

Article

Home Economics Teachers' Perceptions of Facilitating and Inhibiting Factors When Teaching Sustainable Food Consumption

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Abstract: The aim of the present study is to explore experienced home economics (HE) teachers' perceptions of the influencing factors that condition their teaching opportunities regarding the revised mission to implement sustainable development (SD) in food-related education. Five purposefully selected HE teachers participated in individual, semi-structured, in-depth interviews. The recorded interviews were transcribed verbatim and analysed using qualitative thematic analysis. The results show a shared view of the importance of educating the next generation of sustainable food consumers. Teachers returned to specific influencing factors that conditioned their opportunities to implement a perspective of SD in HE food education. This generated four themes: (1) Unscheduled foodwork in preparing sustainable food education, (2) opportunities to link everyday food choices with larger food system issues, (3) access to sustainable supportive food products and materials, and (4) a school environment in support of food-related teaching. The teachers outlined a number of local and national factors perceived to inhibit access to facilitators and expressed a concern for pupils' opportunities for quality assurance and goal achievement. The suggested influencing factors could serve as propositions for further investigations in the continued work of both resource reinforcements as well as of developing a SD perspective in food-related HE education.

Keywords: food-related education; education for sustainable development; home and consumer studies; teacher perceptions

1. Introduction

Food is essential for life and health as one of the basic needs for all living beings. At the same time, contemporary food production and consumption contribute to a long range of unsustainable impacts on individual and public health, the economy, and the environment, ultimately threatening life and health around the world [1–4]. Such knowledge, coupled with the fact that global environmental degradation unevenly affects different human groups [5], has increased the incentives to seek ways to enable sustainable development for both regular and sustainable food consumption [6].

Sustainable development refers to an international agenda to meet the needs of the present generation without compromising the ability of future generations to meet their needs [7]. The meaning of the term has varied since its introduction in the 1970s and 1980s [8,9] and remains a debatable concept [10,11]. However, 'changing consumption patterns' has remained one of the most urgent matters advocated since the action proposals of Agenda 21, in which consumption related to food is one of the most significant areas [12].

Despite the growing attention paid to the role of food in sustainable development goals, no universally agreed-upon definition of sustainable food consumption is currently available. Among major conceptualisations in circulation, Reisch [2] outlined a broad understanding, whereby food should be 'safe and healthy in amount and quality; and it has to be realised through means that are economically, socially, culturally and environmentally sustainable, minimising waste and pollution and not jeopardising the needs of others' (p. 7). Several advocated changes include reducing the consumption of meat and dairy products, increasing the consumption of organic fruits and vegetables, avoiding foodstuffs that have been transported long distances on land or by air, reducing the distance between food consumers and producers (in miles, as well as in minds), and decreasing food waste. These have been estimated to have great potential for bringing significant positive outcomes to the urgent concerns related to unsustainable food consumption [13]. Although numerous types of instruments are currently used to pursue these policy goals, including information-based tools, market-based tools, regulations, and so-called 'nudging', incorporating food-related education in national educational systems has gained increased recognition on national and international agendas [14]. Incorporating a broad conceptualisation of food and responsible food consumption that considers the larger food system interlinkages, including aspects of producing, processing, transporting, packaging, marketing, handling, preparing, storing, cooking, and discarding of food, has become a significant concern [1,15]. Such education has been emphasised as imperative to enable skills and competencies that allow for the option of engaging in food-related practices that promote public and individual health, social justice, and ecological sustainability [14]. Furthermore, by combining theoretical knowledge with the promotion of action-competence, reflection, and decision-making-skills, motivation and confidence to take action is believed to increase [14,16–21].

Even though education alone cannot change the way people consume food, it is nonetheless viewed as an important social strategy, which has been described as 'one of the most powerful tools to provide people with the right skills and competencies to become sustainable consumers' [22]. Likewise, children and adolescents have been particularly highlighted as key actors in shaping a sustainable future, and teachers have been assigned roles as facilitators in delivering this knowledge to the younger generation [23–25]. There are several definitions and elaborations on how to effectively implement education that furthers SD. Vare and Scott [26] have suggested that education for sustainable development (ESD) should approach issues of sustainability in two complementary ways. Firstly, it should promote informed, skilled behaviours, and ways of thinking that are useful in the short-term. Secondly, it should build the capacity to think critically, test ideas, and explore the dilemmas and contradictions inherent in sustainable lifestyles. In contrast, Koch [25] has described effective food-related education to begin with facilitating 'good experiences with good food' (i.e., foods that promote health, ecological sustenance, and are socially just), providing knowledge and skills for how to carry out sustainable food choices and actions. Koch also recommends making pupils aware of interlinkages and challenges in the current food system, teaching skills to navigate through the system to seek out sustainable food. These approaches are aimed to facilitate voluntary participation in sustainable food practices by enhancing motivation, facilitating ability, and creating support.

