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LEARN4HEALTH, A EUROPEAN PROJECT CREATING HEALTH AND FOOD LITERACY THROUGH INNOVATIVE INTERDISCIPLINARY TEACHING AND LEARNING METHODS

Abstract:

Research documents what educators know: Healthy pupils and students are better prepared to learn (Kristjánsson et al., 2010; KL, 2015). This paper focuses on the thesis that innovative practical methods for learnings related to health and food issues create a rewarding educational experience for pupils and students while meeting academic standards in math, reading, science, social studies, art, music and more. For this reason and many more, we created Learn4Health, a project with interdisciplinary roots.

Every day, in Universities across the globe, courses are being created to embrace blended learning approaches. Classes are now being developed with focus on more effective learning and better student outcomes (Jones, 2016). However, the concept of blended learning between higher educational institutions and public schools is relatively new. This paper outlines an exploratory study of blended learning initiated by Learn4Health, an Erasmus+ Strategic Partnership including twelve partners in total, representing 6 European countries (DK, ES, SI, NL, UK and LT). Each country is represented by one higher educational institution and one primary and/or secondary school.

With point of departure in the globalized food systems consumers, especially children, being increasingly disconnected from understanding how and where their food is produced, the paper provides an overview of the development and expected implementation process of a new blended learning programme. The practical methods discussed are problem based learning, an experimental approach to learning involving hands on/learning by doing approach, and an "open school" approach reaching out to local community enterprises and farms.

Another Learn4Health key tool to be addressed in this paper is foodscapes, a multi-valenced concept centered around food environments.

Finally, Learn4Health is about having fun and developing lifelong food literacy skills to understand the nature of food and our own impact as consumers and citizens on health status, environment, social and economic factors. Literacy is the cornerstone of the project, and we will thus discuss the concept's relevance and impact on health in relation to Learn4Health.

Keywords:

Learn for health, food literacy, school gardening, interdisciplinary teaching and learning methods, innovative school foodscapes

JEL Classification: I00, I29, P36

1 Making Healthy Habits Part of How Kids Learn

In the globalized food systems consumers, especially children, are increasingly disconnected from the understanding of how and where their food is produced. This has an impact on eating habits and food choices that might affect health, the environment, agriculture and other ethical dilemmas such as animal welfare and fair trade (Dyg, 2014).

In this optic, outdoor activities, i.e. gardening, may connect children closer to nature by teaching them to take care of living things and by understanding the connection between nature and food. This is, however, not something that happens easily nowadays. The tendency is that children spend more and more time indoors in front of a TV or a computer screen, and the generally hectic work schedule in the family are all cutting into outdoor time (Gunter and McAleer, 2004)

Relations to nature, to gardening and to growing food may increase the intersection between the natural world and humans. It is an environment where children can interact with and get curious about the natural world. Mini farms and small gardens in a school context are a strategic way to start. School gardens can facilitate and support interactive learning. How trite it may sound, spending time in the school garden provides children with valuable knowledge of where food comes from and the experience of tasting and eating fruit and vegetables they have grown themselves.

Mini farms and small gardens in a school context is a strategic way to start. Farm visits and collaboration between farmers and teachers through the school are another valuable steps that can enable children to evolve a fundamental understanding and potential interest in how food is produced, the nature of agriculture and a relationship with the farmer, as an authentic teacher and expert.

One example of research within this subject is a Danish Ph.D. study carried out by Pernille Malberg Dyg (2014) that investigates various farm-school cooperation arrangements and the motivation, learning goals and values among farmers and teachers working together to promote children's understanding of food, nature, agriculture and sustainability. Based on four case studies and a review of Danish educational materials related to food, agriculture and sustainability, Dyg (2014) concludes that there is a connection between the motivation of farmers and teachers and the way in which they collaborate, i.e. how closely they collaborate. She furthermore concludes that farm-school collaboration and related teaching can contribute with perspectives on food, agricultural and ecological literacies and food citizenship (Dyg, 2014: pp.235-236).

The question is now if the learning environments can create other possibilities for building up the children's food literacy?

We have an agenda trying to answer this question in a new European Strategic Partnership called Learn4Health. Learn4Health is an innovative professional development program that through a 2-year project period has the aim to create health, food and nutrition literacy through innovative approaches to provisioning and learning about food for the benefit of young people across Europe. This will in some cases/events involve innovative designs for gardens, equipment, tasting sessions, food events, and more.

2 A Problem Based Learning and Interdisciplinary Approach

Learn4Health focuses on learning for primary and secondary school pupils and their teachers using a problem based learning approach. The practical methods applied are an experimental approach to learning involving hands on/learning by doing including garden to table aspects and training, and an *open school* approach reaching out to local community enterprises and farms.

