

# **How to integrate sustainable consumption and healthy eating in curriculum**

An in-depth probing of the concept of whole school approach

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## **Abstract**

This study inquired into integration of sustainable consumption and healthy eating in curriculum of three Finnish primary case schools, and carried out a preliminary in-depth probing into the working and outcomes of the 'whole school approach' in terms of teaching and learning. The whole school approach did portray as common effort by teachers and caterers to induce sustainability concept and reflective practices for pupils, and as such it presented new cross-curricular and transformative education binding reflection with knowledge and practices for every-day sustainability behaviours. As part of education for sustainable development and food education for sustainability in particular, organic food as an illustration for sustainability was used in one case school. Even though very fragmented and small-scale, the study suggests that sustainability education and sustainable food education do have chances to challenge current societal developments by today's pupils, the future citizens and consumers.

## **1. Introduction**

Eating is a most intimate thing in terms of what goes into our bodies, how healthy it is for us and how pleasurable we find it; eating is also a very public thing in that we eat out together, consume food chosen and cooked by others and furthermore, have public interests in consequential public health (costs). Additionally, we know about huge vested interests in eating in terms of economic structures of food supply networks and finally, we have the environmental concern from local to global scale. Shortly, eating is about sustainability. If we feel there might be sustainability deficit in the way we currently eat in our societies, can schools change the way we eat?

Basically, schools have possibilities to change the way we eat on two levels. First, the current school meals as (exemplary) part of the food system could represent catering for sustainability (Morgan and Sonnino, 2008), whereby the social system mediates sustainability between individual and environment (Mikkola and Mikkelsen, 2008). Second, school meals (are supposed to) have educational influence on pupils and students, who as today's young consumers become in the future the adult ones, growing to actors within food system. At the moment, both levels seem to be challenged in terms of sustainability; school meals have been an object of societal debate both in countries where a statutory free school meal is served and in countries where it is offered (partly) on commercial basis. The double focus of the debate seems to boil down to 'better (sustainable) food for kids', but 'on whose cost?' In similar vein, the food for school meals should preferably originate from organic, local or regional and

sustainable agriculture, and the overall food supply chain represent fair practices (Morgan and Sonnino, 2008).

Education for sustainable development (EfSD, <http://www.unesco.org/en/esd/>) at large and food education for sustainable development (FEfSD) in particular suggest that education could make a difference. According to Morgan and Sonnino (2008, p. 19, 169-171), the 'whole school approach' may be understood as an educational tool of the ecological era, mandating the promotion of public good through cultural transformation of individual attitudes and behaviours towards more sustainable life styles. They see new forms of 'ecological citizenship' (Dobson, 2003, in Morgan and Sonnino, 2008) to be developed by people who think critically about social and environmental interactions, engage practically with collective problems and assume responsibility for conduct in private and public life. Morgan and Sonnino suggest the Green State to utilize the public plate to educate civil society about sustainable development. Here various educational initiatives, including whole school approach, transfer the multiple meanings of food quality to schoolchildren. Given the centrality of FEfSD for ecological citizenship, we need to ask "How to integrate sustainable consumption and healthy eating in curriculum?" If the concept of the 'whole school approach' (Morgan and Sonnino, 2008) as a positive curricular approach should represent exemplary practices, what does it mean for teachers, caterers and pupils/students in terms of teaching and learning? This paper aims at an in-depth probing of the concept of the whole school approach for sustainable consumption and healthy eating in Finland as it is experienced by teachers, caterers and young people and exhibited by present curricula in three case schools. The results highlight the considerable conceptual and social integration effort done by teachers and caterers and the evidence of transformative learning of sustainable consumption and healthy eating by the pupils.

## **2. Methods**

This study looks for evidence of the whole school approach as described by Morgan & Sonnino (2008) within Finnish primary education system. The crystallized features of whole school approach are interpreted here to consist of both teaching and learning of transformative developments such as critical thinking and experiences of social and environmental interactions, including sustainable public food, leading to capacity to eat healthy food with lower environmental impacts and fair economic relations within food supply networks. The study screens this kind of transformative development, whereby the relation with material and social environment, including food, becomes 'rearranged' towards sustainability. The method of the study is discourse analysis of a realist version, whereby the language used by interviewees is thought to be connected with 'real' material environment and feelings as experienced or known to discussants and shared by the researcher (Parker, 1992). The study is based on interviews of nine teachers, five caterers and 3 focus groups of pupils aged 8-11 y in three primary schools within Helsinki area in 2008-2009. The interview guideline included questions regarding the views and activities regarding sustainable development and organic food for teachers, caterers and

groups of pupils. The interviews, altogether 17, were transcribed verbatim and coded for transformative features by teachers, caterers and pupils.