Formal education concerning food-related issues is primarily taught within schools as home economics (HE) [27], and practitioners within this field have joined the discussion of SD in recent years (see for example [28–31]). Previous studies have suggested that HE teachers all over the world perceive HE education as holding great potential for contributing to the global goals of SD education. However, they indicated that there are surrounding circumstances inhibiting their opportunities to carry out this potential [28,29,32,33].

In Sweden, the compulsory school subject Home and Consumer Studies (HCS) (henceforth referred to in its international preferred terminology of HE), uses food as its primary teaching tool. The subject has provided theoretical knowledge and practical experiences regarding meal planning, nutrition knowledge, cooking, and resource management, among other topics, to youth consumers in Sweden since 1962. During the sweeping revision of the Swedish national curriculum in 2011,

and in line with the increasing emphasis on incorporating ESD in school curricula, the mission of HE education was revised to also incorporate a perspective on sustainable development in all areas of the subject [34]. Sweden's national curriculum is issued by the government and contains fundamental values, goals, and guidelines intended to characterise all teaching. The overall curriculum document also contains the syllabi that include national regulations for each subject's main content, goals, and knowledge requirements. One aim of the revised national syllabus of Swedish HE states, 'Pupils should be given opportunities to develop their ability to assess choices and actions in the home as a consumer, from the perspective of sustainable development' [35]. The knowledge requirements for the ninth grade stresses developing skills in 'informed reasoning' or as written in the syllabus: 'Pupils should be able to apply informed reasoning regarding the consequences of different consumer choices and actions in the home with regard to aspects concerning sustainable social, economic, and ecological development' [35]. Thus, the Swedish syllabus of HE includes a mission to educate young people to think independently about responsible action in making sustainable food consumption choices. However, the notion behind the term SD is comprehensive and contested, and the syllabus mission to implement its perspective in HE education remains vague [36]. This implies placing a heavy responsibility on individual teachers to interpret and translate what the ambiguous term could entail in the theoretical and practical implementation of food education. In addition to teachers' individual interpretations and translations of steering documents, there are many other factors affecting the realisation of educational goals [37,38]. The factors influencing pupils learning opportunities in Swedish HE have previously been interlinked to the access of appropriately equipped facilities and kitchen units, formally qualified HE teachers, manageable class sizes (<16 pupils), and sufficient lesson duration (≥ 120 min) [39–42]. Prior studies have shown that these factors vary across the country and are not adhered to in a number of Swedish schools [40,43–45].

The 118-h timetable indicates the minimum guaranteed teaching time for HE during grades 1–9 and makes HE the subject allotted the least amount of time in compulsory school [46]. Allocation of these hours is determined by the local principal, which allows space for teacher professionalism and pupil autonomy to tailor educational processes in line with subject-specific needs and circumstances [38,47]. By having such a flexible teaching system, the implementation of a SD perspective in food-related education will and does vary across the country. Those circumstances, coupled with vague specifications of the potential contributions of HE education, pose difficulties in estimating whether the conditions for such education are constructively adapted to attain the intended goals and the ways in which the program is developed. Similar factors have been stressed as important inquiries to the continued progress of the ESD agenda [48–50].

Accordingly, there is a need to gain a better understanding of the possible influencing factors, conditioning teaching, and learning opportunities regarding education for sustainable development [36]. By identifying possible influencing factors surrounding a subject (such as perceived needs and challenging circumstances), opportunities for long-term quality progression throughout tailored resource development will increase [51], and HE teachers have a significant role to play in providing such identifications [28,29,32]. The present paper is a part of a wider project exploring the implementation and implications of incorporating a SD perspective in Swedish HE mission with an intention of generating a pertinent hypotheses and propositions for further inquiries. The overall project involves analysing data from syllabus documents [36], observations [33], recordings of in-class lessons [52], and interviews with practicing teachers. In this paper, the focus is on influencing factors as perceived by practicing teachers, in which in-depth interviews with a limited number of experienced teachers were deployed to contribute to such a hypothesis.

Thus, the aim of the present paper is to explore purposely selected experienced HE teachers' perceptions of the curriculum mission to implement a SD perspective in food-related education. The ambition is to gain a better understanding of influencing factors conditioning teaching opportunities regarding the mission. The specific research questions are: (1) In what ways are the syllabus objectives regarding SD understood and implemented in food-related HE education? (2) What

possible influencing factors are perceived as inhibiting the facilitation of teaching opportunities towards the goals and knowledge requirements of the formal syllabus?

