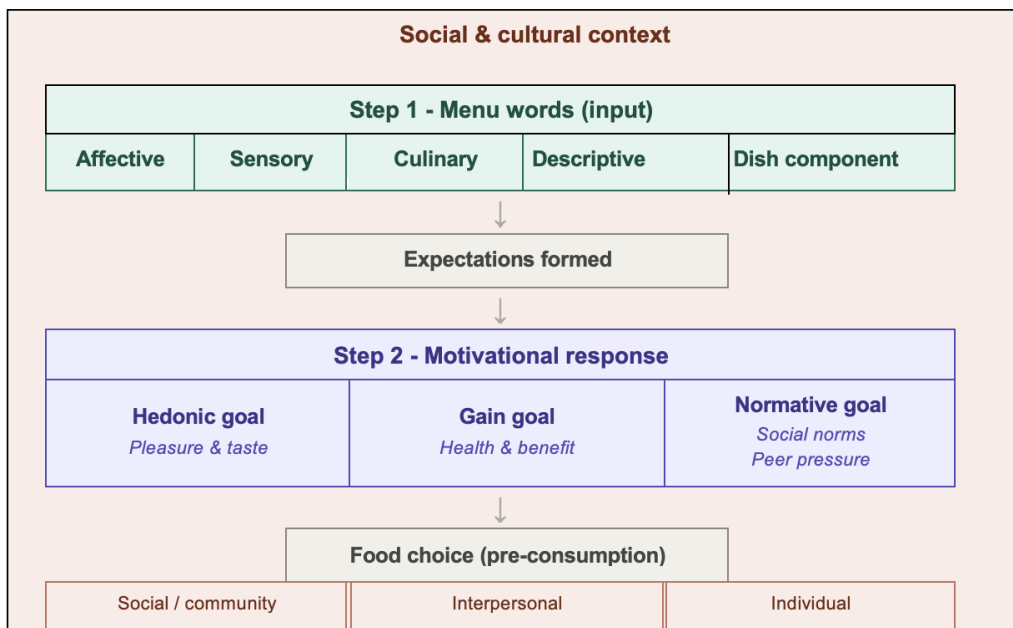


Figure 2. Analytical framework illustrating the process of how the cue of menu words may impact food choice.

The first step of the framework includes encountering the menu words of the served dishes in school. The menu words are categorised in accordance with the system by Bai et al. (2022), which sorts them into sensory, affective, descriptive, or culinary words. This part of the model will primarily be used to have a common analytical lens to compare different menu word types. After encountering the name of a dish, expectations are formed. Expectations take shape in the individual’s mind when they read the word before they have tasted the food. Even though this study does not study expectations directly, they are part of the analytical framework to understand why certain menu words evoke certain responses. The second step describes the motivational response behind the pupil’s food choice. The three goal frames from goal-framing theory are here used to interpret why certain phrasings seem to appeal to specific motivations.

Surrounding this process is the social and cultural context of the pupil, that may influence all of the other parts of the model. This is used as an overarching understanding that menu words not only work by themselves but are dependent on the individual’s social and cultural context.

The model is limited to the pre-consumption phase, since data collection ends at the point of stated choice or preference. Personal and social factors are treated as interpretive resources rather than as variables measured directly.

3. Methods

This section describes the methods used in this explorative study to address the research questions and fulfil the study's aim. The study consisted of three sub-studies, two qualitative and one quantitative. Below is an outline of the entire methodological approach.

3.1. Overall methodological approach

This study adopted an exploratory, mixed methods design combining three complementary sub-studies: a semi-structured interview, a classroom workshop, and an online survey. Rather than three independent investigations, these sub-studies form a single, integrated research effort in which each component builds on and informs the others. It also enhances the validity of the findings and increases the opportunity to cross-check one dataset against another (Grbich, 2013). The interview provided contextual and practitioner-based insight into how menu language is constructed and experienced in a real school setting. The classroom workshop generated qualitative data on how children perceive and respond to different dish names. The online survey then allowed the patterns emerging from the workshop to be tested on a larger sample within the same school. Together, the three components were designed to produce a comprehensive, multi-perspective understanding of the studied phenomenon.

Given the exploratory nature of the study and the context-specific sampling choices made across all three components, the findings should be understood as indicative rather than generalizable. The aim is not to produce universally applicable conclusions, but to generate insights and preliminary evidence that can inform future research and practical guidance in school food settings.

All sub-studies were performed at Språkskolan in Stockholm, Sweden. This school is divided into a Finnish school with 141 students and an English school with 234 students, both going from preschool to grade nine. The school was obtained as study field through a personal connection.

3.2. Research paradigm

Pragmatism was considered to be the most suitable research paradigm for this study because it prioritizes practical problem-solving and methodological flexibility. Rather than committing to a purely positivist or interpretivist stance, pragmatism focuses on what works best to answer the research question in a real-world context (Pretorius, 2024). Since this study combines quantitative surveys with qualitative thematic analysis, pragmatism provides a coherent philosophical foundation for

integrating multiple types of data. It supports the use of mixed methods to generate both measurable outcomes and contextual understanding, acknowledging that children's food choices are influenced by both observable patterns and socially constructed meanings embedded in menu language. Ultimately, a pragmatic approach aligns with the study's aim which is to produce insights that can result in more effective communication strategies for promoting sustainable food choices among children.

3.3. Ethical considerations

Even though ethical vetting was not required, as student theses are exempt under the Swedish Ethics Act (2003:460) on research involving humans, careful ethical considerations must still take place. Since minors were involved in this study, lawyers from RISE (Research Institute of Sweden) and SLU (the Swedish University of Agricultural Sciences) were consulted prior to the study to make sure the study was ethical and protected the children from personal information being collected or showcased. The study was therefore planned to be executed in a way that the student's remained anonymous and did not leave any personal information to the researchers.

Throughout all the involved studies, the four fundamental ethical research principles as summarised by Bryman (2016) were complied with. These principles include the consent requirement, the information requirement, the confidentiality requirement and the use requirement. The consent requirement was fulfilled by participants giving their consent prior to participating. When children were the participants, information was also sent to their guardians through their mentor prior to the workshop. For the adult participant, a consent form was signed. To meet the information requirement, study participants and their guardians received comprehensive and transparent details about the research prior to data collection. These details covered the study's objectives, that participation is entirely optional, the freedom to withdraw at any point without explanation, and a guarantee that all gathered data would only be used for this study. Every participant for all the studies was also assured of full anonymity and confidentiality during every stage of the process. Anonymity was maintained by limiting access to interview recordings to the research team alone, with secure storage of the files and their deletion at the project's end. Finally, the use requirement was met by making sure the collected data was only used for the purpose of this research project.

Furthermore, an extract from the researcher's criminal record was sent to the head of education prior the visits, complying with The Education Act (2010:800) 2nd chapter 31 §. This mandatory check was needed to be allowed in the school, with the purpose to protect the children.

3.4. Interview with head chef

The interview with the school's head chef aimed to investigate the reasoning behind how dishes are named on the school menu, and to draw on the chef's direct experience of how children respond to different menu language. As the practitioner responsible for both writing and observing the effects of menu names, the head chef was uniquely positioned to provide insight that other methods could not access.

3.4.1. Design and sampling

A semi-structured interview was chosen as the data collection method, as it allows for flexible dialogue between researcher and participant while maintaining a clear thematic focus (Galletta, 2013). Rather than following a fixed script, the interview was shaped by the interviewee's responses, with follow-up questions asked in response to what was said. The researchers therefore remained open for the discussion to move in different directions, as it could provide insight into the respondent's beliefs and perceptions of the topic that the researchers perhaps had not thought about (Bryman, 2016). The interview guide consisted of a set of themes rather than fixed questions, giving the interviewee considerable scope to elaborate in their own terms (Bryman, 2016). See the full interview guide in Appendix 1.

The interviewee was selected through purposive sampling, meaning that the study participant had appropriate qualities to fulfil the study's aim (Bryman, 2016). Contact information was provided by the head of education at Språkskolan. The interview took place in the school cafeteria before lunch was served, ensuring a quiet and undisturbed setting. The interview was recorded on a mobile phone and subsequently transcribed in full into a Microsoft Word document.

