



Innovative teaching methodology of health friendly nutrition development and practice in pre-primary and primary education (HealthEDU) Project ref. No.:2016-1-LT01-KA201-023196

## **“RESEARCH AND ANALYSIS OF THE LEGAL AND FACTUAL STATUS AND PROBLEMS IN THE SPHERE OF NUTRITION OF CHILDREN AT THE AGE OF 4 TO 10 YEARS OLD IN ITALY”**

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### **1. Introduction**

The **Italian guidelines** for catering at school move from the need to facilitate, from the childhood, the adoption of correct alimentary habits for the promotion of a healthy friendly nutrition and the prevention of chronic diseases like diabetes, obesity and osteoporosis. The recent change of the Italian family and individual's life style determined the need to consume at least one meal out of the house, utilizing public restaurant services. The access to a healthy friendly nutrition is one of the crucial aspects to grow children and teach them good health nutrition, in particular from the early life stage.

According to the “Convention of children rights”, adopted by UN in 1989, children must have a healthy friendly nutrition in order to have as good as possible health condition; and more in the revision of “European Social Charter” in 1996 is written that “each individual has the right to have advantage from somehow action that could provide the best health level as possible”.

The **Regional European office of WHO (World Health Organization)** has approved in 2006 a document titled “Gaining Health” a specific program that aims to prevent and control chronic diseases. At the end of 2007 WHO and EU Commission have approved the “Health in all policies” to promote elaboration of policies in different sectors as alimentation, environment, commerce, education, industry, work and transport. According to these guidelines, in 2007 Italian Health Minister adopted the “Guadagnare Salute – rende facili le scelte salutari” a global strategy that aims to promote healthy friendly life styles in order to fight social issues as wrong alimentation, alcohol abuse and smoking addiction. Within the different action plans, the public food procurement is considered main instrument to promote health friendly alimentation.

School canteen is fundamental to grow the quality level of food, keeping well the alimentary security principles. A good restauration management can boost health friendly food habits throughout innovative menu at school and promotion of new dishes/recipes. In addition to produce meals in respect to guidelines of Levels Reference of nutrients and energy for the Italian population (**LARN**), it can play a main role in the food education of children, family and teachers.



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Dietary table has to be modulated at local level according to LARN, sending clear nutritional messages to children. The first objective of the catering at primary and kindergarten is to guarantee the quality of food, a high level of nutritional elements and hygienic standards, in a framework of real pleasantness. This research has involved ten school institutions (5 kindergarten and 5 primary schools) coming from Tuscany and Marche region) which, in a different but similar way, provide food for their pupils:

- Kindergarten "Pianezzoli" part of Circolo Secondo Empoli, in the metropolitan area of Florence. Circolo Secondo groups 7 kindergartens and 6 primary schools. Pianezzoli kindergarten has involved 2 teachers and 21 pupils in the project. They have promptly reply to the questionnaires in collaboration with children partents, nutritionist and adiministrative staff of the school canteen.
- Kindergarten "Pier Della Francesca" part of Circolo Secondo Empoli (FI). Pier Della Francesca school has involved 3 teachers and 28 pupils in the activities of the project. This institution has provided questionnaires from parents, nutrinionist and the responsible of the Municipality in charge of nutrition at school.
- Kindergarten "G. Rodari" IC (Istituto Comprensivo) Montespertoli (FI) has involved 80 pupils and 5 teachers in the projects. Montespertoli is a municipality located about 20 kilometres southwest of Florence. The IC groups 2 kindergartens and 2 primary schools.
- Kindergarten "Don Milani" IC (Istituto Comprensivo) Montespertoli (FI) has involved 74 pupils and 5 teachers in the projects.
- Kindergarten "Capoluogo" from Montegranaro. The institution is part of the IC (Istituto Comprensivo) Montegranaro, in the Province of Fermo in the Italian region of Marche. The "Capoluogo" kindergarten has involved 2 teachers and their 2 classes with 50 pupils aged 3 and 4 y.o.
- Kindergarten "Santa Maria" from Montegranaro. The school is part of IC of the municipality of Montegranaro. 2 teachers are involved in the project, with 2 classes and 40 pupils.
- Kindergarten "San Liborio" part of IC Montegranaro. Two teachers from 2° and 3° classes have involved their students (44 in total) in the activities of the projects. We receveid questionnaires from parents and the school canteen administrative staff.
- Primary school "Santa Maria" part of IC Montegranaro. Mrs. Daniela Nardi, teaching in the 3° and 4° classes, has involved 40 students and their partents. We receveid questionnaires from the nutritionist in charge of prepare the menu at school.
- Primary school "A. Manzi" in Vaglia municipality part of IC Fiesole. This institution groups 7 kindergartens and 6 primary schools dislocated in the town of Fiesole and sourrandings. One teacher of the "Manzi" primary school in Vaglia has involved her class composed by 20 pupils.
- Primary school "A.Manzi" Pratolino (FI) part of IC Fiesole. Pratolino is a neighbour of the city of Florence. Two teachers involved their 20 pupils in the activity of the project. For what concern the survey, they contribute providing questionnaires from nutritionists and parents.