2. Materials and Methods

2.1. Design

This study has taken an interpretative and exploratory approach applying qualitative in-depth interviews with a limited number of purposefully selected experienced HE teachers. A purposeful sampling technique was chosen since it is typically used in qualitative research for the selection of ‘information-rich cases’, to be studied in-depth [53], i.e., individuals who are especially knowledgeable about or experienced with the studied phenomenon and who are able to communicate experiences and opinions in a reflective manner. The interpretative research paradigm is characterised by a striving to understand the world as it appears from a subjective point of view. It seeks, from the researcher’s outsider perspective, the understanding of social reality within the actors’ frames of reference [54]. Thus, the individual interviews with a purposefully selected group of five experienced HE teachers, so-called LLU-teachers (‘Lokala lärarutbildare’ or ‘local teacher tutors’, consist of experienced teachers working in the field who are designated to teach and supervise university teacher students during their practical internship), teaching at the secondary level (pupils aged 13–15 years in grades 7, 8, and 9), provided opportunities to focus in-depth on variations in experiences and significant common patterns within that variation.

2.2. Selection and Participants

The selection criteria used to ensure that the sample was appropriate was that the participant should be (1) a formally qualified HE teacher and (2) work as an LLU-teacher as a part of the teacher education program located at the University of Gothenburg. These selection criteria were used to create an analytical frame of reference for the analysis with experienced and formally qualified teachers with known interest in implementing a SD perspective in teaching HE and for being active in HE didactical contemplations. The selected teachers were expected to have reflected more on the focused issues than the average HE teacher, and thus, be better qualified to provide more detailed answers.

Participants were targeted by contacting registered LLU-teachers individually. All teachers contacted agreed to participate, and their schools, which varied in size, were located in different environments: urban (two schools), suburban (two schools), and rural (one school). Three of the participating teachers worked in three different municipalities adjacent to Gothenburg, and two of them worked in the municipality of Gothenburg but in different districts. The teachers had been working as HE teachers between 7 and 32 years.

2.3. Semi-Structured Interviews

Data were assembled via individual face-to-face semi-structured interviews from December 2015 to February 2016. The interview guide was piloted with a former LLU-teacher of HE currently working at the University of Gothenburg. These data are not included in the present analysis. No removal or addition of queries occurred, but minor modifications to phrasing were made. Interview questions were developed to cover key areas derived from the previous studies of the overall project, and participants were encouraged to expand on those key areas. First, participants were asked initial questions regarding their number of years as an HE teacher, educational background, and their reason for becoming an HE teacher. The initial part of the interview also covered their understanding of the concepts of SD, and an ‘SD perspective’ within a HE context in order to establish their understanding of these concepts. Next, participants were asked questions that focused on overarching themes regarding the planning and implementation of a SD perspective in food-related education, pupils’ participation and learning opportunities, grading procedures and facilitation, and the inhibiting factors influencing teaching opportunities (Table 1).

Table 1. Interview guide supporting the interviewer with initial questions, themes, and exemplary questions regarding home economics (HE) teachers' perceptions of the mission to implement a sustainable development (SD) perspective in food-related education as expressed in the national syllabus.

Initial Questions:
<ul style="list-style-type: none"> • How long have you worked as an HE teacher? • What is your educational background? • What made you want to become an HE teacher? • When you learnt of the syllabus inclusion of a SD perspective, what were your thoughts? • In what way do you see the term differing from the previous concepts of household resource management? • What is 'a SD perspective' in a HE context according to you? • Do you believe HE is a good arena for teaching these issues? Why/why not?
Themes with Exemplary Questions:
<p><i>Planning and implementing a SD perspective in food-related education</i></p> <ul style="list-style-type: none"> • How do you plan and implement a SD perspective in your food-related teaching today? Are there any differences compared to before the inclusion of SD in the national syllabus? • What are the main content categories in your sustainable food-related teaching? • Are there any specific work areas or focuses that you find especially important to work with? • Are you satisfied with your current teaching regarding this issue? Why/why not?
<p><i>Pupils' participation and learning opportunities</i></p> <ul style="list-style-type: none"> • How do you perceive pupils' interests and participation in food-related education taught from a perspective of SD? • How do you think this teaching contributes to pupils' learning development?
<p><i>Grading procedure</i></p> <ul style="list-style-type: none"> • What are you doing in practical terms when evaluating and grading pupils' work in accordance with the knowledge requirements? • How do you perceive this to work?
<p><i>Facilitating and inhibiting factors influencing teaching opportunities</i></p> <ul style="list-style-type: none"> • Can you describe the influencing factors that support or could support your teaching of food and SD? • Can you describe inhibiting factors that complicate learning and teaching opportunities in this area?

The questions stated above were not fixed and had no prioritised order. All questions were open-ended to allow room for new themes to arise as well as to encourage reflection from, rather than mere reporting of, the teachers' experience.

The emergent design of qualitative data collection meant that results from the first interviews guided future interviews. During the data collection process, research meetings with the involved authors were arranged to discuss the emerging data collection and themes needed to be further explored in subsequent interviews. Rich stories were obtained and it was decided to end the data collection after five individual interviews.