3.4.2. Data analysis

The transcript was analysed using thematic analysis following the six steps of Braun and Clarke (2006);

1. Familiarising with the data
2. Generating initial codes
3. Searching for themes
4. Reviewing potential themes
5. Defining and naming themes
6. Writing up

A thematic analysis was chosen as analysis method since it is one of the most common approaches when it comes to analysing qualitative data (Bryman, 2016). An inductive approach was adopted, as the limited prior knowledge of the

phenomenon made it more appropriate to allow themes to emerge from the data rather than imposing a predetermined framework (Elo & Kyngäs, 2008). Both researchers were involved throughout the analytical process to minimise individual bias and ensure multiple perspectives were considered. The researchers also remained aware of how their own assumptions may have influenced both the conduct of the interview and the interpretation of the material (Galletta, 2013).

3.5. Classroom workshop

The classroom workshop was designed to investigate directly how children perceive and interpret different menu names for a vegetarian dish. Building on the chef's perspective gathered in the interview, this component brought the research into the children's own environment. This allowed their responses to menu words to be observed and collected in an engaging and familiar setting. The workshop consisted of two activities. First, children created their own dish names for a presented vegetarian dish. Second, they wrote down word associations in response to six dish names constructed by the researchers.

3.5.1. Design, sampling, and material

A classroom setting was chosen as it provided a familiar and comfortable environment for the participants and allowed the researchers to maintain control over the activities. A workshop format was selected over open discussion to minimise the risk of sensitive disclosures and to keep the session focused on the research questions. Given the typically shorter attention spans of children in this age group, the workshop was designed to be interactive and varied.

Participants were again recruited through purposive sampling, comprising two grade five classes of 16 and 23 students respectively at Språkskolan. These classes were selected as they represented the target age group and were located at the same school as the other sub-studies. Contact was established through the head of education, who provided the researchers with the mentors' contact information.

When conducting the experiments in class, it was also important to the researchers to get the pupil's attention and engagement in the topic prior to their participation. Before engaging in the workshop, the researchers therefore shortly explained the purpose of the workshop and how the pupil's voices were of importance to have a chance in affecting the future of school meals. If getting their attention and engagement would fail, there would be a risk of lacking or unserious responses to the workshop activities.

The workshop specifically studied one dish, to make the results comparable. To select the studied dish for the workshop, two months of the school menu were analysed to identify the most frequently served vegetarian options. Pasta and soups were served most frequently, followed by vegetable patties with varying sides. Nevertheless, vegetable patties with herb sauce and boiled potatoes were chosen, as patties maintain a relatively consistent form and offer stronger potential for creative reinterpretation than pasta or soups, which vary considerably in composition. In the first activity, students were shown a photograph of this dish (Figure 3) and asked in groups of three to suggest an appetising name for it, which was then written on paper. The students were then told to toss the paper into a basket, which was a deliberate design choice to keep the activity engaging.



Figure 3. A visual example of the studied dish.

In the second activity, six dish name variants were presented one at a time on a PowerPoint slide, each constructed according to one of the five menu word categories identified by Bai et al. (2022), plus the name already in use at the school. Thus, the presented names were; (1) the school's existing name, (2) a culinary word-focused name, (3) a sensory word-focused name, (4) a dish component-focused name, (5) an affective word-focused name, and (6) a descriptive word-focused name. All presented names are summarized in Table 2.

Table 2. The presented dish names for the word association experiment.

1 Vegetable patties With herb crème & boiled potatoes	2 Fried veggie patty With whipped herb cream & newly boiled potatoes	3 Crunchy green patties With smooth herb crème & steaming hot potatoes
4 Carrot patties With parsley sauce, side salad and potatoes	5 Grandma's homemade patties With garden herb sauce and potatoes from local farms	6 Chef's vegetarian patties With French herb sauce & potatoes from Skåne

For each name, students were asked to discuss their impressions of the name in groups. Then, the groups were asked to write five words on sticky notes about what

they associate the dish name with. These notes were then collected by the researchers after each name before the next was revealed. This procedure was repeated for all six presented dish names.

3.5.2. Data analysis

Separate thematic analyses were conducted for each of the two workshop activities, again following the six steps of Braun and Clarke (2006) and applying an inductive approach (Elo & Kyngäs, 2008). The data were first transferred from paper to Excel to enable an overview of the full dataset, after which preliminary codes were generated and grouped into overarching themes. In searching for themes, the researchers followed the recommendations of Ryan and Bernard (2003, as cited in Bryman, 2016), attending to repetitions, local typologies, and metaphors or analogies in the data. Frequency alone was not treated as sufficient grounds for inclusion, only patterns directly relevant to the research questions were retained (Bryman, 2016). Themes were reviewed collaboratively by both researchers before being defined and represented in a visual model.

3.6. Online preference rank test and forced choice survey

The quantitative component of the study was designed to build directly on the findings of the classroom workshop by testing children's dish name preferences on a larger sample. Where the workshop generated qualitative insight into how children perceive and articulate responses to menu language, the survey allowed those preferences to be measured and compared. A second aim of the survey was to examine whether a preferred vegetarian dish name could influence children to choose a plant-based option over a comparable meat-based alternative.

3.6.1. Design, sampling, and material

An online survey was distributed to all pupils in grades 6-9 from both the Finnish and English section at Språkskolan (n=130). As these students were at the same school that the other sub-studies had been conducted in, they were recruited through convenience sampling (Bryman, 2016). The survey was created in the platform Netigate and distributed via link and QR code through class mentors, following contact established through the head of education and the relevant work team leader.

The survey consisted of two questions. The first asked participants to rank six descriptions of the same vegetarian dish as studied in the workshop, vegetable patties with herb sauce and boiled potatoes, from most (1) to least (6) appealing. Five of the six name variants were carried over directly from the workshop to

produce a coherent and comparable dataset across the two sub-studies. The school's original menu name was replaced with a pupil-generated name from the workshop, as the researchers were interested in whether a peer-created name would resonate with a broader student group. The description ranked first was automatically carried forward to the second question, which presented a forced choice between the participant's preferred vegetarian description and a beef patty dish with identical sides described using the school's existing name. The respondents were then asked to choose which of the dishes they would rather eat in the school canteen. This design allowed the study to assess not only which name was most appealing in isolation, but whether that appeal was strong enough to shift food choice away from a meat-based alternative.

Two sets of hypotheses were formulated. For the preference ranking test:

- H0 proposed that the distribution of rankings would not differ from a random distribution.
- H1 proposed that a significant difference would exist.

For the forced choice test:

- H0 proposed that the proportion choosing the vegetarian dish would equal the proportion choosing the meat dish.
- H1 proposed that these proportions would differ significantly.

3.6.2. Data analysis

Ranking data were analysed using the Friedman test, which is appropriate for comparing ranked preferences across three or more conditions (Bower, 2013), with a significance threshold of $p < 0.05$. Where the overall test indicated a significant difference, pairwise post-hoc comparisons were conducted using the Durbin-Conover procedure to identify which specific descriptions differed from one another. A multinomial logistic regression was additionally performed to examine whether age, gender, and dietary preference predicted participants' top-ranked description. For the forced choice question, a binomial test was used to assess whether the observed distribution of choices differed significantly from an expected 50/50 split (Kothari, 2004). All analyses were conducted in the statistical software Jamovi.

4. Results

The results section will be divided into the three different methods for this project; interview, classroom workshop and online survey. To set the context, a brief description of the meal environment within the studied school will initiate the section.

In the entry way to the canteen, a glass display case is showing display models of the different dishes served that day. Beside the display case is a chalkboard with the dish names of the day presented. A bar table with plates and allergen information is then placed right before entering the canteen. Before entering, the students line up outside the cafeteria and then proceed to walk in one by one. The school canteen itself can fit 97 guests at a time, and the room mainly consisted of neutral colours and with furniture signalling uniformity, see Figure 4.



Figure 4. The school canteen.

According to the head chef, it was his choice to paint the walls this way from being previously white to make the canteen uniform and neat. The choice of palette and furniture was therefore mainly in accordance with the head chef's preferences. The food is placed in different stations; a beverage station, a bread station, and the main courses. For the main courses, vegetables are always placed at the beginning of the food cart, followed by a carbohydrate source and then protein source. The students are free to serve themselves with the food they wish to eat, and have 30 minutes to eat before the next classes enter the canteen.