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## **2. How is child nutrition organized at national level in kindergartens and schools (ref. to children 4 to 10 years old)**

### **2.1 General description of the situation**

In 2008 there were 791 school canteens using organic ingredients (both partially and fully) for their menus in Italy. As a consequence, over 1 million dishes containing at least some organic ingredients are served every day in kindergartens and primary schools. There are various approaches and degrees of commitment: some schools propose a complete organic menu, some other just a small amount of organic products and others just one organic dish. There is also schools which still don't start to adopt organic menu in their canteen.

In general, for the whole schools interviewed, meal is composed of 2 dishes at least; normally also side-dish and fresh fruit/desert/yogurt are served. In 45% of the cases a snack is provided during the morning. In most cases the snack is served for an educational issue: first of all the municipalities involve the families and the children in order to convince them to avoid bringing to school a packaged industrial snack. This is a very important choice, both on a market perspective for the development of this sector and in an educational point of view; as such practice educates children and sets an example for adults and for the community.

Another objective of this research is to explore differences in diet and eating habits among children attending schools and those who come from foreign countries and to define how public canteen services of primary and pre-primary schools can consider the religious and traditional beliefs regarding nutrition. Fundamentally, food consumption can be considered a religiously and culturally-defined social issue, and can be used as an instrument for inclusion and social cohesion. The religion issue is directly linked to another important one: removing meat from the menus preferring vegetables dishes. In both cases, most problems come from parents' reaction at the decision. In same case they firmly obstruct changement proposed by the nutritionist, even if in line with the National Guidelines.

More over removing meat sometimes is done by Municipality as a politic choice. Many municipalities of the Metropolitan area of Florence tried to do this in the recent past. Sometimes parents react in enthusiastic way. But in many cases they refused removing meat instead of vegetables in the school menu. The main reason is because of "vegetarian" dishes are less attractive for their pupils. Children went back home hungry. Parents complained and the Municipality Council refused the possibility to remove meat in the menu.

By drawing together methods and approaches used in schools across Italy, this report aims to help dismantle some of these barriers and to encourage schools in facing new challenges.



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## 2.2 Which is the process to approve the food sold in the school

At National level, menus are decided by each Municipality, in cooperation with an entitled nutritionist. The Italian Ministry of Health has defined some Guidelines for nutrition at school, but Municipalities are free to respect or not. In particular, the nutritionist is asked to respect the rotation principle (4-5 weeks in order to avoid the dosage of the same food) and the seasonality of products and to define the exact portion to be distributed to each child.

In case of allergic children, special menus are conceived, idealised and realised. In the case of food allergies and intolerances, foods which create allergy and their derivate are excluded from the special menus. Foods and derivate appearing on the label of allergic products are excluded too in the special menus. Once conceived by the nutritionist, the menu is approved by both the Municipality and the school internal commission.

Specific nutrition tables have been defined at national level. According to those tables, lunch at school should represent about 35% of the daily energy requirement. The menu is structured as to provide about 15% protein, 30% fat and 55% of carbohydrates

**Table 1 - Recommended amounts of energy, nutrients and fiber as at lunch in the various school bands**

Recommended amounts	Kindergarten	Primary School
Energy (kcal) related to 35% of daily amount	440 - 640	520 - 810
Proteins (g) related to 10-15% of a single meal	11 - 24	13 - 30
Fats (g) related to 30% of a single meal	15 - 21	18 - 27
Saturated (g)	5 - 7	6 - 9
Carbohydrates (g) related to 55 - 60% of a single meal	60 - 95	75 - 120
Simple sugar (g)	11 - 24	13 - 30
Iron (mg)	5	6
Calcium (mg)	280	350
Fiber (g)	5	6

Source: Italian Guidelines for School Catering, 2012



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**Table 2 - Frequency of consumption of foods and food groups as at lunch during the school week**

Food/ Food groups	Frequency of consumption
Fruits and vegetables	One portion of fruits and one of vegetables every day
Cereals (pasta, rice, barley, corn...)	One portion every day
Bread	One portion every day
Legumes	1-2 times per week
Potatoes	0 -1 time per week
Meat	1-2 times per week
Fish	1-2 times per week
Eggs	1 egg per week
Cheese	Once per week
Cured meats	2 time per month
Single course (i.e. pizza, lasagne, ecc.)	Once per week

Source: Italian Guidelines for School Catering, 2012

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**Table 3 – The Mediterranean diet pyramid**



Source: <http://www.safefood.eu>

### 2.3 Regulatory requirements related to the food sold, consumed or served in the school

The main legal and regulatory acts, which define the requirements for access to healthy nutrition, as well as the quality and safety of the foods, which are provided by kindergartens and schools in Italy, are:

- *Regulations on national guidelines for curricula on kindergarten and primary school* as concern in the article no. 1, comma 4, del Decreto del Presidente della Repubblica n.89 March, 20th 2009.
- *“National Guidelines for the food served at school”*, Provvedimento 29 aprile 2010.