2.4. Procedure

Teachers were informed that the interviews would be audio-recorded and that the information provided would remain confidential. The first author (EG) conducted all the interviews which took place at each teacher's school, usually in or near the HE classroom. The audio recorded interviews lasted about an hour each, but non-recorded conversation also took place during guided tours around the HE related facilities on which notes were made.

The pilot interview and the first main interview were transcribed by the first author to reflect on the interview techniques. The remaining four recordings were transcribed by a professional transcriber from an independent transcription service company.

2.5. Data Analysis

Thematic analysis was applied for identifying, analysing, interpreting, and reporting themes across the data set and followed the six phases suggested by Braun and Clarke [55]. First, audio recordings and transcripts were reviewed to become familiarised with the data, and the answers to the initial questions regarding teacher understanding regarding the implementation of SD-related

concepts, were sorted and summarised in a descriptive text. Second and third, the remaining content was coded and sorted to generate initial codes and potential themes describing teachers' perceptions of influencing factors. The fourth and fifth phases of reviewing and defining themes generated the final themes, and the sixth phase consisted of choosing data extracts to demonstrate the prevalence of the themes. The cited extracts were translated from Swedish to English by the first author.

The generated themes were data-driven in the sense that the issues given extra emphasis by the teachers were prioritised in the analysis. However, to support the analysis and to make sense of all expressed notions of influencing factors, Linde's [38] guidance of 'where, who, what, and how' was kept in mind. That is: Where is the influence exercised—at central or local level? Who exercises this influence? What are the influencing factors? How do these factors influence teachers' opportunities?

3. Results

3.1. Teachers' General Understanding and Implementation of Food and SD

When teachers were asked to give their understanding of incorporating an SD perspective in HE education, they emphasised increasing the environmental and ethical focus and the practical application of 'carrying out' sustainable methods of food consumption practice. As a means of accomplishing this, organic, local, KRAV-labelled, vegetarian, fair-trade, and seasonal foods were mentioned. They also noted consumption-related acts of reuse, reduction, reflexive choosing, composting, recycling, and the use of senses when assessing the quality of foods. Further topics expressed by individual teachers included, the cultivation of lot gardening, sustainable fast food, and overcoming obstacles such as habituated parents.

The previous syllabus term 'household resource management' (HRM) was expressed as being still used in class, since HRM is perceived to refer more to the practical applications of carrying out the acts and methods related to the SD perspective, whereas the term SD is used when applying the more abstract interlinkages and consequences to reflect the societal levels relevant to food.

All teachers stated that they currently implement an SD perspective in their teaching about food, but that they were unable to implement the perspective to the same extent as it is formulated in the HE syllabus. They initially mentioned the scarcity of allocated time as the main reason for this difficulty.

Teachers described an SD perspective specific to HE as learning how to act towards SD from a household perspective as a first step. This first step should convey experienced-based activities with personal relevance in everyday food practices. This includes things that pupils encounter on a daily basis and can concretely influence, such as reusing, composting, lowering food-related energy use, and becoming familiar with food labels. A second step was described as widening the pupils' views and enhancing their critical thinking by applying and making visible the more abstract links and perspectives that are interconnected to food-related choices on the local, national, and global levels. This second step, however, requires more allocated time and resources to sufficiently meet the formulated goals and knowledge requirements of the syllabus.

3.2. Perceived Facilitators and Inhibitors When Teaching Food and SD

When discussing the facilitating and inhibiting factors affecting implementation of the revised syllabus mission, teachers declared different prerequisites regarding physical and administrative frames from which to start. Nonetheless, teachers returned to specific influencing factors that either facilitated or inhibited their opportunities to implement a perspective of SD in HE food education. These generated four themes: (1) Unscheduled foodwork in preparing sustainable food education, (2) opportunities to link everyday food choices with larger food system issues, (3) access to sustainable supportive food products and materials, and (4) a school environment in support of food-related teaching (Table 2).

Table 2. Themes and interconnected influencing variables conditioning teachers' opportunities to implement a sustainability perspective in accordance with the home economics syllabus formulations.

1. Unscheduled Foodwork in Preparing Sustainable Food Education	2. Opportunities to Link Everyday Food Choices with Larger Food System Issues
<ul style="list-style-type: none"> • Allocated planning time • Surrounding tasks • Documentation requirements 	<ul style="list-style-type: none"> • Lesson length • Lesson frequency • Same classes
3. Access to sustainable supportive food products and materials	4. A school environment in support of food-related teaching
<ul style="list-style-type: none"> • Budget • Procurement • Written materials • Physical equipment 	<ul style="list-style-type: none"> • Work environment • Strategic efforts • Scheduling freedom • Central governance

These themes indicate essential factors perceived as necessary to achieve the formal syllabus goals and knowledge requirements related to food-related education from a perspective of SD. The following section will present the information that generated the themes of influencing factors.

3.2.1. Unscheduled Foodwork in Preparing Sustainable Food Education

To understand and translate the intended mission formulated in the syllabus, which was considered to be subjectively interpretable, teachers expressed a need to access additional planning and grading time, especially with other HE teachers, in order to meet a standard of education furthering SD and the pupils' right to grading security.

