Farm-School Collaboration in Denmark

Perspectives, Values and Learning Goals

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Extended abstract

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Summary abstract

Connecting schoolchildren to farms can potentially promote a greater understanding of food production, rural life, sustainability and a connectedness to nature. A qualitative PhD study aims to analyse farm-school educational collaboration in Denmark focusing on the motivation, values, learning goals and teaching methods. Various collaboration arrangements are studied and how learning goals and values of different stakeholders are integrated in the teaching, aiming to identifying future directions. Case studies of different farm-school arrangements involving interviews, observations and analysis of educational materials are conducted. Preliminary findings show that closer collaboration can promote an integration of different subjects, experiments and study of seasonal changes in the teaching. The learning goals of different stakeholders have one thing in common: promoting an understanding of food production and different production systems. Yet, sustainability and food systems perspectives are not well integrated in the teaching.

Introduction

In the globalized food system, urban consumers - including children - are becoming increasingly removed from nature, agriculture and knowing about farm-to-fork issues related to food; including how, when and where food is produced and understanding the impact of production and consumption choices on the environment, farm economy and public health. Building closer links in the food system through collaboration between local farmers, schools and children, to promote an understanding of food production and sustainability issues, connectedness to nature and healthy food behaviours, have the potential to provide an important practice field for schoolchildren to enhance their academic learning and food literacy - and ideally foster food citizenship. Farm visits enable children to see, smell, feel - and sometimes taste - various dimensions of food and connect with local farmers, the soil or stable, where food is produced. However, the extent to which this can promote food literacy and food citizenship is intrinsically linked to the motivation, values and learning goals of farmers and teachers and other stakeholders working with children and developing the programmes and its content and approaches.

Presently, only limited research has been conducted on the educational aspects of farm-school collaboration. Compared to farm-school research, there is relatively more school garden research. This is primarily intervention studies focusing on the potential of garden-based learning for fostering improved fruit and vegetable intake, increased understanding of ecology, interest in science and pro-environmental behaviour amongst children (Ratcliff, 2008; Skelly and Zajicek, 1998; Skelly and Campbell Bradley, 2007; Yost and Chawia, 2009: Desmond, Grieshop and Subramaniam, 2004; Heim et. al., 2009). There are many differences between school gardens and farm visits; first and foremost, that the farm visits provide a unique opportunity for children to get out of the city, see a real life production, meet the farmer and learn about rural life. There are also similarities and overlaps in some of the types of collaboration and applied teaching methods, suggesting that there could be some of the same opportunities for learning from farm visits as there are with school gardens.

1.1. Research aim and methods

The paper presents the preliminary findings of a PhD project, which seeks to investigate existing farm-school collaboration in Denmark and the integration of farm visits into the school curriculum in topics related to food, agriculture, ecology and sustainability. Thus, the focus is *not* on the learning and behavioural changes of the children in the short-term. Rather, the emphasis is on the motivation of teachers and farmers, the learning goals and values behind these programmes, as well as the applied teaching methods. Using a case study approach, the study aims to analyse the underlying values, motivation and learning goals and different institutional arrangements in the farm-school collaboration. Three cases are used representing different collaboration arrangements and types of production: 1) a conventional dairy farmer taking in urban and local schools on single farm visits; 2) a network of organic farmers (including an organic meat farmer and a cooperative farm with integrated production) taking in classes both on single visits and several visits over a season including having a small school garden plot, and 3) A science network between three schools collaborating with a local farmer on farm education, science experiments, food education during 4th to 6th grades. The research uses data from the Danish Agriculture and Food Council (DAFC) and Organic Association (OA), field observations and interviews.

Chapter 2: Typologies of farm-school collaboration and teaching methods

The collaboration arrangements between farmers, schools and interest organisations (e.g. DAFC and OA) have an impact on how the farm visits are organised on-farm and in the classroom, the funding of the farm visits and applied teaching methods. In the following section, various typologies of farm-school collaboration and general conditions will be described and how this likely impacts the types of teaching methods used.

In 2010, a total of 12,888[1] farm visits were registered by the DAFC, an interest organisation representing farming and food industries of Denmark including businesses, trade and farmers' associations. The DAFC has approximately 650 participating farmers across Denmark involved in farm education programs to primary and secondary schools.