### **3. Results**

#### **3.1 Teachers' educational activities for sustainability**

Teachers working in primary education expressed rather strong support for education for sustainability and in principle, for sustainable food education. Teachers developed particular approaches of their own in order to explain the epistemological basis of broad environmental impacts such as climate change, eco-toxicology of pesticides and resource depletion. They illustrated their message by simple every-day analogues, such as grass pot covered by a plastic bag or chemically contaminated mice eaten by cats or they discovered with their pupils items of material environment made of oil. The epistemic area of teaching included also explorative activities whereby pupils were looking answers for their questions in the internet. The teachers stressed they wanted to develop the pupils' abilities for critical reflection of the information pouring upon them today.

The teachers also organized experiential learning for pupils, who brought the content of their waste bins at home to be analyzed at school. Within the school, there was an intensive effort to increase the source separation of waste into several fractions. The task included the identification and use of the differently labelled trash bins. The teachers took the pupils with them to nearby supermarkets to evaluate the amount of packaging around different foodstuffs. The pupils also searched for different kinds of organic food on the shelves, and learned about its labelling in addition to the information presented by school text books. The prices of foods were also looked at. The teachers made visits to 'local nature' such as forest sites where the pupils produced nature diaries about what they saw within that environment and in which season.

The teachers wanted to integrate the physical environment of school, including school catering, as a learning environment for sustainability. Food manners were looked after and food waste was particularly avoided by teaching pupils to 'take what you eat and eat what you take'. Through an additional administrative effort, a teacher managed to include organic crisp bread into school meal. Within the school, there were also other environmental practices created: the saving of water when washing hands, saving of energy by switching off unnecessary lights and source separating the various waste fractions. In developing education for sustainability, the teachers participated the caterers and other technical personnel into educational activities. They also looked for national and international projects and had interest in their school becoming recognized as an institute of progressive sustainability education. However, part of the teachers felt that during their hectic work days, they would not have the capacity at all times to participate in the project activities or to follow the new guidelines for the sparing use of resources.

Teachers made initiatives for pupils' social learning and organized pupils' environmental and sustainability groups, called 'Green Boards'. The group was responsible for following and co-educating other pupils regarding environmental practices. The Green Boards were able to make decisions about the use of limited amounts of budget money for pupils' interests. The board had a chair and secretary, in order to teach the pupils about ways of democratic decision-making.

### **3.2 Caterers' teaching and guiding activities for sustainability**

The caterers were introduced to school's sustainability education efforts and asked to join the teaching work. The caterers were satisfied to have lessons for pupils about food culture and school menus, explaining how everybody liked and disliked at least something, and how one could learn to like different foods. The caterers also emphasized the 'take what you eat and eat what you take' in order to avoid food waste. They placed every day the 'plate model' of the day's dish at the entrance of the dining hall for the pupils to see how exemplary compilation of carbohydrate and protein containing foods as well as vegetables plus milk and bread looked like. The caterers also had a 'counselling eye' for pupils eating in the way that they gave kind remarks if a pupil had a very deviating compilation of the day's dish. They followed the amount of food waste on a daily basis and created new ways for its collection; finally, pupils took turns at the waste bin and gave advice to other pupils about not to waste food. In general, the caterers were an active resource in the kitchen and dining hall in guiding the healthy everyday food and eating behaviour.