However, there were many factors expressed that negatively influenced a HE teacher's access to adequate planning and grading time. In addition to the general work of planning lessons, content, methods and materials, HE teachers describe unscheduled time spent on such tasks as taking inventory, ordering goods, grocery shopping, maintaining the premises and materials, preparing and storing fresh food, emptying and cleaning compost containers, and finding recipes and equipment tailored to teaching sustainable food consumption. Such additional work needed for teaching about food, when unscheduled, inhibited the teacher's opportunities to constructively translate and prepare the multi-faceted dimensions of an SD perspective related to food. This is exemplified by the following comment:

"I find it very stressful in all, to get enough planning time [...]. I think many HE teachers spend a lot of time on such things [as grocery store shopping and managing recycling stations]. Thus, that is the issue, to get in order [time to take care of] all the practicalities." (T2)

In addition to the mere management of unscheduled foodwork, general teaching missions were expressed as containing uncounted consequences to preparation time in the subject, for instance, the general mentoring mission; being a mentor is part of the teacher assignment and means being a contact person and support for a number of pupils throughout the study period. Since HE has the lowest number of teaching hours, HE teachers have the least amount of time to spend with their mentored pupils, but they still must have an insight into the pupils' progress in school. This further reduces the opportunities to plan lessons focusing on an SD perspective, since the allocated time for preparing for food education is spent on chasing information from other teachers regarding pupils' educational progress.

"It is a bit difficult to find time to be [a mentor] as well, when you already have all this foodstuff to be in place. (...). It's what often breaks you, that you do not teach these pupils, but you should still have a good insight into their studies." (T3)

A second general teaching mission expressed to contain uncounted consequences for preparing food education lessons is the documentation requirement. Documentation is a tool for teachers to

evaluate their teaching and the pupils' knowledge and learning, it should reflect the pupils' knowledge and provide a basis for communicating assessment and grade setting with pupils and guardians [56]. Interviewees emphasised that HE lessons largely consist of learning in action. These practical elements of lessons cannot be saved or stored for future assessment and preparation to present to pupils or guardians at a later time. Thus, the requirements of formative documentation are perceived to inhibit teachers' opportunities to plan the implementation and grading of SD since HE teachers have to put in extra effort and time to document pupil performance. This was also mentioned as a problematic condition compared with other subjects not having unscheduled foodwork or practice-oriented teaching processes. To manage these inconsistencies in allocated time to prepare sustainable food education, the teachers described different strategies, such as using lecture-based lessons and theoretical writing assignments to accommodate the SD perspective.

"If you are being questioned, if you want to "stay in the clear" (hålla ryggen fri), you know, then it's easier to have a theoretical test where you have counted points that you have saved, or an assignment with pupil writings that's been saved, because this you can throw on the table if you ever get questioned for a grading." (T1)

3.2.2. Opportunities to Link Everyday Food Choices with Larger Food System Issues

To incorporate the theoretical and practical elements highlighted by the teachers as necessary for providing effective learning opportunities regarding sustainable food practices and processes, a need for both sufficiently long and frequent lessons was expressed. Sufficiently long lesson duration refers to a recommended duration of 120 min or more, which was mentioned as being essential to teacher's opportunities to provide a perspective of food and SD, where the practical process of creating a meal is linked to the elaborated theories behind it. Sufficiently frequent lessons refers to the necessity to provide continuity in learning opportunities over an adequate period of time. This facilitates pupils to build their learning, based on remembering previous lessons, and for teachers to get a coherent sense of the development of pupil learning. Although local principals can allocate hours in accordance with subject specific needs, it is not possible to get both of these, since the 118 h must be shattered to provide grades in both the 6th and 9th school year.

Almost all teachers expressed a preference for longer lessons in order to facilitate opportunities to link everyday food choices with larger food system issues. One teacher underscored her opinion that no one should be restricted to HE lessons shorter than 120 min. On the other hand, having access to longer lessons means having fewer lessons per year, which teachers perceive as a loss of continuity. As an example, one teacher explained that they have a six-month gap between the last lesson of 7th grade and first lesson of the 8th grade, while another teacher had a two-year gap between 5th grade and 8th grade. Consequently, a lot of time will be spent on revision of what had been previously taught, which is perceived as wasting valuable time that could have been placed on opportunities for pupils to develop understandings of complex interlinkages behind sustainable food choices and actions. This quandary between sufficiently frequent lesson occasions (first quote), and sufficiently long lesson duration (second quote) is shown in excerpts like the following:

"Well now I have quite short lessons, but, on the other hand, I get to meet [the pupils] more frequently during longer periods of time. Like, I have them during the whole 8th and 9th grade. So, in that way, it's good, since you get to see their development because of that." (T1)