4.1. Interview

A 68-minute interview was conducted with the head chef, who had 29 years of cooking experience in both communal and private schools in various suburbs around Stockholm.

4.1.1. Thematic analysis

The thematic analysis regarded the head chef's experiences with menu naming and children's reactions. Four themes emerged from the transcribed material; *Vegetarian as a linguistic problem*, *Naming strategies*, *Cultural and social frames*, and *The lonely reality of the head chef*. For a full overview, see Figure 5. In the following section, the four main themes are described.

Theme 1: Vegetarian as a linguistic problem

This theme captures how the word "vegetarian" itself functions as a linguistic label that deters children before the food has even been tried. The head chef's recurring observation is that children's expectations are shaped by the name rather than the food itself. There is a clear paradox about using the word "vegetarian" in dish names. One part is that it is a clear barrier for children to taste the dish. At the same time, the head chef explained situations where the dish name has disguised the name of a protein alternative, and children end up complaining that it does not taste like meat.

"They don't see "sin" in the text - they think it's chili con carne. And then when they've eaten, it's the texture of the soy mince or Anamma - you can tell it's not animal-based. And then they come back and say, "this wasn't meat." Because they don't really read the whole sentence."

Some dishes that are naturally vegetarian but do not have the label on them could be popular with the students.

"When I buy ready-made pancakes, I always serve soup with them, because I know most people like it. And with potato patties, the kids don't even realize it's vegetarian. Pancakes - what are they if not vegetarian? It doesn't get more vegetarian than that."

Based on these quotes from the interview, the head chef notes that he finds the term "vegetarian" to be complex and that dishes are received differently depending on the context.

Theme 2: Naming strategies

The head chef talks about naming dishes as marketing tools, saying "you have to sell the dish". When it comes to specific words, he mentions how using words like "fried" and "cheese-crust" seem to generate positive responses. Also, following food trends and trying to imitate popular fast-food items seems to have been appreciated by the students.

"I actually made a spicy lime chicken - like a Chop Chop-style dish. I bought chicken thighs, coated them with lime, and fried them on the

griddle. The kids ask for it at every meal planning session. You have to keep track of what's popular and what the kids are eating. Along with it, I made a garlic dip - mayonnaise and garlic, just like they have at Max. All the kids know what that is".

Occasionally, the school gets visits from external food companies serving food and discussing it with the children. According to the head chef, even vegetarian dishes seem to be eaten and enjoyed more when the external food servers come compared to the regular school cafeteria.

Theme 3: Cultural and social frames

This theme describes how children's food choices are shaped by factors such as cultural background, peer pressure, habits from home, and food neophobia towards unfamiliar food. This variation is reflected in the different attitudes expressed by the children of the school. One startling example was when the head chef made the switch from always having non-pork-eaters have another form of meat as their alternative in school, to being served vegetarian food while others were eating pork.

"The first time I did it, I had pork, and it was a Friday, so I also had some really good vegetarian patties that we had made. Then a student came in and spat in my face. In the kitchen. And called me a racist."

This statement shows how being served vegetarian food while other students were served pork was even seen as a direct insult. Peer pressure also came up during the interview:

"And without peer pressure - because when someone says it's disgusting, it becomes difficult to try it, even if you actually want to. You might even eat it at home and like it, but at school you don't dare to show it. Then you become excluded."

This shows how children are very influenced by one another regarding their food choices, and how only a single comment can make a child not willing to eat certain foods.

Theme 4: The lonely reality of the head chef

A reoccurring theme throughout the interview is the head chef's experience working without a colleague to peer consultation with when it comes to the menu language. He seeks inspiration on his own and says that:

"I glanced a little at other schools for inspiration and saw what they had written. You can write "today's green". But maybe it shouldn't say that either. I don't know how you're supposed to write it. It's difficult."

As the head chef is working at a private school, he lacks a dietary manager within the municipality that public schools often have access to for ideas.

The theme also encompasses the head chef's expressed ambition to improve menu language. He mentions how he's been taught that *"You should not write the word vegetarian"*. However, due to the negative reactions from children when the word has been removed, the chef avoids the risk of upsetting the children through broken expectations and continues to write the word "vegetarian" on many of the dishes.



Figure 5. Thematic analysis of interview with head chef. Background colour indicates theme association.

4.2. Workshop

The classroom workshop results are below divided into the two activities performed in the two grade 5 classes; the children creating own dish names for the presented dish and their word associations with different dish names.

4.2.1. Creating dish names

After conducting a thematic analysis in accordance with Braun and Clarke's (2006) six step guide, four main themes were generated from the dataset of 12 created dish names; *Conformative*, *Creative*, *Sensory* and *Imaginary* (See Table 3 for summary of all dish name suggestions).

Theme 1: Conformative

Half of the responses seemed to be an attempt to guess the different dish components on the picture that was shown. Even though the children were asked to not guess what food it is but rather give the dish the most appetizing name, most responses seemed conformative with the name used in the school cafeteria.

Theme 2: Creative

For two out of the three creative suggestions, words related to royalty ("*king*" and "*royal*") were used, indicating these words being attractive to these consumers. The other creative response included "*five-star rating*" in the menu name, which may add a sense of quality to the dish.

Theme 3: Sensory

Only one of the responses included sensory descriptors, making it its own theme. This response used the words "*yummy*" and "*crunchy*", implying that these terms sounding appetizing.

Theme 4: Imaginary

Two of the suggestions imagined the patty on the picture being a steak. This implies that for the dish to sound appetizing, meat should be included in the name. This theme was decided to be named imaginary since it was clear on the picture that was shown in the workshop that it is not a regular meat steak.

Table 3. Thematic analysis of children's dish names.

Dish name (children's response)	Themes
Vegetarian patty with potato, served with side dishes and cold dill sauce	Conformative
Veggie patty with potatoes and vegetables with a cold tzatziki	Conformative
Veggie patty with side dishes	Conformative
Vegetarian patty dish with potatoes and a white dill sauce	Conformative

Potatoes with patty & garlic sauce	Conformative
Vegetarian patty with potatoes and tzatziki	Conformative
The veggie king with potatoes	Creative
Royal potatoes with crunchy patty and dill sauce	Creative
Vegetarian patty served with potato, nutrition & cold sauce with five-star rating	Creative
Yummy crunchy vegetarian patties with boiled potatoes	Sensory
Wonderful potatoes and steak	Imaginary
Fried potatoes and flank steak	Imaginary

4.2.2. Word associations

The thematic analysis of the word association experiment was conducted across a total of 209 responses, following the exclusion of 12 responses deemed clearly non-serious or uninterpretable. The remaining 197 responses were used in the thematic analysis and yielded four overarching themes; *Sensory imagination*, *Categorisation and expectations*, *Emotional anchoring* and *Cultural confusion*. Full presentation of all emerged themes can be seen in Figure 6.

Theme 1: Sensory imagination

The most consistently recurring pattern across all six menu names was the use of sensory language in response to texture- and temperature-related descriptors. The word "*crunchy*" emerged as the single most frequent positive descriptor in the entire dataset, appearing most often as a response to menu name 3 (*Crunchy green patties...*) Additional sensory codes such as "*creamy*", "*steaming hot*", and "*melts in the mouth*" similarly generated positive associations. Conversely, terms such as "*dry*" and "*cold*" implied negative associations. This pattern suggests that children in this age group interpret dish names primarily as sensory promises, constructing a mental image of how the food will feel rather than what it contains.

Theme 2: Categorisation and expectations

A second prominent theme concerned how children categorised dishes based on key signifier words, and how violations of those categories shaped their responses. The word "*patty*" seemed to activate expectations associated with meat-based, filling, and flavourful food. When this expectation was disrupted, most notably in menu name 4 (*Carrot patties...*), responses became markedly more negative with codes such as "*disgusting*", "*tasteless*", and "*not good*" appearing with greater frequency. Similarly, the terms "*vegetarian*" and "*veggie*" functioned as category markers that participants associated with undesirable food, regardless of how the dish was otherwise described. Paradoxically, the most transparent menu names, those explicitly listing ingredients, appeared to reduce appeal when the named ingredients carried negative associations.

