

# Rebuilding the European Market Social Economy: Health issue for the Union: Nutrition & Education

By

Gregorio Varela-Moreiras  
Full Professor in Nutrition & Food Science  
University CEU San Pablo (Madrid, SPAIN)  
President of the Spanish Nutrition Foundation

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## The rationale

Nutrition is a major environmental influence on physical and mental growth and development in early life. Food habits during infancy can influence preferences and practices in later life and some evidence suggests fair to moderate tracking of food habits from childhood to adolescence.

Children progressively acquire and learn eating habits and practices as they grow and develop. Initially, the family plays a key role in the process not only as responsible for feeding the child, but also by setting norms within the family, acting as role models, encouraging certain behaviours and rewarding or limiting other. During school age, the social environment of children diversifies and extra familial influences progressively become more important references. In this period, children are more independent, start making their own food choices and take personal decisions regarding what they eat.

The family is less important for adolescents, while friends, peers and social models are the key influences on their eating and physical activity practices.

Studies support that good nutrition contributes to improving the wellbeing of children and their potential learning ability, thus contributing to better school performance. Children and young people who learn healthy eating habits, are encouraged to be physically active, to avoid smoking and to learn to manage stress, have the potential for reduced impact of chronic diseases in adulthood. Nutrition education is a key element to promoting lifelong healthy eating and exercise behaviours and should start from the early stages of life.

Food habits are complex in nature and multiple conditioning factors interact in their development. Young children do not choose what they eat, but their parents decide and prepare the food for them. During infancy and early childhood the family is a key environment for children to learn and develop food preferences and eating habits. As they grow and start school, teachers, peers and other people at school, together with the media and social leaders, become more important. Progressively children become more independent and start making their own food choices. The peer group is very important for adolescents and has a major influence in developing both food habits and lifestyles.

Policy strategies are formal and informal rules adopted on a collective basis to guide individual and group behaviour. Environmental strategies are measures that alter or control the legal, social, economic and physical environment to support health and well-being by creating opportunities for action and removing barriers to follow a healthy diet.

In 2002, the **European Commission through the Directorate-General for Health and Consumer Protection** launched the **Status Report on the European Commission's work in the field of Nutrition in Europe**. One of the main conclusions was that "Public information and education about nutrition and the composition of healthy diets should be more prevalent, especially in the educational systems". After ten years later, efforts have been made but still clearly insufficient.

## **School based nutrition education**

Nutrition education is any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food- and nutrition-related behaviors conducive to health and well-being. Nutrition education is delivered through multiple venues and involves activities at the individual, community, and policy levels.

Nutrition education has been recognized as an essential element in the prevention and control of diet-related problems. Schoolchildren are a priority group because an appropriate diet is crucial to their healthy physical and mental development. They are present and future consumers, and they constitute an important link between the school and the home and with the community at large.

School-based nutrition education should: (a) address the needs and interests of students, the teachers and the school; (b) be relevant to programme goals; (c) take into account what children already know and can do; (d) be culturally appropriate; (e) be delivered in a way children can understand and teach the skills and knowledge required to improve or strengthen healthy eating habits.

### **Components of School-based nutrition education programmes**

Several successful programmes consider a multiple component prevention model, beginning in elementary school and extending to high school. A growing number of these include an environmental element in the strategy influencing the quality of food provided by school meals.

In order to succeed, nutrition education needs to be incorporated into the school curriculum actively involving teachers, family and other community professionals. School-based nutrition education should focus not only on the provision of nutrition information, but also on the development of skills and behaviours related to areas such as food preparation, food preservation and storage; social and cultural aspects of food and eating; enhanced self-esteem and positive body image and other consumer aspects. All of these areas are conducive to healthier food choices.

There is a wide array of teaching methods that can be used according to learning objectives: from classroom discussions, worksheets and keeping food records; to shopping exercises, tasting, creating, or drama. Extra-curricular activities are also challenging. For example, school gardening, developing cooking skills, exhibitions and other workshop activities. Incorporation of self-evaluation and feedback can be effective in interventions for older children. New technologies such as the Internet, the World Wide Web and CD-Roms also provide a chance for interactive learning experiences. To be effective, nutrition promotion strategies must be creative, engaging, inexpensive and widely disseminated.