"You would want a lesson where you can discuss more in depth and go into . . . For example, we cut up a chicken, and [the pupils] have just enough time to cut up the chicken and make something of it. I mean a fast chicken-pasta stew or so. But to get to make chicken broth out of the bones and discuss breeding issues, and, I mean, put all the pieces [together] ..., you don't have time for that. Rather ... it is a bit hard to practice what you preach just because time is so short." (T1)

Another influence on opportunities to link everyday food choices with larger food system issues was expressed by the interviewees as having the possibility of teaching the same pupils throughout their school years, instead of being assigned new classes. It was underlined that HE and its food-related education is a subject in which teachers visually assess learning outcomes along with the pupil's development during a total time that is already scarce and fragmented. Thus, teaching the same pupils continuously would not only facilitate teaching and learning about the links between everyday choices and extended systems, but also put less pressure on unscheduled foodwork. Not knowing in advance if teachers will keep the same classes was mentioned as an additional problem:

T4: - "I hope that I will get them also in the 8th grade, and also in the 9th grade, of course, so I can follow them all the way."

IW: - "Mm, but that's not something you know?"

T4: - "No, you never know from year to year, so that is a shame."

3.2.3. Access to Sustainable Supportive Food Products and Materials

When incorporating a perspective on SD in HE food-related education, in which the methods and materials largely consist of foodstuffs, recipes, cooking activities, and finished meals, the teachers often returned to the importance of being able to engage pupils by using high quality sustainable foods:

"We have vegetarian themes, where I go into and talk about if everyone ate vegetarian one day a week, how it would affect the environment and the world very, very much. So then, I mean it is also very important that I prepare a recipe for a tasty vegetarian meal." (T3)

Pupils' interest in food and cooking in HE was expressed as generally high. However, teachers found it more challenging in relation to a SD perspective, since this involves familiarisation with methods or foods to which pupils are not always accustomed. The challenge of keeping pupils motivated to participate in more abstract reasoning regarding food and sustainability demands a reasonable amount of quality and purposefulness to be put into the provided food products and materials. While considerable resources were perceived to have been put into developing cooking materials for HE, teachers believe that not enough attention has been given to creating inspirational material for how to concretely incorporate SD perspectives in food-related practices. In the following excerpt, a teacher expressed her thoughts about a newly distributed teaching material.

"There's this "smart choices" brochure, and it's a recipe for an autumn soup. And I'm thinking, the creator of this recipe cannot have been..., I mean no. This will be completely wrong (...) this is not an accurate recipe. And I argue that it loses its purpose. Thus, I feel that if you are going to do it, do it well. Because otherwise, you will not get people, or your point, to where you want." (T5)

Not having access to supportive sustainable food products and materials also negatively affected the aspect of time-consuming preparation work, since the teacher described a lot of time spent on finding or creating their own materials or recipes.

Further, the subject allocated budget was another recurrently expressed inhibiting factor in having access to sustainable supportive food products and materials. All teachers described in different ways how they struggle to keep lesson planning and purchases within the given budget.

"We have to save, save, save, so we are very stingy when we buy groceries (...). If we now are supposed to stand and talk about these [sustainable food choices and actions] things, we also need to have the possibility to purchase organic products (...). It gives a wrong overtone, I mean no matter how stingy we all may be, we would certainly need to have more money so that we can really demonstrate [our point]." (T4)

In addition to organic foodstuffs, fair trade and locally produced goods were products mentioned as sustainable supportive teaching materials that needed to be prioritised in budgeting and procurement in order to gain credibility and engage pupils in experienced-based learning.

3.2.4. A School Environment in Support of Food-Related Teaching

In the teachers' portrayals of teaching opportunities, recurring influencing factors linking to the school environment and perceived support generated a fourth theme. This theme involves more 'soft' factors, such as people's personal attitudes, treatment, and values, and the teachers' feelings of support. These factors seemed to be perceived as either a major facilitator or a major inhibitor depending on the level of support.

While all five teachers expressed pride in their role as HE teachers and their sincere belief that they have an important role in preparing future consumer citizens, the teachers perceived a general opinion about HE that it is a type of cooking course rather than a legitimate discipline. The same teacher felt that her subject had less credibility in the eyes of her colleagues simply because the pupils are having fun during her lessons.

"When it comes to this subject, there are, well both, parents and pupils that are set to "well let's go cook some food", but that's far from being the case (...). Some teachers think that their subjects are much, much more important. "Sure, you go over there and do some cooking" and, of course, there have been many occasions over these 30 years now that I've been working in schools that I have had to put my foot down." (T4)

This implied that a negative view of HE is believed to undermine the subject's position and its mission to contribute to education for SD. However, the most influencing factor within this theme is related to school leadership. It is what the school management group decides to prioritise that is expressed as having the most influencing power over factors facilitating or inhibiting equal education, quality secure assessment, and good working conditions. For example, just having the opportunity to prepare and manage the changes of a revised syllabus was experienced differently among the teachers questioned.