Theme 3: Emotional anchoring

Menu name 5 (*Grandma's homemade patties...*) generated the most emotionally positive responses in the dataset. Affective words including "grandma", "homemade", "nature", "organic", and "close" appeared with notably higher frequency compared to other names. Unlike the other names, this one communicates not what the dish contains but who made it and under what circumstances. It evokes ideas of care, comfort, and quality that children associate with the home environment. However, some responses included uncertainties such as "what?" or "don't know", indicating individual differences in the emotional anchoring of these words. Notably, the herb component of this name attracted little attention, neither positive nor negative, suggesting that the emotional framing was sufficiently powerful to override uncertainty about specific ingredients.

Theme 4: Cultural confusion

The fourth theme emerged from responses to menu name 6 (*Chef's vegetarian patties...*), which contained the highest proportion of uncertainty codes in the dataset. Geographical and cultural labels such as "from Skåne" and "French herbs" produced uncertain or neutral reactions. Terms such as "don't know", "strange", and "French" indicated that participants lacked the cultural reference points needed to decode geographic and culinary origin markers as quality signals. The term "chef's" similarly failed to activate the prestige association likely intended, suggesting that such status signifiers may function effectively for adult consumers but carry limited communicative value for children in this age group.

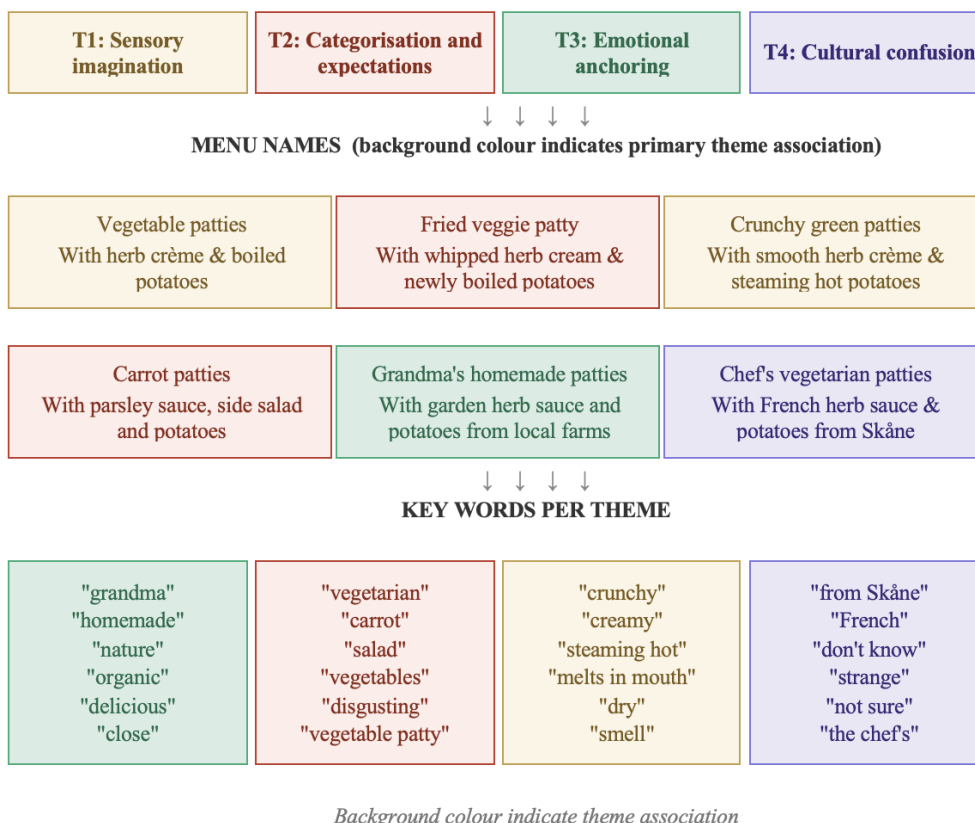


Figure 6. Thematic analysis of word association workshop.

Taken together, these four themes indicate that children's interpretations of menu language are shaped primarily by sensory cues and emotional resonance rather than by ingredient transparency or cultural provenance. The findings are discussed further in relation to their implications for sustainable menu naming practices in chapter 5.

4.3. Online survey

Below are the results from the online survey sent to grade 6-9 at the studied school. The survey received a total of 130 responses, where 5 were incomplete and therefore excluded from the dataset. In total the data that was analysed and portrayed were $n = 125$.

4.3.1. Friedman test and pairwise comparisons

A Friedman test was conducted to examine whether there is a significant difference between preferences of the presented names in the ranking part of the survey. The formula for the test was $\chi^2(5) = 105, p < 0.001, n = 125$.

The test showed that there was a significant difference, as the p-value indicates the probability of the difference occurring by chance is less than 0.1%. The null hypothesis (H0), stating that the rankings would not differ from a random distribution, was therefore rejected in favour of the alternative hypothesis (H1). Figure 7 portrays the mean ranks of menu description and the results from the Friedman test.

The favourite among the menu names was alternative E (*Grandma's homemade patties...*), with M = 2.05 (mean) and median = 1. The least favourite among the menu names was alternative A (*The veggie king...*), with M = 4.29 and median = 5. The remaining alternatives received intermediate mean ranks ranging from 3.39 to 3.79.

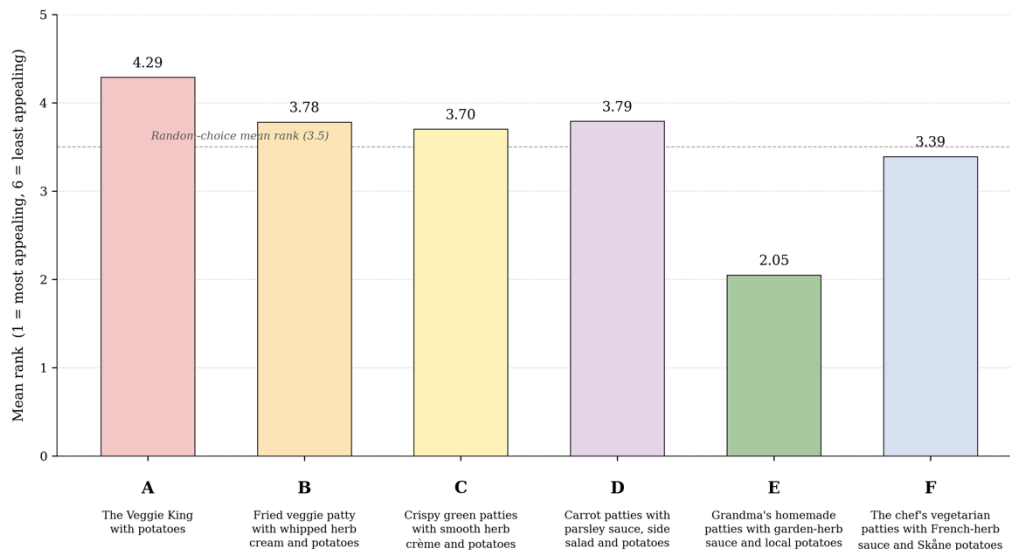


Figure 7 Mean rank of each menu description.

(A–F) based on responses from 125 students. Lower mean rank indicates higher perceived appeal (1 = most appealing, 6 = least appealing). The dashed line at 3.5 represents the expected mean rank under random ranking.

The Friedman test does however not state whether one name is preferred over another but merely states if there is a difference. Therefore, to determine which specific descriptions differed from one another, pairwise comparisons using the Durbin-Conover post-hoc procedure were performed through Jamovi (Table 4).

Table 4. Pairwise comparisons between menu descriptions.

Pair	Statistic	p-value	Significance
A - B	2.326	0.020	*
A - C	2.732	0.006	**
A - D	2.289	0.022	*

A - E	10.338	< 0.001	***
A - F	4.135	< 0.001	***
B - C	0.406	0.685	<i>n.s.</i>
B - D	0.037	0.971	<i>n.s.</i>
B - E	8.012	< 0.001	***
B - F	1.809	0.071	<i>n.s.</i>
C - D	0.443	0.658	<i>n.s.</i>
C - E	7.606	< 0.001	***
C - F	1.403	0.161	<i>n.s.</i>
D - E	8.049	< 0.001	***
D - F	1.846	0.065	<i>n.s.</i>
E - F	6.203	< 0.001	***

Durbin-Conover post-hoc test, n = 125.