## **How to be implemented?**

Implementation is a complex and usually slow process. Characteristics of the teachers, educational materials and support provided by programme leaders and staff determine the level of implementation within the curriculum. Pre-testing the curriculum allows adaptation, improvement in the design and time for the programme to gain acceptance. Teachers often complain about the lack of explicit curriculum, suitable materials or training experience. Adequate time, intensity of the intervention, resources, as well as the provision of suitable materials and teacher training opportunities are essential to programme success.

## **Environmental influence**

Environmental interventions are important components of intervention programmes, that contribute to the creation of opportunities for action by removing barriers to following a healthy diet: health education, physical education, health services, school food services, school counselling and social services, school-community efforts, faculty-staff health promotion and school environment. Environmental interventions include changes in food supply, point of choice nutrition information, collaboration with private sector food vendors, workplace nutrition policies and incentives or changes in the structure of health and medical care related to nutrition.

## **School meals**

School meals should be part of the educational process, providing a valuable opportunity to practice what children learn in the school setting, combined with other policies that facilitate a positive school environment. This includes a pleasant room, nice atmosphere and plenty of time to enjoy healthy food in the school, either food provided by the school or brought from home.

School meals should provide high quality foods that meet dietary requirements, consistent with dietary guidelines and positive nutrition experiences. Training of foodservice staff, school policies that enhance this framework and training of adults who have dining room supervision responsibilities are important elements in this context. Any other places where children can get food in the schools (e.g. vending machines, tuck shops or the cafeteria), also provide useful opportunities for intervention by modifying the quality and variety of the food offer.

## **The family**

Family involvement enhances the effectiveness of programmes for younger children. Objectives for the family component in successful programmes focus on stimulating awareness and gaining parental support to encourage variety in the diet and availability of healthy foods at home. However, many studies report difficulties for family involvement in nutrition education.

## **Community involvement**

The pilot programmes report modest but lasting improvement in children/adolescents knowledge and healthy choices. Collaboration between educational and health sectors, industry support, partnerships with catering companies or other groups in the community can enhance school nutrition education.

## **How to evaluate school nutrition education?**

Evaluation is often missing, incomplete or uses inadequate design to assess the effectiveness of an intervention. Process evaluation focuses on programme implementation, quality control and monitoring that explains study outcomes: extent of implementation, fidelity to the programme, reach, use of materials, environmental mediators (for example, teacher training), curriculum delivery, parental involvement, participation in family activities, attendance at evening activities, availability and accessibility of healthy foods at home, school food service changes, food service staff, food industry support or external factors.

Outcome evaluation looks into programme effectiveness. Different designs have been used although good quality evaluation studies are randomized, use quasi-experimental designs and include control groups with pre and postintervention measurements.

End points commonly used include increased awareness, positive attitudes and related knowledge and behavior change (i.e.- dietary habits, physical activity). A variety of methods have been used for that purpose, but often food frequency questionnaires, food records or repeated 24 hour recalls have been reported. Other instruments include psychosocial measures, telephone interviews with parents, observational assessments, impact factors at home, self-efficacy scales or social norms. Some studies also include anthropometric measurements, biochemical or health indicators. In these studies length of follow-up ranges from 2 years up to 7 years. Therefore, it is important to consider qualitative and quantitative dimensions of evaluation.

## **Summary of the characteristics of successful school-based nutrition education:**

*Behavioural focus*

*Theory-driven strategies*

*Adequate time and intensity*

*Family involvement*

*Multicomponent strategies*

*Developmentally appropriate*

*Considers needs of students, teachers and school*

*Self-assessment elements (older children)*

*Self-efficacy. Strengthen skills, influence attitudes, behavioural capability*

*Adequate teaching methods*

*Modify school environment: access to healthy food; school food policies;*

*School meals*

*Teacher training opportunities*

*Cultural relevance*

*Evaluation programme*

## **The need for action and improvement in Europe**

- Nutrition education and physical activity in primary and secondary schools need to be reinforced across Europe. Self assessment instruments to be used in schools can support schools in monitoring their own situation as a basis for action.
- Nutrition education curricula should aim to provide students with the required knowledge and skills, support self-efficacy and encourage behaviour change conducive to adopt a healthful diet and physical activity levels in agreement with dietary guidelines. Time and resources should be allocated to achieve change.
- Research on teaching methods, novel approaches and intervention strategies are required as well.
- School meals provide a valuable opportunity for nutrition education. Food provided at schools should be nutritionally adequate and consistent with classroom messages.
- Staff dealing with school meals should be properly trained, supported and integrated with teaching staff.
- The emphasis on environmental and behavioural factors in successful school-based physical activity and nutrition interventions highlights the importance of involving parents and other community members. The provision of adequate information regarding school meals to families and facilitating occasions where parents can take part in the school should be encouraged.
- Evaluation of progress must be sensitive and involve collaboration of all participants. It is concerned with assessing the effectiveness and efficiency of interventions.