"I worked in [name of another town] at that time, where we got an incredible amount of time before the curriculum was ... well, it was almost not even printed, on which we got a lot of time (...), but for others, when I later got to this place, they had not been given one hour to think, you know, about the new curriculum. Rather, they were just supposed to shift from one day to the next." (T3)

Further, teachers gave several examples of the management group giving HE a low priority, and how it affected their teaching possibilities and legitimacy. For example:

"This school year, they have chosen to schedule the "läslyftet" (a national reading capacity-building project) during our subject conference time, so they have removed our subject conference time altogether." (T3)

"Well, this is how I see it, regarding sustainable development in the sense that, when you handle something like this in schools, like this is where you cut down and where you make larger groups and do everything ..., well, then I think like, from the top, what you are signalling down (...), and I mean, in this light, you're treating this subject stingily by "where you cut, you cut", and that becomes a little foolish." (T5)

Poorly executed restoration work or the establishment of new strategies related to the extended mission of the national HE syllabus are other examples of when the teachers expressed the feeling that they received little support for their tasks. As an example, an emerging sanitation problem caused by storing decomposing waste in HE classrooms was, according to one teacher, only addressed by the school management after a forced shut down of the HE facilities. Unfortunately, the solution of installing the much-needed recycling chamber did not prove to fulfil a variety of basic features and qualifications, which made HE teachers feel disappointed and discouraged:

“Yeah, it’s stuff like that which makes you think, ‘If you are going to do it, it has to devise a unity’, not just be done only for show and not to do the [job]. It does not feel credible, not according to me anyway.” (T5)

The next quote is from a teacher who experienced much more support from the management regarding the same issue.

“Now there is like, these corn bags that we throw our compost in, and it’s someone else who empties it. Someone else will come and collect it. It doesn’t depend on me being there on a voluntary basis.” (T2)

Thus, ‘soft’ factors within the local school environment are influencing teachers’ feelings of support towards their subject, which in turn can have an influence on the teachers’ biggest asset, namely, their enthusiasm to implement the extended mission of a SD perspective.

“Sometimes, I think like, I mean, if the ones upstairs don’t want more than this, then, I cannot break my back over it, you know.” (T5)

The frameworks established at the central level were also mentioned in reference to support. In addition to the main influence of the allocated timetable, national decisions regarding budget and procurement guidelines were expressed. It was discussed that the grades in HE should count towards placement in higher education, which could positively affect pupils’ motivation and perceived importance to participate in the more abstract and complex contemplations about food and sustainable development.

4. Discussion

The main findings presented in this study display varying views from purposely selected HE teachers with a shared perception of having a meaningful and important role in the transition of the next generation to sustainable food consumers. The teachers’ understanding and implementation of an SD perspective in food-related HE education was described as teaching possible ways to ‘carry out’ sustainable food-related practices as well as to provide opportunities to develop informed reasoning and critical abilities regarding the complex interconnections behind food-related choices and actions. At the same time, the subject is perceived as under-prioritised, involving perceptions of several inconsistencies and contradictions in aligning the vision of teaching sustainable food consumption with the reality.

The varied factors generating the theme ‘unscheduled foodwork in preparing sustainable food education’ might not seem to be unique circumstances, since ‘limited time’ and extra workload caused by mentoring and documentation requirement can be applied to many subjects taught in compulsory school. However, the results show the specific ways in which they can negatively influence the unique demands of planning, implementing, and assessing practical and theoretical food-related knowledge in HE while teachers are expected to interpret and translate the revised mission to implement an SD perspective. As an example, a perceived lack of sufficient allocated planning and assessment time, together with a perceived extra workload caused by the documentation requirements, seem to result in a choice to either reduce the amount of documentation or reduce the teaching procedures that require extra documentation such as practice-orientated teaching lessons. Since documentation is required to indicate why pupils are assigned to a certain grade level but not another [56], theoretical tests were expressed as a way to work around the dilemma. This tendency to manage the issues of SD in HE as theoretical content has also been reported by Norwegian HE teachers [28]. This implies a possible legitimization of reducing practice-oriented teaching in HE, which ultimately could force teachers to reduce the dynamics necessary for teaching sustainable food consumption as advocated in the literature [1,25,27].

Secondly, similar to Vare and Scott [26], HE teachers expressed incorporating food-related education furthering an SD perspective in two complementary steps: (1) Using an implied focus on food

practices relevant to the everyday life of adolescents, teaching possible ways to carry out sustainable food consumption, and (2) providing opportunities for developing analytical and critical abilities about the consequences of choices and actions. In this way, the perspective of SD is effectively covered during experienced-based activities, which is aligned with the theories of previous studies [16,17,57]. However, for teachers to implement both of these steps as a cohesive and meaningful whole, they need to have access to sufficiently long and sufficiently frequent lessons. Having the opportunity to provide continuity and depth is especially important when teaching complex relationships within SD dimensions [58]. In Swedish HE, however, teachers describe how it is not possible to provide both of these facilitators since HE grades must be provided in both the 6th and 9th school year with only 118 h in total. Teachers expressed that this makes the complexity of sustainable food issue risks too fragmented for pupils' process-learning.