Significance symbols: *** p < 0.001, ** p < 0.01, * p < 0.05, n.s. = not significant.

Menu descriptions

- A The Veggie King with potatoes
- B Fried veggie patty with whipped herb cream and fresh-boiled potatoes
- C Crispy green patties with smooth herb crème and steaming hot potatoes
- D Carrot patties with parsley sauce, side salad and potatoes
- E Grandma's homemade patties with garden-herb sauce and potatoes from nearby farms
- F The chef's vegetarian patties with French-herb sauce and potatoes from Skåne

Description E differed significantly from descriptions A, B, C, D and F (all p < 0.001), receiving a lower mean rank than each of the other descriptions. Description A differed significantly from descriptions B (p = 0.020), C (p = 0.006), D (p = 0.022), E (p < 0.001) and F (p < 0.001), receiving a higher mean rank than each of the other descriptions. These results indicate that description E was significantly more liked than all other descriptions, and description A was significantly less liked than all other descriptions. No significant differences were observed between descriptions B, C, D and F (all p > 0.05).

4.3.2. Regression analysis

A multinomial logistic regression was conducted to examine whether age, gender or dietary preference predicted which menu description respondents ranked as their first choice. The results that are presented in Table 5 shows that the overall model was not statistically significant, with $\chi^2(35) = 48.2$, p = 0.068, Nagelkerke R² = 0.176.

Table 5. Multinomial logistic regression model fit.

Statistic	Value
$\chi^2(35)$	48.2
p-value	.068

Nagelkerke R ²	0.176
Cox & Snell R ²	0.062
McFadden R ²	0.147
n	125

The results of the regression analysis showed $\chi^2(35) = 48.2$, with 35 degrees of freedom representing the number of variable combinations the model could draw on. This value indicates that the model captures some variation, but not enough to rule out that the results occurred by chance. The associated p-value of 0.068 exceeds the conventional significance threshold of 0.05, meaning that the model is not statistically significant.

Nagelkerkes R² indicates the proportion of variation in the outcome that is explained by the model. R² = 0.176 indicates that 17.6% of the variation in choice can be explained by gender, age and diet. However, the remaining 82.4% represents variation not explained by these predictors and therefore the reason for the majority of the student's first choices in the survey is due to other unknown factors. None of the individual predictors significantly predicted top-ranked description either with all a p-value over 0.05, see Table 6.

Table 6. Likelihood ratio tests of predictors.

Predictor	χ^2	df	p-value	Significance
Age	9.10	5	.105	<i>n.s.</i>
Gender	12.10	10	.278	<i>n.s.</i>
Diet	27.01	20	.135	<i>n.s.</i>

Significance symbols: *** $p < .001$, ** $p < .01$, * $p < .05$, *n.s.* = not significant

The table shows how age, $\chi^2 (5) = 9.10$, $p = 0.105$; gender, $\chi^2 (10) = 12.10$, $p = 0.278$; and dietary preference, $\chi^2 (20) = 27.01$, $p = 0.135$, meaning them being non-significant.

4.3.3. Forced choice test

To statistically analyse the second part of the survey, forced choice test, a binomial test was used to examine whether the proportion of participants in the study who chose the vegetarian option differed significantly from a 50/50 split. A binomial test is appropriate when comparing the observed frequency of a binary outcome, in this case vegetarian or meat, against a hypothesised proportion. The results showed that 51 students (40.8%) preferred the vegetarian-based dish whereas 74 students (59.2%) preferred the meat-based dish ($n = 125$), see Table 7.

Table 7. Binomial test.

Outcome	Count	Total	Proportion	p	95% CI
Vegetarian	51	125	0.408	.049	[0.321, 0.499]

Meat	74	125	0.592	.049	[0.501, 0.679]
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Note. Test of proportion against expected 50/50 distribution. H_0 : proportion = 0.5. Forced-choice distribution against an expected 50/50 distribution ($n = 125$).

As per table Table 7 the p-value (0.049) indicates that it is significant, meaning the probability that the distribution would occur by coincidence is low. The 95% confidence interval for the vegetarian proportion [0.321, 0.499] falls entirely below 0.5, indicating that an equal 50/50 split is an unlikely outcome and confirming that the significant p-value does not reflect a chance finding. Even though the margin is small, both the p-value and confidence interval indicate that the meat-based dish was chosen significantly more than the chosen vegetarian dish, leading to H_0 being rejected in favor of H_1 .

Although the meat-based dish was more often chosen than the plant-based dish overall in the forced choice test, it was of interest to see if there were differences between the different menu descriptions. The distribution of the forced choice test results is therefore presented in Figure 8.

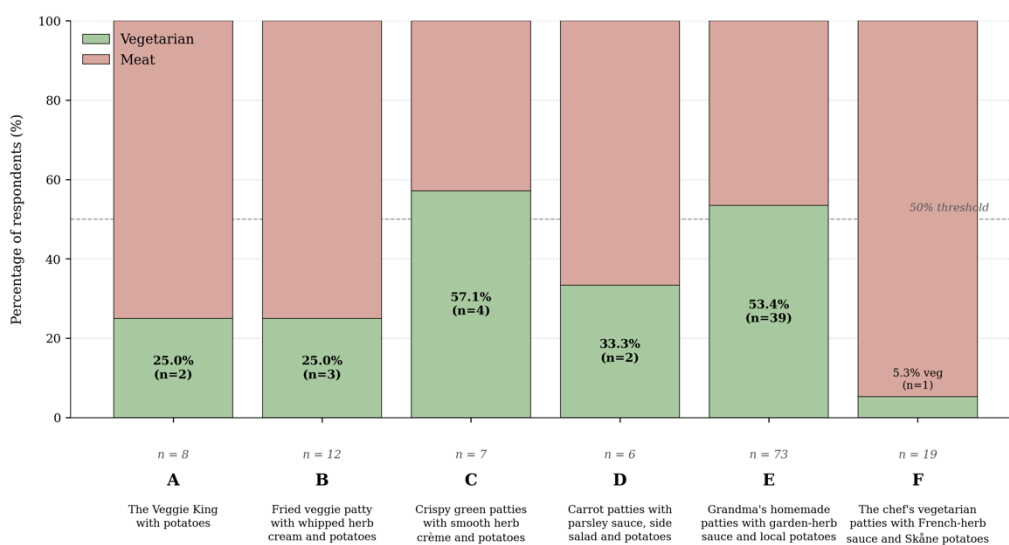


Figure 8. Forced choice results.

The percentage of respondents who chose the vegetarian option over the meat-based dish, per vegetarian option. The y-axis shows the percentage of participants who chose the vegetarian option over the meat option. The dashed line indicates the 50% threshold above which the vegetarian dish was chosen more frequently than the meat-based dish. Group sizes (n) are shown below each bar.

Two of the descriptions, C and E, were chosen over the meat-based dish (C = 57.1% and E = 53.4%). The remaining descriptions A, B, D and F were chosen less frequently than the meat-based dish, with description F receiving the lowest proportion of choices out of the vegetarian options (5.3%).

5. Discussion

This chapter will initially present a synthesis of the study's main findings, followed by a discussion of them relating to the study's analytical framework. The chapter will also present implications for policy and practice, as well as acknowledge the study's methodological limitations and propose suggestions for future research.

5.1. Synthesis of results

Taken together, the results from the three sub-studies allow to pinpoint eight mechanisms on menu wording in school food settings. Table 8 showcases the study's main findings, which sub-study the finding resulted from, the concrete evidence from the sub-studies, and how the findings can be implemented in menu naming interventions.

The most consistent finding is that emotional and nostalgic language outperforms all other naming strategies. Names evoking care, comfort, and home rather than ingredients or dietary categories generated the strongest positive responses. This aligns with research showing that menu words can provide associations to family and tradition and are powerful drivers of food appeal (Guéguen & Jacob, 2012). Closely related is the finding that sensory language, particularly words describing texture and temperature, consistently generated positive associations across methods. This supports Behnke et al.'s (2024) hierarchy of word influence, which places experiential-utilitarian words at the top, and Bai et al.'s (2022) classification of sensory words as a distinct and impactful category. Words that help a child imagine how a dish will feel to eat appear to be more persuasive than words that explain what it contains.