### **3.3 Pupils learning experiences and outcomes**

By their focus groups, the pupils expressed their knowledge, critical thinking and reflection abilities, perceived practices and responsibilities as well as emotions regarding sustainability and (organic) food. Pupils told they knew organic food did not contain fertilizers or pesticides and in this respect it was healthy food to eat. Some of them knew their parents bought it home, particularly milk, eggs and bread. They were very aware that organic crisp bread and milk products were served at school meals. However, they were critical consumers comparing prices – how much the snack did cost at their own school and how much at the nearby music academy. Critical thinking and reflection were evident in an exchange whereby a pupil claimed organic food to taste good, the other asking whether the one had tasted it and when not, the other questioned the knowledge basis of the claim. The reflective thinking of responsibilities was expressed by a pupil who planned how to behave in case organic food would taste bad; she would feel like taking it to waste bin, but because it was healthy and the kitchen lady would not like food waste, she would go back with the food to her seat and eat the food. Regarding the amount of food allowed to be taken, the pupils discussed about the number of meatballs and came to the conclusion that it was seven. Additionally, one of them remembered that there was organic milk in the refrigerator too, for the pupils who had particular nutritional needs; they knew the rules and practices in this case too. Food was also very emotional topic in the way that the pupils expressed 'their love or hate' for particular foods such as spinach or fish soup, and wanted to use them as 'comfort' when

having experienced unkindness by others. They also were very critical to foods they did not know, and even more critical when the kitchen lady did not know the ingredients of the food either.

The pupils' practices and responsibilities concerned foremost challenging source separation. The pupils told they did not always remember the waste fractions, and in a hurry with others to the school yard, they just threw the piece of waste into any one bin. The ones who were engaged in the Green Boards were aware of their role and knew they were expected 'to know' about recycling, food 'rules' and how to solve scuffles with the pupils' body designated for this. Others correspondingly knew or asked who were (this time) these 'resource persons' in each class.

#### **4. Discussion**

Biggs (2003) advocates educational alignment (in higher education) according to societal needs, but this need may be justly claimed to prevail in primary education as well; in the case schools, the sustainability and as its part, sustainable food education, were a perceivable part of every-day activities in school. As curricular effort, supported by cross-curricular theme of EfSD of Finnish national core curriculum (Uitto, 2009), features of integrated curriculum (Beane, 1997) were present as societal problems and their solutions were explored thematically by pupils. The effort for the complex of knowing and practicing sustainability on the premises came close to what Beringer and Adomßent (2008) and Bray (2008) report for university campuses. Pupils were 'initiated' into sustainability practices, which were, however, not of the stagnating and undemocratic kind, but were looked into as informed and critical reform of prevailing societal practices (Smeyers and Burbules, 2006).

To some extent, there seemed to prevail a correspondence between teachers' and caterers' teaching efforts and the pupils' learning outcomes. The pupils did express knowledge, critical thinking and reflection, as well as responsibility regarding their sustainable practices, as suggested by Abowitz (2008) and Morgan and Sonnino (2008). However, the particularities of the food networks were not quite clear for teachers or caterers, and therefore not for pupils either, as presumed in the whole school approach. The caterers (Mikkola, 2009) and teachers saw sustainability realized not only through organic food but also numerous other aspects such as carbon dioxide, and food safety and security at large. The stage of the teaching and learning of sustainability was mostly the school premises and local environment, and the main focus was set on sustainability aspects enabling rather unambiguous measurement such as waste creation and use of energy and water. However, co-operation with caterers was very challenging for teachers whose social networks and practical responsibilities tended to grow beyond their set limits, while caterers seemed happy about new and different tasks within school community. Emotions were clearly integrated with sustainability teaching and learning activities, a field to be studied further.

However, the pupils participating in focus groups did belong to Green Boards and were those willing to meet an 'outsider', which suggests, that they could have been more aware and 'initiated' into the concept of sustainability and its practices than other pupils not willing to participate. In conventional teaching terms, they were 'good pupils', but as such, they offered evidence, although fragmented, that sustainability education and sustainable food education do have chances to challenge current societal

developments by today's pupils, the future citizens and consumers. However, according to Bridges (2008), there are limits to schools' societal influence, and the main thrust of schools should be educational and not indoctrinatory.

## **5. Conclusion**

This study inquired into integration of sustainable consumption and healthy eating in curriculum, and carried out a preliminary in-depth probing into the working and outcomes of the 'whole school approach' in terms of teaching and learning. The whole school approach did portray as common effort by teachers and caterers to induce sustainability concept and reflective practices for pupils, and as such it presented new transformative education binding reflection with knowledge and practices for everyday sustainability behaviours. Even though very fragmented and small-scale, the study suggests tentatively that sustainability education and sustainable food education do have chances to challenge current societal developments by today's pupils, the future citizens and consumers.

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