The third theme, regarding access to sustainable supportive food products and materials, was perceived as vital in the challenge of keeping pupils motivated to participate in, and contemplate the implications of, the more unfamiliar or abstract choices and actions regarding food and SD. By practicing sustainable alternative choices in the classroom, the pupil is given the opportunity to assess whether or not the choice is relevant to engage in. In line with previous studies, the procurement budget is perceived as too tight to buy groceries considering SD [28,32]. Pupils have expressed this as being contradictory in teaching HE [33]. Accordingly, there seems to be a need to further support HE by providing such materials, preferably those that are built on theory and research of the drivers in adolescent food consumption practices [21].

Fourth, the teacher perceptions of HE being an important and essential subject did not correspond well with the perceived level of support of food-related education within the school environment. Instead, examples show perceptions of insufficient central and local support necessary for teachers to enable optimal use of existing frames. The local school context was further suggested to influence how pupils decide their level of engagement. If the school environment, or the actors in the school environment (even unintended), signal a sceptical and undermining approach towards the subject, it negatively influences the learner's motivation to participate in the given education [21,25]. As expressed by the interviewees, HE teacher motivation to continue to carry out the ambitious mission to implement an SD perspective is also affected. A previous study with Finnish HE teachers has shown that the dominant facilitating factor for implementing SD in teaching was their interest and enthusiasm [32]. Accordingly, and as reported by Dewhurst and Pendergast [29], not being regarded as a subject contributing to SD education is an inhibiting factor that negatively affects the capacity of HE teachers to engage pupils in activities aligned with educational and, in turn, social goals related to sustainable development in general, and education for sustainable food consumption in particular.

While the subject of HE itself has no strong ties to a recognised academic discipline, and has, as Linde [38] explains, no solid legitimacy regarding its providing valid knowledge worth conveying, more knowledge and education for sustainable food consumption is one of the top priorities in the global agenda towards a sustainable future [6]. The desired knowledge, skills, and abilities regarding SD formulated in the national syllabus of HE correspond well with international and national debate and policies regarding education as a means to enable responsible consumers and sustainable food consumption. While this is a positive outlook for Sweden's compulsory school contribution to the SD agenda, in the viewpoints of the participating teachers, discrepancies seem to exist between what the revised HE syllabus expects teachers to provide educationally and what opportunities are perceived to be provided on a national and local level to attain these goals.

Weaknesses and Strengths

Only five teachers were interviewed in the present study, the conventional view of studies based on small samples sizes is that they have limited validity when implying understandings beyond the social context within which data are gathered [59]. In such a view, each social setting is defined by the perceptions and interpretations of those actors who are participating in that particular social reality.

However, within the philosophical position of interpretivism, such conventional views are regarded to be based on the ‘uniqueness fallacy’—that everyone in every setting is unique in every respect [60]. Although teacher repertoires are individual, there are always collective elements throughout subject studies [38]. Hence, a strength of the present study is that the participating HE teachers shared typical elements of interests and aspirations relevant for the studied phenomenon, while sharing with other HE teachers the collective element of having different contextual circumstances and resources. Accordingly, by identifying relevant similarities, practitioners will be able to recognise what is common and transferable to similar cases [60].

5. Conclusions

In conclusion, the teachers in the present study perceived HE as an essential subject, with the mission of providing key competencies in carrying out sustainable aspects in food consumption practices through practical, hands-on experience relevant to the everyday life of adolescents, while informed reasoning and critical thinking is also practiced. However, this perception did not correspond well with the perceived opportunities to carry out and attain the subject’s assigned mission to contribute from a perspective of SD. Rather, it is perceived as underprioritised and pierced by contradictions and inconsistencies in central and local support regarding vital subject specific needs. Thus, if the goal is to contribute to the international agenda to educate adolescents in SD and for enabling healthy and environmental supportive food consumption, there is a need to further investigate the influencing factors conditioning HE and how they can be constructively adapted to attain the intended goals. Four themes especially merit consideration: unscheduled foodwork in preparing sustainable food education, opportunities to link everyday food choices with larger food system issues, access to sustainable supportive food products and materials, and a school environment in support of food-related teaching. The perceptions of the participating HE teachers provide relevant input to continued work on the theoretical, conceptual, and practical development of the field, both in the specific context of HE, and in education for sustainable food consumption in general. The present study has generated themes that have been expressed by the participants as relevant and crucial for the implementation of teaching on sustainable food consumption. This is an important knowledge base that can enrich continued and comprehensive research to be conducted for the benefit of policy and practice.

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