Those Guidelines came from MIUR (Ministry of Education) which spent 2 years of work. Together with the Regional Guidelines on Education and Alimentation at school, they represent the programmatical summary for principles, teachers, nutritionist, parents and kids. Those guidelines conduct the Ministry to the Programme “Scuola e Cibo”.

- *National Law n.107, 13/07/2015* (GU 15/07/15, n.162) “Educational national system Reform and Mandate for re-organization of actual regulations”.

- In the municipality of Empoli food sold and served in the school is regulated by the *regional law L.R. n. 53/81*. Service is managed directly by the school, through the use of its facilities, equipment and personnel. The preparation of dietary table (kindergarten and primary) has been prepared by territorial AUSL (local sanitary service company) nutritionists, which operates periodically checks



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on both the winter and summer menu. Copy of dietary table, is sent to all families and is also posted in the dining halls of the individual school buildings. Preparation of meals takes place in a single cooking center with the exception of the preparation of pasta which takes place directly in the various elementary schools and kindergartens through the use of special equipment and is distributed by the personnel in service.

In reference to the school catering, there are close relations between the municipal office and territorial AUSL professionals (paediatrics and nutritionists). The School district office makes use of a special commission who has the task of creating training of personnel services, the drafting of nutrition charts, verification and control of foodstuffs, local and on equipment.

Family has to pay an annual fee to cover part of the costs. The amount is established annually on the basis of the general cash supply of the Municipality. Partial or total discount of the price are annually fixed by the Municipality through specific action on the basis on family income. The school is in charge to collect money from the parents.

An effective communication between institution and family is fundamental for the realization of this strategy, because they can be productive in a project of healthy friendly habits promotion. In this process, AUSL (Local Health Point) play an important role: surveillance of hygienic-nutritional characteristics of food and nutritional table adopted; control according to the national regulatory for that concern characteristic of the kitchen, characteristic of the products, scholarization of the administrative personnel, self-control system; alimentary education. Moreover it is important the role of the municipality. It has to: chose the type of service provided; investment and resources programme; elaboration of the tender process; surveillance on the food management of the food service. Finally teachers must to be involved in the activities related to good practices on healthy friendly nutrition of children.

The Municipality of Montespertoli uses, for the service of school meals, and its own cooking center, at the nursery school of Aliano, that the Italian cooperative CIR food & beverage s.c. who has contracted the service.

- The municipality of Montespertoli the meals are provided by the CIR food & beverage cooperative. The kitchen of kindergarten "Don Milani" provides meals to the other schools.

The menu includes a summer and a winter menu and it is arranged on a four-week rotation.

The menu is defined through a comparison between the Commission Mensa Administration Representatives, Teachers and Parents of children, with the help of a nutritionist from CIR food sc Catering cooperative. They are also the result of compromises between organoleptic aspect in order to give children a nutritionally correct menu, and to satisfy the users' tastes.

- The Municipality of Montegrano the food programme has been in place since 2001. In January 2016 the Council adopted a new decision for food and canteens. More than 150 meals are served daily across the six schools. 92% of the meals are prepared on site with 69% of them including



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organic food. The nutritionist advises and monitors the service, which also counts on the involvement of canteen commissions comprised of parents and school canteen staff.

## 2.4 Issues identified

Nowadays Italy is a multicultural nation meaning that the presence of foreign pupils in our classes is very high. Each area of the world have different alimentary habits also related to socio-economic condition, religious aspect, the possession of specific natural elements and, last but not the least, the tradition of each population.

The foreign Italian population is young: almost  $\frac{1}{4}$  of foreign people are minors going at school.

Young people from different ethnic groups living in Italy are at risk of bad-nutrition both for the failure in mixing religious food habits with Italian food and for choosing cheap and junk food. New generation are growing in an occidental society with different habits and value related to the relation with food. For all these reasons, immigrant pupil population represents a group at risk.

Nevertheless children from different ethnic groups are more willing to adapt their alimentary habits. If children feel good with both food traditions (origin and host country), family will have difficult to accept losing their specific culture. The Italian Sanity plays a fundamental role helping these families to better choose for their sons and to go ahead cultural differences. School is the most important venue where playing this game.

For the surveyed families most of the religious restrictions are concerned with the consumption of meat.