On the other side of this picture, the word "vegetarian", and related category labels like "veggie", consistently functioned as a deterrent. Rather than activating a desire to try the dish, these words were associated with obligation or health rather than pleasure. The practical implication, supported across all three sub-studies, is that naming dishes by their cooking technique or sensory qualities is likely to be more effective than signalling their dietary category. Connected to this is the finding on expectation violations. Drawing on Deliza and MacFie (1996), the data suggest that when a dish name creates an expectation and the food fails to deliver on it, the result is not just disappointment but distrust. This places a real constraint on naming strategies: the goal is not simply to make a dish sound as appealing as possible, but to create expectations that the dish can honestly fulfil.

Geographic and professional quality markers, words like "from Skåne", "French herbs", or "chef's", produced a different kind of challenge. Rather than deterring through wrong associations, they confused through unfamiliar ones. Aligning with previous literature, unfamiliarity with food descriptions can result in resistance towards food (Frödén, 2021; Murimi et al., 2016). These signals may function as quality cues in adult restaurant contexts, but appear to carry little value for children. This points to the importance of calibrating menu language to its specific audience.

Surrounding all of these linguistic findings is a broader contextual one: social and cultural factors act as powerful moderators of how any menu word is received. Peer pressure can override even the most carefully constructed dish name, and cultural food socialisation histories mean that the same word lands differently depending on who reads it. This reinforces the view from (Ventura & Worobey, 2013) that social influence has an impact on food choice.

Despite these constraints, the findings indicate that strategic naming can still make a meaningful difference. Two vegetarian descriptions managed to outperform a meat-based alternative in the forced choice test, both using sensory or affective language rather than category labels.

Finally, a structural finding emerges from the interview that has not previously been addressed in the literature: school chefs lack professional support and formal guidance when it comes to naming dishes. This gap suggests that one of the most accessible tools for promoting sustainable food choices, the menu description, is currently being developed through informal trial and error rather than evidence-based practice.

These eight findings are summarised in the table below.

Table 8. Synthesis of study's main findings.

Key finding	Supported by	Results	Implication for menu naming
<p>Emotional and nostalgic language drives strongest appeal <i>Affective framing outperforms all other naming strategies</i></p>	<p>■ Workshop ■ Survey</p>	<p>"Grandma's homemade patties" ranked highest in the survey and generated the most positive word associations in the workshop, including "homemade", "nature", "organic", and "close".</p>	<p>Names evoking care, comfort, and the home environment are most likely to increase children's willingness to try a dish (Guéguen & Jacob, 2012).</p>
<p>Sensory language generates positive associations <i>Texture and temperature cues activate appetite</i></p>	<p>■ Workshop ■ Survey ■ Interview</p>	<p>"Crunchy" was the single most frequent positive word in the workshop. The chef noted that "fried" and "cheese-crust" reliably increase uptake; "Crispy green patties" was one of only two vegetarian options chosen over the meat dish (57.1%).</p>	<p>Experiential-utilitarian (Behnke et al., 2024) and sensory words (Bai et al., 2022) should be prioritised when naming sustainable dishes.</p>
<p>The "vegetarian" label functions as a deterrent <i>Category labelling reduces perceived appeal before tasting</i></p>	<p>■ Interview ■ Workshop ■ Survey</p>	<p>The chef observed consistent resistance to anything labelled "vegetarian". The workshop showed that "vegetarian" and "veggie" activated negative category expectations. "The chef's vegetarian patties" received fewest vegetarian choices (5.3%) and "The veggie king" ranked least appealing overall.</p>	<p>Avoid explicit vegetarian labelling where possible, name dishes by cooking technique or sensory qualities instead (Behnke et al., 2024).</p>
<p>Expectation violations cause rejection <i>Mismatch between name and taste leads to distrust</i></p>	<p>■ Interview ■ Workshop</p>	<p>The chef described children complaining after eating soy mince they had believed to be meat. In the workshop, "Carrot patties" generated markedly negative responses ("disgusting", "tasteless"), as the word "patty" activated meat-based expectations that carrots could not fulfil. Being served vegetarian when peers were being served pork was seen as a violation.</p>	<p>Dish names must manage expectations honestly. Naming should signal what the food will feel like, not mislead (Deliza & MacFie, 1996).</p>

Cultural and geographic markers confuse rather than attract

Origin-based quality cues do not resonate with children

- Workshop
- Survey

"From Skåne" and "French herbs" produced the highest uncertainty responses in the workshop ("don't know", "strange"). The word "chef's" failed to function as a prestige marker. "The chef's vegetarian patties" also ranked among the least preferred in the survey.

Geographic and professional quality signals that are effective in adult dining contexts carry limited communicative value for children in this age group (Murimi et al., 2016; Frödén, 2021).

Social and cultural context shapes food acceptance

Peer pressure and cultural background act as powerful moderators

- Interview
- Workshop

The chef reported children refusing to try food when peers declared it "disgusting". Finnish pupils were more resistant to vegetarian food than English-section peers.

Menu language alone is insufficient, social environment and cultural background moderate how names are received and must be considered alongside naming strategies (Ventura & Worobey, 2013).

Meat is still preferred overall, but well-named vegetarian dishes can compete

Strategic naming can meaningfully shift choice

- Survey

59.2% of respondents chose the meat-based dish overall. However, "Crispy green patties" (57.1%) and "Grandma's homemade patties" (53.4%) were both chosen over the meat option - the only two vegetarian descriptions to exceed the 50% threshold.

Strategic menu naming can meaningfully shift choice toward vegetarian options, even among predominantly meat-preferring children.

Practitioners lack guidance on sustainable menu naming

A professional knowledge gap exists at the practitioner level

- Interview

The chef repeatedly expressed difficulty naming dishes and acknowledged needing more knowledge in this area. He relies on informal sources such as social media and competitor menus and lacks access to a professional peer or dietary manager.

Research-based guidelines for sustainable menu naming are needed and could have direct practical impact in school food settings.

The findings both confirm and extend current knowledge in several important ways. While it was already established that menu words influence food perception in adult restaurant settings (Bai et al., 2022; Behnke et al., 2024), that plant-based dishes face low acceptance in Swedish schools (Eustachio Colombo et al., 2021), and that peer influence and cultural background shape children's food behaviours (Ventura & Worobey, 2013; Fernqvist et al., 2024), how these dynamics interact specifically with menu language in a school context remained unknown. This study provides preliminary evidence that affective and sensory words generate stronger positive responses than vegetarian category labels or geographic quality markers, extending existing literature into a new population and setting. It further shows that strategic naming can make a vegetarian dish competitive with a meat-based alternative, a finding with direct practical implications. That said, menu words operate within a social and cultural environment that constrains their effect, and a structural gap at the practitioner level was identified that had previously not been mentioned in the literature. These contributions are exploratory and context-specific but establish a foundation for more systematic and generalisable future research.

The eight findings will be further discussed through the lens of this study's analytical framework in the following sections.

5.2. Effectiveness of menu words

Analysing the findings through the three steps of the analytical framework reveals a consistent and theoretically coherent picture of how menu words shape children's food perceptions in a school setting. The first step of the framework concerns the words children encounter as input, categorised through the classification systems of Bai et al. (2022) and Behnke et al. (2024). Across all three sub-studies, sensory and affective words consistently generated the most positive responses, while descriptive and origin-based language produced confusion or indifference. In the workshop, "*crunchy*" emerged as the single most frequently cited positive word, appearing both in children's word associations and spontaneously in one pupil's own dish name, suggesting it carries a broadly shared sensory appeal. This aligns with Behnke et al.'s (2024) hierarchy of word influence, which places experiential-utilitarian words at the top in terms of consumer impact, and with Bai et al.'s (2022) classification of sensory words as an effective category. In contrast, origin-based descriptors such as "*French herbs*" produced neutral or confused reactions. Geographical language, although effective as a quality signal in adult restaurant contexts, are suggested to not translate meaningfully into the school setting. It should however be acknowledged that the dish associated with these terms was the last presented in the workshop session, meaning some uncertainty responses may reflect mental fatigue rather than genuine confusion, which represents a limitation to be considered when interpreting this finding.