In addition to the number of registrered farm visits by the DAFC, the OA, representing

organic farmers, businesses and consumers, also offers visits to organic farms across Denmark. There are 30 so-called 'organic school yards', which are organic farms that take in classes for farm visits. Unlike the DAFC, the funding for compensating the farmers for their time, is not permanent. For this reason, the number of visiting schoolchildren (not estimated in total number of farm visits as it is by DAFC) vary from year to year depending on the availability of funds. As a result, the number of children visiting farms reduced in 2011 compated to 2010 due to lack of funding. In 2010, when funding was available, approximately 300 schoolchildren (or 2000 in total from May-November 2010) visited organic farms per month. Additional funding is available in 2012. (Ministry of Food, Agriculture and Fisheries, 2011) Currently, there is limited documentation and research into farm-school collaboration and the integration of farm visits in the curriculum, nor past regular recorded data on farm visits.

2.1. Typologies of farm-school collaboration

Farm-school collaboration in Denmark can be put into four categories. The most common is one-day farm visits with varying degrees of integration in the classroom, in e.g. different subjects or as interdisciplinary projects. The second is one-off excursions with limited focus on learning and more focus on social aspects. The third and fourth types are longer and more rare. They enable children to follow the seasonal production cycle and be active on the farm e.g. by having a small plot similar to a school garden, where they can grow potatoes or other crops. Individual or a group of teachers organize visits to a local farmer/farm organisation over a growing season. In the fourth category, schools, even municipalities, have a more long-term collaboration with a farm, and is integrated into the curriculum over the growing season or over several school years. In both types of longer collaboration, it is common for the schoolchildren to be actively involved in some type of school garden/plot, often using this for different pratical experiments. The study looks into three different cases of farm-school collaboration covering the typologies described above.

2.2. Teaching methods and learning opportunities

Although most farm visits are one-time visits, there are examples of farmers and teachers establishing a closer collaboration involving more visits and activities for the children such as growing their own potatoes as the cases are illustrating. The farmers and teachers interviewed have strongly highlighted the learning opportunities in this: it enables time to do science experiments, following the seasonal cycle on the farm and in nature, doing cooking exercises and mixing theoretical and practical teaching in the school and in the farm classroom. The children meet real farmers with an actual production/business and get a glimpse into their way of living distinguishes farm visits from school gardens.

Most types of farm-school collaboration offer the opportunity for children to explore: to touch a pig, to feel the soil, to hear a cow, to smell the manure, taste the fodder and to ask questions to the farmer. Some even enable the schoolchildren to grow their own potatoes. The latter type of collaboration has some form of a garden/plot component and a longer-term collaboration. This allows the teacher and students to return to the farm, follow the season on the farm and take a more active part in the production.

Chapter 3: Motivation, values and learning goals in farm-school collaboration

In the context of seeing the multifunctionality of farms and establishing closer links to urban consumers, specifically schoolchildren, understanding the farm as a place for learning and the farmer as an authentic educator is part of this investigation. In this connection, studying the motivation, values and learning goals of farmers and teachers is important in order to understand the possibilities and challenges in farm education.

Preliminary findings suggest that the goal and motivation by the biggest interest organisation, the DAFC, in promoting educational activities to schools, is to foster public support for agriculture, create awareness and increase transparency within the agricultural sector. This is in fact closely in line with the motivation of the conventional farmers interviewed: the motivation of presenting a more 'real life' and 'positive' picture of agriculture and the farmer. Furthermore, the importance of increasing awareness amongst children about the socio-economic conditions for farmers, multi-faceted job functions and

getting children interested in farming or just aware of general conditions in agriculture and of food was mentioned.

Preliminary results indicate that the motivation behind the activities related to farm-school collaboration by the OA has a slightly different starting point: the focus is less on defending organic agriculture, which does not have the same negative associations in the media or by the public as conventional agriculture. Rather, the focus is on explaining the principles of organic farming and the motivation by organic farmers for engaging in this type of farming. There is also the objective of promoting awareness and support from future consumers.

According to some farmers and others, it is not economic incentives that drive farmers. Although there is a small financial compensation for the farmer's time, many do not view farm visits as an economic diversification strategy. They view farm visits as more of an idealistic obligation, because they see a need for this collaboration and because they enjoy working with children. Yet for some farmers located closer to Copenhagen, the economic compensation seems to also be an incentive to take in more classes to supplement their income. So responses are likely to vary on this matter depending on geography.

According to the DAFC, there is a large number of registered farm visits on the Eastern Island region close to the capital of Copenhagen compared to more rural areas farm from city centres. A possible explanation could be that there is a greater number of urban schools inquiring about farm visits in the capital area and that they have somewhat easy access to public transport to get to the farm. In more remote areas of the country, the visits are likely to be more sporadic due to transport limitations.