Problem based learning is a highly nationally and internationally recognized study method widely utilized at Aalborg University. Basically, problem based learning is a method to organize the learning process in such a manner that the pupils/students are actively engaged in finding answers themselves (Graaf and Kolmos, 2007). According to MSO Erik de Graaff and Professor Anette Kolmos (2007) from Aalborg University, problem based learning is defined by open-ended and ill-structured problems that provide a context for learning. Since individuals cannot be expected to solve such complex tasks by themselves, interdisciplinary group efforts are involved (Graaf and Kolmos, 2007: p.4).

Learn4Health is dedicated to this method and aims at developing basic and cross disciplinary skills, digital skills, engineering and entrepreneurial skill as well as language skills qualifications all using food, eating, health and nutrition as its underlying learning occasion. Learn4Health uses innovative pedagogical approaches, as previously mentioned problem based learning, but also whole school approach, student centered supportive learning, open school, supportive learning, intergenerational learning and co-creation, and is based on an evidence and research based approach to knowledge creation. This means that all interventions and activities in Learn4Health are investigated with validated methods. Learn4Health has special emphasis on creating inclusion across social and ethnic barriers by using learning about the everyday life topic of food and eating as the pivotal point.

3 Innovative School Foodscapes

In the context of Learn4Health, it is essential and relevant to talk about foodscapes, simply because the project is carried out in various foodscapes such as school foodscapes. Furthermore, school meals have been acknowledged as a special situation where learning about food and nutrition occurs (Osowski, Göranson and Fjellström, 2011; Nahikian-Nelms, 1997; Gullberg, 2006; National Food Administration, 2007; Lintukangas, 2009). Thus, Learn4Health focuses on the theme innovative school foodscapes for future primary and secondary schools.

The concept of foodscapes originated in the field of geography (Aldrich, 1966) and "... represents a marriage between food and landscape, both the conceptual notion of landscape and actual, physical landscapes" (Adena, 2006: p.13). Like landscapes, foodscapes can refer to physical and tangible spaces, however, they can also refer to intangible associations between places and food(s) (Adena, 2006). Furthermore, foodscapes include people and the complex interrelationship between food, place and people (Mikkelsen, 2011). Foodscapes are thus a multi-valenced concept centered around food environments: Spaces meant for acquiring, preparing food, and talking about food, or generally gathering some sort of meaning from food (MacKendrick, 2014). The idea of foodscape is widely used in urban studies and public health to refer to urban food environments (MacKendrick, 2014). In the field of sociology, the notion has been extended

to include cultural spaces and discourses that mediate our relationship with our food and institutional arrangements (MacKendrick, 2014).

Learn4Health will be unfolded in school foodscapes across Europe involving workforce development for teachers both in schools as well as *train-the-trainer* teachers from higher educations. This will contribute to the development of the credibility of the primary and secondary teacher professions and strengthen the role of school teachers in the future knowledge societies. It will at the same time contribute to the advancement of research in healthier and more sustainable school foodscapes. By integrating innovative tools and designs for learning and experimenting in specific school foodscapes, Learn4Health will strengthen the future role of subjects related to food and health in primary and secondary schools.

4 Foodscapes as Driver for the Strategic Partnership

How to utilize foodscapes as the main driver for Learn4Health? Assistant Professor at the Department of Media and Culture Studies at Utrecht University, Dr. Rick Dolphijn, in our opinion, elucidates the intangible side of foodscapes rather well:

“[Foodscapes are] how food functions in immanent structures that are always in a process of change [...] how food affects and is affected [...] how we live our lives with food, according to food, and through food [...] what happens between the eating and the eaten” (Dolphijn, 2004).

As pointed out by Dolphijn (2004), our lives are affected by food, according to food, and through food, and what happens between the eating and the eaten. We could state and add “between the eaters”.

With point of departure in the concept of foodscapes, we will carry out various projects and events of which some will be new, build upon experiences, and others already existing. The plan is to design and develop foodscapes involving and activating children, and thus the foodscapes will become drivers for the project.

How to carry Learn4Health into action in practice? The development of the blended learning programme will be structured in three steps. Firstly, a hands-on food activities list (HOFA list), comprising several already existing and/or planned relevant instruments developed by the individual partners, will be produced. The list will include results of field tests, impact on eating patterns, academic achievements and feasibility, which is vital for common inspiration and transferability. Secondly, new and additional hands-on food activities with high feasibility in a broad range of cultural and national contexts will be designed and developed. This is an action, which will comprise hands-on workshops in the participating countries. Thirdly, the appointed instruments will be merged/adjusted to form the basis for a final hands-on manual (the HOFA catalogue of ideas) for designing and implementing projects. Each partner is responsible for implementing relevant projects and activities. The partnership monitors the activities carried out among the partners, and makes sure that results and curricula are available internally and externally, and thereby providing a high level of transferability.