Goal-framing theory (Lindenberg & Steg, 2007) then helps explain which words produce which expectations and why some prove more motivating than others. Words such as "*fried*", "*cheese-cruste*d" and "*crunchy*" appear to activate a hedonic goal frame, making dishes feel immediately pleasurable and worth trying. The survey results strongly support this, as "*Grandma's homemade patties...*", a name dominated by affective language, was ranked significantly more appealing than all other descriptions ($M = 2.05$, median = 1, $p < 0.001$). It was also one of only two vegetarian descriptions chosen over a meat-based alternative in the forced choice test. Crucially, the words "*grandma's*" and "*homemade*" convey no information about the dish's ingredients whatsoever, instead they communicate care and tradition, activating a hedonic and emotional response rather than an informational one. This demonstrates that hedonic words can lead children to prefer a dish even in the absence of concrete ingredient information. This extends the findings of both Bai et al. (2022) and Behnke et al. (2024), originally developed in adult restaurant contexts, into a school food setting. The fact that both the workshop and the survey reached this conclusion independently, through two separate methods, strengthens confidence in the finding considerably.

Conversely, the word "*vegetarian*" appeared to consistently activate a gain goal frame, associating the dish with obligation or health rather than pleasure, a frame that is considerably less motivating for children. This functioned as a deterrent across all three sub-studies: the chef observed consistent resistance to vegetarian labelling, the workshop showed "*vegetarian*" and "*veggie*" triggering negative category expectations, and the survey found "*The chef's vegetarian patties*" receiving the lowest proportion of vegetarian choices of any description at just 5.3%. The normative goal frame was also visible in the workshop data, where the majority of children's expressed responses seemed shaped by what was socially acceptable to say rather than purely by personal preference. This reflects Lindenberg and Steg's (2007) observation that one goal frame tends to dominate at any given moment and can override the others.

The final step of the framework draws on Fernqvist et al.'s (2024) food choice model to contextualise why the same menu word can produce different responses depending on who reads it and in what setting. At the social and community level, the school cafeteria itself shapes how quality cues are received. Before the workshop, the mentor of one fifth-grade class mentioned that the children "*hate*" the food served at school yet were enthusiastic about contributing to future menus. This generalised distrust of school food means that words functioning as prestige or quality markers in commercial dining may lose their power entirely in this context. "*Chef's*" for instance, signals craft and expertise in a restaurant setting, but in a school cafeteria where children already feel sceptical toward the food and those

who prepare it, the same word risks being ineffective or counterproductive. This pattern was confirmed by "*The chef's vegetarian patties...*" ranking among the least preferred descriptions in the survey.

5.3. The “vegetarian” label and its consequences

A central finding from the interview concerns how the words chosen to name a dish generate expectations before the food has even been encountered. Drawing on the expectations theory of Deliza and MacFie (1996), the chef's observations illustrate how menu words do not merely describe a dish but actively construct an anticipation of what it will be. The "vegetarian" label, for instance, was described by the chef as serving a protective function. Without it, children who had anticipated a meat-based dish would feel misled upon tasting it, and complaints would reliably follow. The label therefore manages expectation rather than simply conveying information. At the same time, the chef acknowledged that removing the label entirely would be "tempting fate", reflecting a cautious, experience-based approach to naming. This tension between a label that deters and a label that protects, captures the central dilemma of vegetarian dish naming in school settings.

The strength of these expectations, and the consequences of violating them, becomes particularly visible when analysing the incident that the chef encountered. This was the incident in which a student spat at him and called him a racist upon being served a vegetarian dish as the sole alternative to a meat option. While being an extreme situation, this event reflects a broader pattern that Deliza and MacFie (1996) identified; hedonic expectations do not only shape how a product is anticipated, but also how it is experienced and crucially, how its absence is felt. When food with the “vegetarian” label is served as a substitute rather than a choice in its own right, it is perceived as deprivation, and in contexts where it is the only available option, that deprivation can be experienced as an act of exclusion. The school's head chef similarly described the use of vegetarian labelling as a means of limiting expectations, with the aim of avoiding a negative experience, an approach that aligns with expectations in the model illustrated in Figure 2, where menu wording shapes individual expectations prior to consumption.

This dynamic is further supported by the survey results. "*The veggie king...*", the name generated by pupils in the workshop and included in the ranking test, resulted as the least preferred option overall. Viewing this through the goal-framing theory (Lindenberg & Steg, 2007), the word "*veggie*" functions as a category marker that immediately signals plant-based content, activating the gain goal frame that may not have the same positive effect as the hedonic goal frame. As words like “*vegetarian*” signals plant-based food, this can also trigger the pattern of low

acceptance for plant-based food identified more broadly by Eustachio Colombo et al. (2021). While it is not possible to isolate the precise reason for the name's poor performance, the merge of evidence across the interview, the workshop and the online survey strongly suggests that the negative associations carried by category-based vegetarian language played a significant role. The finding therefore reinforces the argument that naming sustainable dishes through their category, rather than through their sensory or emotional qualities, consistently activates the wrong goal frame for this audience.

5.4. Social and cultural factors

At the interpersonal level (Fernqvist et al., 2024), peer influence emerged as a powerful moderating force. The chef observed that children frequently declare a dish "disgusting" before tasting it, and that peers immediately copy their behaviour, meaning that even a well-constructed dish name can be overridden by the want of being socially included. This can also be viewed through the goal-framing theory (Lindenberg & Steg, 2007), that the normative goal of fitting in is stronger than the other goals at that moment. At the individual level (Fernqvist et al., 2024), cultural background further moderated responses. The chef noted that Finnish pupils were considerably more resistant to vegetarian food than English section pupils, reflecting different food socialisation histories that menu language alone cannot fully overcome. These contextual factors confirm that menu words do not operate in a vacuum, they are amplified or dampened by the social and cultural environment surrounding the child, and that any strategy for sustainable dish naming in school settings must account for this broader context rather than treating language as a purely technical problem.

As previously mentioned, the acceptance rate for plant-based food is low in school environments in Sweden (Eustachio Colombo et al., 2021), and the forced choice test in the present study shows this pattern to be consistent since the majority of pupils chose meat over their top ranked vegetarian option. However, the findings also showed that when named strategically, vegetarian dishes can compete with the meat-based alternative. The forced choice test showed that both "*Crispy green patties...*" and "*Grandma's homemade patties...*" were chosen more often in favor of the meat dish. These two names draw on sensory and affective language respectively (Bai et al., 2022; Behnke et al., 2024), suggesting these categories of menu words to be most likely to overcome social and cultural resistance to vegetarian food, rather than those that signal ingredient transparency or descriptive content. Viewed through the lens of goal-framing theory (Lindenberg & Steg, 2007), this pattern suggests that sensory and affective menu words can activate a hedonic goal frame strong enough to compete with the normative pull of peer influence and the culturally rooted preference for meat. In other words, while social

and cultural factors set the broader context within which food choices are made, menu words can still have an influence on food choice by appealing to the immediate pleasure-oriented motivations that dominate at the moment of choice. It should be noted, however, that these findings are based on a single school, and further research is needed to determine whether the same pattern recurs in other Swedish school contexts.

5.5. Implications for policy and practice

A final and significant takeaway from the interview was the chef's own acknowledged uncertainty about how to name dishes effectively. Despite years of experience, he returned repeatedly to how difficult he finds menu writing, and that he needs more experience and expertise in this area. Working at a private school without access to a municipal dietary manager meant he lacked a professional sounding board, leaving him relying on informal sources such as social media and other school menus for inspiration. This sense of isolation, and the gap in professional knowledge it reflects, was one of the most consistent threads throughout the conversation with statements made such as: *"I have a lot to learn there, about how to write a menu so that it looks good. It's not easy"* and *"It's really difficult to write. How you should name the vegetarian dishes"*. Taken together, these quotes point to a structural gap. The competence needed to communicate sustainable food choices effectively is not currently supported at the practitioner level, and this study's findings suggest it is an area where targeted guidance could have meaningful practical impact.