But we need to make a distinction. In case of a small school, it is easier to provide different menu for each exigence. The municipality is aware about special alimentary needs. Parents show certificates for specific pathologies signed by doctors or nutritionists or a self-declaration about special needs. In this case the municipality prepare a special menu.

In case of a huge amount of children eating at school, it is impossible to satisfy any individual need. For this reason, municipality asks to families to establish a common point. Meat frequently represents an obstacle. Regarding fish, although a copious number of dietary systems do not prohibit the consumption of fish, and even if fish is too expensive for a school meal, it may represent a problem for ethical and philosophical trends such as veganism and vegetarianism. On the other hand, it may represent a valid replacement for meat. The percentage of families against the elimination of fish from the menu is high (+20%): it therefore seems to be easier to give up the consumption of fish than meat. If fish continued to be offered in the menu, the majority of the surveyed families would agree with (or be indifferent to) the suggestion of removing meat from the menu.

The diets of disadvantaged children are less likely to comply with the Italian Dietary Guidelines. Parental education is one of the main socio-economic indicators related to childhood obesity and dietary habits. Several studies have also shown a lower consumption of fruit and vegetables and a higher intake of energy-dense foods in children with parental low socio economic level.



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Thus, special attention should be given to parents and their children with lower socio economic status when developing school and community based strategies of promoting healthy eating to decrease childhood overweight. Fruit and vegetables are an excellent source of important nutrients, including potassium, folate, fiber, vitamin A, vitamin C, vitamin K, and many phytochemicals. There is compelling evidence that diets rich in fruit and vegetables have health-protective effects. In addition, replacing energy-dense foods with fruit and vegetables may help healthy weight management. Most research has focused on the evidence that fruit and vegetable consumption may prevent obesity and protect health in children.

### 3. Good practices

Local level: [A scuola con la zucca!](#)

IC Montelupo Fiorentino (FI) Italy

In conjunction with the World Food '16 day the Pre-primary school "Rodari" has involved their pupils in the initiative "A scuola con la zucca". They started the experimentation of menu with pumpkins at the school canteen, according to AUSL guidelines. Moreover they had educational and training activities with families and initiatives in the classrooms with pupils to promote health friendly nutrition.



Source: archive IC Montelupo Fiorentino



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Regional level: [A scuola con Gusto](#)

The project's main goals are to educate children at balanced and healthy habits through the different senses (sight, smell, touch, taste), with particular attention to the peculiarity of the territory Tuscany. General objectives are: to learn proper relationship with food, to know the foods and their differences, to be natural and environmental friendly. The project started in a.y. 2007/2008 by the volunty of the Commission and the Mensa AUSL12 of Versilia and with the patronage of the Ministry of Education (Ministry of Education, University and Research). In line with the new addresses, the project long term objective is to promote alimentary education which continuous training activities within the school.



Source: archive of Tuscany Region

- National level: [Saltainbocca](#)

SALTAinBOCCA is an initiative addressed to Italian kindergartens and primary schools, born in collaboration with the Italian Federation of Paediatricians (FIMP). The project aims to provide children and parents the information they need for a healthy diet and proper physical activity thus trying to reverse the trend of overweight and obesity in childhood constantly increasing in Italy. SALTAinBOCCA was presented the 11 October 2016 at the Press Room of the Chamber of Deputies obtaining the patronage of the Chamber of Deputies and the Senate. So far 213 schools have joined. School receive the SALTAinBOCCA TOOLKIT, containing:

1 book with information and tips to promote a health friendly life style, 1 board game with dice and pieces which allows children to learn rules of a balanced and healthy life style, 1 poster in each class, canteen and conference room, 25 postcards for parents of children with invitation to know the project in the classroom and to participate to a contest them dedicated.



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#### **4. Identified problems at national levels/initiatives that should be implemented (i.e. non-formal education initiatives) and conclusions**

This report is intended to show that many of the difficulties faced in the catering services can be overcome with a strict collaboration of different actors (parents, teachers and politics).

What is important is a supportive local and political framework. The support and good-will of parents, families, governors and local politicians is an important foundation for the success of any school catering service. As with any change, it is important to accompany any modifications to catering policy with education and awareness raising activities in order to ensure the successful uptake of the new innovative solution. This is equally true for staff, pupils, and the wider local community.

An important finding from the Municipality of Empoli is that buying local food does not necessarily equate to buying sustainably. As demonstrated, freshness, seasonality and organic provenance can all be useful approaches to take.

For the municipality of Montegrano families are not willing to changes and adaptation of school menu at the National Guidelines.

A final lesson to be drawn from this report is that that change does not need to be on a grand scale – an incremental approach to eco-innovation is often a very effective way of successfully introducing a culture of sustainability while maintaining the support of key stakeholders. By highlighting ideas and best practice cases from around Italy, this report has attempted to provide ideas, inspiration and further resources for those who are involved in the procurement of food and catering services for schools.



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