Furthermore, publishing and dissemination will be prepared, and a final evaluation will be conducted.

5 Literacy - an Important Tool for Learn4Health

As previously mentioned, Learn4Health is concerned with developing lifelong food literacy skills to understand the nature of food and our own impact, as consumers and citizens, on health status, environment, social and economic factors. The concept of literacy is the cornerstone of the project, and we will here discuss the concept's relevance and potential impact on health. The idea of 'literacy' is increasingly used in a much wider sense than in its original meaning related to the ability to read and write. It is taking on numerous forms and fields of knowledge: each of which is an integration of different values and ways of thinking, acting and interacting. This ranges from individual literacies (in various fields e.g. reading, science, nutrition, and health) - often either implicitly or explicitly equaling individuals to consumers - to what Cardwell (2005) defines as 'citizen levels of literacy' (Dyg, 2014; Cardwell, 2005).

As stated, the globalized food system, adults and children are becoming more and more removed from agriculture, food production and the knowledge about the process "from farm to table". This includes the complexity of knowing how, where and when food is produced and understanding the impact of production, processing, packaging, transportation, distribution, and consumption choices on the environment, health and farm economy. Loss of cooking skills and sensory abilities increase the consumption of highly processed foods, difficulties understanding food labels all pose challenges for public health. These challenges are observed with increasing obesity rates and other diet related health challenges (Dyg, 2014: p.7).

According to Dyg (2014) schools have long been viewed as a key arena for promoting healthy diets and a sustainable development agenda both within the food system, health promotion and environmental protection. Examples are farm-school collaboration in programs and research (sometimes combined with a local food supply) in the US, Canada, UK, Australia, Norway and Italy, which show several benefits in nutrition, learning and social and personal development and skills in children.

In Learn4Health we argue that to make use of this arena and induce food literacy, it is necessary to develop and design (school) foodscapes that facilitate this process. In our view, these foodscapes should involve the integration of farm-based and/or garden-based learning in the curriculum. This has not only the potential to increase school children's food knowledge and agricultural knowledge, studies also show the benefits of especially garden-based education on enhancing academic skills including science skills/aptitude and interest (Skelly and Bradley, 2007), as well as social competencies and personal development in students (Dyg, 2014; Skelly and Bradley 2007; Green, 2004, Waliczek et al. 2001; Horgan, 2010).

6 Potential Challenges for Learn4Health

A successful delivery of the vision of the project to optimize the level of food literacy among children depends on motivation and cooperation of the strategic partnership and its ability to tackle challenges such as cultural differences, resource inequalities, and political agendas. Furthermore, the ability and commitment to cooperate and the capability of working interdisciplinary are key. Considering that the starting point of each country involved in the project is dissimilar, we expect challenges when comparing the final results

transnationally. However, we expect that the individual institutional results will be able to stand alone nationally.

Our expectations to Learn4Health are to create a 'knowledgescape' that relates directly to the selected and defined areas of competences by applying foodscapes as the driving force. This necessitates an insight and a coherent and holistic knowledge about foodscapes for all partners.

Learn4Health has a dedicated vision that involves developing both the vision and the creativity related to future foodscapes. These are actions and experiences, i.e. real experiences from participating individually or collectively in activities within a democratic framework, and by considering how barriers can be overcome. Hence, the project emphasizes the benefit of taking concrete action in the learning process.

7 Outline of Learn4Health

- Learn4Health is driven by the call for improving, changing and innovating the teaching and learning methods applied in the field of food issues in selected European schools.
- The aim of the project is to bridge the gap between teaching activities and food provision activities at schools. The co-creational approach rests on an involvement of children, teachers, caterers, researchers and local food businesses in its innovation efforts and problem based learning.
- The learning and teaching approach is founded in the use of real life food 'problems' as objects by which Learn4Health aims at promoting sustainable and healthy eating, and co-creating synergies between school and local/urban food economies.
- Learn4Health will develop innovative practical methods for learnings related to health and food issues creating an educational experience for pupils and students while meeting academic standards in math, reading, science, social studies, art, music and more.
- Learn4Health initiates an exploratory study of blended learning in innovative school foodscapes.
- Learn4Health will develop lifelong food literacy skills to understand the nature of food and our impact as consumers and citizens on health status, environment, social and economic factors.

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