Even though the chef was positive towards making vegetarian food more appealing to children, political will and societal context affects the evolving of school meals. In early 2026, the Swedish Food Agency (2026) published new guidelines for school meals, including a recommended upper limit of 125 grams of red meat per week, daily servings of legumes, and the promotion of hybrid meals combining plant-based and animal-based ingredients. These guidelines have sparked public debate. Some students and parents have expressed reservations about an increased presence of vegetarian meals in schools, and the Minister for Rural Affairs has stated that students should continue to be offered an animal-based alternative every day (SVT News, 2026). The current policy landscape therefore reflects differing views on how school meals should evolve, with the Swedish Food Agency's recommendations promoting more sustainable options such as plant-based alternatives, and the concerns raised by other stakeholders including politicians, students, and parents.

Building on this context, the findings from the interview with the school's head chef, viewed in light of the current political debate, indicate that initiatives aimed

at promoting more sustainable options in the school cafeteria depend on more than guidelines alone. Practitioners such as the head chef need concrete tools and professional support, for example access to dietitians or similar specialists as suggested by the head chef himself, in order to design menus that children are willing to engage with. Also, in order for the dietary shift needed to achieve a more sustainable food system, politicians need to be compliant with scientific nutrient recommendations and not aim to work against them.

Future research should build upon these findings and practically test them in a real-life school setting, as well as use qualitative methods such as interviews or focus groups on school children to deepen the understanding of their perceptions of menu words. As noted in the introduction, shifting diets to more plant-based is a recognizable tool to mitigate negative environmental impact, and is needed to drive meaningful change. Future research should also examine whether the strategies identified in this study can be implemented in practice, what consequences this might entail, and whether they could help reduce resistance to the dietary guidelines set out by the Swedish Food Agency (2026) and EAT (2025). This connects to Beckerman et al. (2017) research on early interventions targeting young people, which suggests that such approaches may have the potential to bring about long-term dietary change. The present study represents one such opportunity to positively influence children's perceptions of and attitudes toward plant-based food to drive the dietary change needed to promote sustainable food systems.

5.6. Methodological limitations

An overarching limitation for all three sub-studies in this project includes the small sample sizes, impacting the study's generalisability. Furthermore, the sampling for all sub-studies was non-random, meaning generalisation to the broader population is questionable (Bryman, 2016). However, due to this study's explorative nature and contribution to new insights to this unstudied phenomenon, the researchers still believe the findings are useful to further build upon in more studies.

The researchers are also aware of the methodological limitations with exploring this phenomenon using such structured methods. Using focus groups or interviews with the pupils would provide richer material that could provide more insights into the phenomenon and increase the validity, rather than using methodological and well-organised approaches. Due to limitations in time and resources, and since children are an especially legally vulnerable group, focus groups or interviews could not be performed for this project. Despite these limitations, the method was designed to cover multiple aspects of the phenomenon by using complementary sub-studies instead. Future research should however conduct interviews or focus groups on pupils to gain deeper understanding of their perceptions of menu words.

The results from the survey, especially the forced choice test, should be tested in a real life setting to observe whether an altered dish name is enough to choose vegetarian instead of meat in a school cafeteria. Based on the results from the survey, we could see the intentions but actual choices. This study intended to perform an observation within the school cafeteria to test whether a change from the school's name for the studied dish compared to the most highly ranked name from the survey would result in a difference in how much of the vegetarian food is consumed. However, due to some restraints in time and resources, this ended up not being possible. Future research should therefore test the findings from this study in real-life school settings.

Since this project was conducted in a Swedish private school, it is unknown whether these results can be generalised to public schools as well. This relates especially to the chef's experiences about naming dishes and not having colleagues within the municipality to brainstorm with. Future research should also include public schools as well as more of them to strengthen the reliability of the findings.

Another limitation for this study is the fact that only one dish was studied for the workshop and survey. Perhaps if another type of sustainable dish was studied, the results could have differed. For this study however, it was seen reasonable to only study one dish to be able to compare the results from the workshop and survey.

Lastly, a factor that may influence the presentation of the results is that all sub-studies were held in Swedish and then translated into English for this paper. This means that translations and citations of the results may not exactly express the message that was said in real life.

6. Conclusions

This study addressed whether menu descriptions can make sustainable dishes more appealing to students and shows that children respond more positively to menu words using sensory and affective words, rather than explicitly stating ingredients in a dish name. The word “vegetarian” can both work as a deterrent for the children by making a dish less appealing, yet in practice it can be used as protection against the children’s expectations of meat-tasting dishes to be broken. Social and cultural factors also act as moderators regarding how certain menu words are perceived and if the altering of menu words can result in a shift in food choice. This study draws on three data sources that triangulate the same issue using findings from the chef’s practical experience, the children’s own associations and perceptions, and their choices.

The study provides direct implications for menu communications in schools to promote sustainable consumption. To achieve a dietary shift towards more sustainable in schools, there needs to be political support as well as strengthened knowledge for the practitioners in school kitchens.

This study has contributed to preliminary evidence in the empirically unknown phenomenon of children’s perception of menu words and is unique in applying previous research rooted in restaurant settings to a school context.

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Popular science summary

The world is facing large problems due to climate change and environmental degradation. These negative impacts are largely caused by the food that we are growing, with meat production causing a lot more negative impact than vegetables, grains and fruit. Therefore, people in general are recommended to eat less meat and more plants to lower environmental impact. To change people's diets on a large scale is however difficult, but since food preferences are developed early in life, focusing on children to eat more plant based is promising. Also, since around one million meals are served to children in Swedish schools every day, this seems like a good place to start.

There are many ways to influence people's food choices, but this study focused on how the name of a dish on the school cafeteria menu affects what children wants to eat. This topic was chosen since there is no research about it yet, only in regular restaurants using adults as participants. To understand what children think about different dish names, three types of studies were made. First, we did workshops with children in grade five where they chose their own names on a sustainable dish and wrote down words they thought about when they heard different dish names. Second, we interviewed the head chef of a school to find out his thoughts on how students react to different dish names and what he thinks student like or dislike. Lastly, we sent an online survey to all student from grade six to nine where they ranked different dish names on the same vegetarian dish from most appealing to least appealing. Then, they had to choose whether they would rather pick the dish with the most appealing name or a similar dish with meat in the school cafeteria.

The results showed that a dish name using words that provide a sense of home and comfort makes it more appealing compared to names that just states the ingredients. Also, including words that describe how the food taste and feels is also appealing to students. Many students have a bad connection to the word "vegetarian", so a dish with this word does usually not make students want to eat it.

More research should be made where the children can tell more in depth about their interpretations of certain words on menus, as well as to test in real-life schools whether a changed dish name can affect how much of the vegetarian food is eaten in the cafeteria.

Appendix 1

Interview guide

Q1. Describe what your job as a head chef entails and what responsibilities you have.

Follow-up questions:

How long have you worked in school kitchens? In kitchens in general?

Q2. Can you describe the thinking behind the design of children's dining environment?

Follow-up questions:

What is the reasoning behind the choice of furniture and decoration?

What is the reasoning behind the arrangement and layout of the food?

What is your experience of what the children's dining environment is like?

Q3. How do you decide on the names of the dishes on the school menu? And what does the process look like?

Follow-up questions:

Are the names based on ingredients, creativity, or other factors?

If so, what is the thinking behind it? What is the reason for choosing to name the food in a certain way?

Where did you learn how to formulate menu language?

Q4. What do you hope to communicate to the children through the names you have created for the dishes?

Follow-up questions:

How do you think about how the names can influence children's choices when you name dishes?

Q5. Based on your own experience, how do children react to menu language?

Follow-up questions:

What kinds of questions do you get from children regarding the names on the menu?

How do children react to different words when you name dishes?

In what way do the names influence their food choices?

What kinds of words do children react more positively or negatively to?

Q6. Can you describe any specific examples of when children have reacted to the name of a dish?

Follow-up questions:

What kind of reactions did the name create among the children?

Do you have any thoughts on why that might have been the case?

Q7. What do you think is important when it comes to naming dishes so that children want to eat more sustainably?

How should one think when naming dishes so that children choose, for example, the vegetarian option, based on your experience?

Q8. Do you have any additional reflections on what we have discussed today that you would like to highlight?

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