The motivation of teachers is very varied. For some the main focus is to strengthen the social cohesion and reduce tension amongst the children by giving them a positive experience together. For others the motivation is primarily academic: that abstract concepts, such as ecology, natural cycles, and agriculture from the books can be better taught and understood by the children through experience and sensory impressions being in the field or stable, talking to a farmer, growing their own potatoes, seeing e.g. what nutrients are or how crop rotation works in real life.

3.1. Values and learning goals of food and farm education

Amongst the organic farmers interviewed and the OA, an important value, which they aim to pass on to the schoolchildren, is that of valuing and respecting nature, feeling a connectedness to nature and understanding organic farming. The overall stated goal by the organic farmers and the OA is that the schoolchildren will be able to form an independent opinion and ensure future consumer support by learning what organic agriculture is and its many dimensions.

In contrast to the goals of the organic farmers and the OA, the overall learning goals of the conventional farmers interviewed so far and the DAFC (representing both conventional and organic farmers) relate more to children understanding the foodchain and the role of agriculture in the Danish culture and economy. The mix between understanding specific production details and broader issues related to the foodchain, local and global issues and environmental issues, are included in the teaching, although with a tendency to focus on the former. It is, however, important to stress that the learning goals and what is being taught vary greatly depending on the age of the schoolchildren and the focus of the teacher.

For the teachers interviewed so far, the picture is more complex in terms of their learning goals. Worth noting here is that Danish teachers have relatively more autonomy in what they teach than teachers in most other countries. So far findings show that teachers have it as a main (implicit or explicit) value and learning goal to give their students an understanding of organic agriculture and food production, integrating academic learning goals related to subjects like science, biology, mathematics and Danish in the farm visits. Other teachers have a stronger focus on developing social competencies. The latter seems to be more the case with teachers teaching in the lower grades (1st – 3rd grade).

In one school, the focus was not only on learning goals related to understanding organic and conventional agricultural production in an objective manner and integrating practical experiences from the farm visits in subjects like science and biology; the emphasis was also on developing critical thinking and action competence, with the long-term goal of encouraging the children to become critical consumers and active citizens in the future. These relate to key pedagogical principles of action competence and sustainability education (Education for Sustainable Development) (Simovska, V., Jensen, B.B., Larsen, N. & Glud

Holm, L., 2005; Mogensen, F. and Schnack, K. 2010). Working with developing critical thinking and action competence to educate children to become future critical consumers – fostering food citizenship - cannot be assessed or verified easily, if at all possible.

Inevitably values influence what is being taught and how, and are ideally linked to the learning goals directly or indirectly. Teachers want their students to understand about agricultural production. However, in doing so they are limited either by time, knowledge, money or their own values, for which reason there is a risk that the children are not provided with a real picture of current agricultural production forms or understand the complexity, if they are only presented to one type of production and spend limited time learning about food and agriculture.

Chapter 4: Current and future challenges and opportunities in farm-school collaboration

The key challenges for farm-school collaboration can be grouped into three overall categories: transport and financial challenges, knowledge and structures within the schools, and educational focus and development challenges.

Financial constraints do not appear to be related to schools having to pay for the farm visit, as this is generally (but not always) covered through different kinds of funding for farm visits. A bigger challenge could be related to paying for transport. However, the farmers and teachers interviewed generally did not identify transport as a significant barrier. Nevertheless there is an apparent bias here: only teachers and farmers that succeed in going on farm visits have been interviewed. Farmers in remote areas of the countryside have many challenges getting visits from schools due to time and transportation constraints, as public transport options are limited and funds in schools are limited to hire a bus.

There is great variation in the subjects and the extent to which the farm visit is integrated into the teaching back at the school. Not all teachers prioritise to integrate the farm visit into their teaching. Yet many still find important benefits of taking the students outdoors to learn, as it can build a sense of community in the class, stronger relations amongst the children, reduce conflicts and enable students that are weaker academically to get successful

experiences. The lack of integration or follow-up back in the classroom is likely influenced by the teachers' limited time, motivation or knowledge about agriculture and how to integrate the farm visit in the teaching.

Preliminary findings indicate that many teachers lack knowledge about farm visits and its potential, motivation or time to integrate the farm visits into the context of sustainability and food citizenship. None of the available educational materials from the agricultural interest organisations seem to support goals or teaching methods related to sustainability teaching, action competence or food citizenship.

END NOTES

[1] Not all farm visits are registered. Some are done informally and without payment or connection to the Danish Food and Agriculture Council.

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