### **Action Steps:**

- Provide access to expertise and networking among EU members from organizations, government and industry.
- Develop joint position papers with nutrition, education, health and professional organizations.
- Build alliances on nutrition policy (e.g. European Ideas Network).
- Provide nutrition education expertise to government agencies, professional organizations and non-government organizations (NGOs).
- Encourages collaboration among nonprofit and governmental organizations to develop guidelines for responsible food advertising and marketing aimed at children and adolescents, and urges food companies, advertising agencies, broadcasters, and other food marketers to follow such guidelines.
- Encourages and supports state funding for the inclusion of nutrition and/or health education curricula in primary and secondary schools.

- School-based nutrition education and promotion can help advance student academic performance . Integrating comprehensive nutrition services within the school environment, including educational activities in the classroom, healthful food choices throughout the school campus, and reinforcement in the home and community, has been shown to improve children.s dietary intake.

- Nutrition education shall be based on current science, research and national guidelines. Nutrition education shall be standards-based, using national or state-developed standards. Nutrition education shall be designed to help students learn:

**a)** nutritional knowledge, including, but not limited to, the benefits of healthy eating, essential nutrients, nutritional deficiencies, principles of healthy weight management, the use and misuse of dietary supplements, and safe food preparation, handling and storage;

**b)** nutrition-related skills, including, but not limited to, planning a healthy meal, understanding and using food labels, accessing and critically evaluating nutrition information, misinformation and commercial food advertising;

**c)** how to assess and manage one.s personal eating habits, set goals for improvement and achieve those goals;

**d)** how to communicate, make healthy decisions and advocate for developing lifelong healthy habits.

## **The recent role of the network of European Nutrition Foundations (ENF)**

To open up communication channels and to facilitate the sharing of nutrition-related information and best practice across Europe, a network of European Nutrition Foundations (ENFs) has recently been established in 2010. This initiative builds on long-established working relationships between individual foundations, some of which track back 40 or 50 years. The network at present already has eleven members: Austria, France, Germany, Ireland, Italy, Portugal, Spain, Sweden, Switzerland Turkey and the UK.

The theme of the Madrid meeting in 2010 was Nutrition in Schools across Europe, with each of the members presenting the current situation in their countries, focusing on two aspects: (1) nutrition in the school curriculum and (2) regulations on foods and drinks provided in schools.

The most relevant conclusions from the above mentioned meeting were:

Nutrition education is implemented in schools across Europe to varying degrees. Nutrition is incorporated into the official school curriculum in Ireland, Portugal, Sweden and the UK, although in most of these countries, nutrition is not taught as a separate subject but is integrated into other subjects or activities (usually under the discretion of the individual school). For example, nutrition could be covered under geography in world food security. In other countries, such as France, Germany and Italy, nutrition education is not obligatory. However, nutrition is included in school education by means of resources provided via projects carried out by local authorities or private initiatives, such as the „THAO-Salud Infantil. or SHE programmes in Spain. In some countries, nutrition is moving higher on the agenda and plans are underway to include the subject in the school curriculum (e.g. France, Switzerland).

Arrangements regarding food and drink provision in schools also differ between European countries in the ENF. The UK and Portugal are the only countries to have compulsory regulations on the provision of school lunches. Other European countries have guidelines regarding meals provided at schools, but they are not mandatory and only serve as useful tools for planning school meals. In many countries some form of regulation exists prohibiting the sale of certain foods and drinks via vending machines or at canteens/kiosks (e.g. food and drink high in sugar/fat). Also in place are school programmes or initiatives to encourage young people to eat or drink healthy foods and drinks (e.g. fruits and dairy products).

Overall, the topic of nutrition and food in schools is approached in various ways and implemented to differing degrees throughout Europe. Nevertheless, all the foundations in the ENF agree that it should be placed higher on the agenda for all schools and most are actively involved in achieving this in their country.

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