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Title of your example

“Food waste, consumer attitudes and behaviour: SPAIC, a project exploring the reasons linked to consumer-related food waste , involving Italian schools”

Theme

“Innovative educational strategies and learning activities”.

11:30 – 12:30	<i>Panel Discussion: School-based food and nutrition education.</i>	Panel of Experts to discuss and present key recommendations on nutrition education: school curriculum, innovative educational strategies and learning activities; linkages with extracurricular activities, school food environment, local food system, school gardens, meals, and hygiene and health interventions.
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Date, location and geographic scope of your example (regional, sub-regional, national, local)

Date: 2017- 2019. National level study in Italy

Main responsible entity(ies) for the implementation of your example

Ministry of Health, INAIL/DIT

Funding and technical assistance of your example

Funding of Ministry of Health and technical assistance and expertise of INAIL DIT involving Research Organization (CRF), and three Italian high schools

What are the elements needed for the practice to be institutionally, socially, economically and environmentally resilient and/or sustainable?

Reducing the amount of wasted food is a key element in developing programs of global environmental, ethical and sustainable food system production. Food waste occurs at all stages of the food production, starting from harvesting, through manufacturing and distributing and finally consumption, but the largest contribution to food waste occurs surprisingly at home in the developed countries.

Food waste generation that occurs in large scale retail distribution and at home, is mostly avoidable because large quantities of produced food are discarded when it is still edible. As a cause of negative economic, environmental and social effects, food waste is considered to be one of the priority sustainability issues that needs to be addressed. In developed countries, consumers are one of the biggest sources and they are directly/indirectly responsible of food waste. To successfully reduce consumer-related food waste, it is necessary to have a clear understanding of the factors influencing food waste-related consumer perceptions and behaviours.

How your example addresses food security and nutrition challenges. Describe linkages to social protection policies / school food programs / sustainable food systems

Three high schools from Latium region were selected, characterized by different socioeconomic status and fields of education: a private school of art situated in the center of Rome, a Cinematographic high school with a less central location and a biotechnology school in Rome province.

We chose different schools to study whether the difference in localization and socioeconomic status has a reflection on habits about food waste (shopping, leftovers, food preservation....) as well as on perception of individual responsibility towards food waste.

In each school, the activity consists of two steps.

In the first step, an analytical review of the specific lifestyles and behaviour of consumer that identify the causes that lead to the production of waste, was performed to transfer the scientific knowledge to a pre-selected group of students involved in the proposed corrective action. In particular, starting from the evidence that the attitudes and behaviour can significantly affect the amount of food directly and indirectly wasted, scientific literature was reviewed to extrapolate the guidelines for achieving the chosen goals, including specific surveys on social media and on the corrective actions already adopted in other case studies.

After a consultation phase between experts, researchers and teachers for the planning of activities, the active involvement of 250 students of Classes 3 and 4th "high school" followed.

First, data about food waste habits and the perception of one's responsibility about it were collected with self-report questionnaires, filled in by both adolescents and their families, as a baseline study.

Lessons regarding food waste impacts on the environment, on loss of resources, on its cause were given to the students, in order to raise awareness of a selected group of students (30 students for each school). Working groups are formed involving students chosen among about 250 of them, considering their "specific" excellence and mainly their interest to the theme, according to teachers involved in the project.

Teachers and researchers proceeded to organize training activities on food waste, correlating it to the concept of sustainability and underlining its negative economic, environmental and social impacts.

The project is planned according to the interests, perceptions and curiosity of the students, focusing on their insights to design useful "products", that transform the idea into concrete social utility tools, according to the European conception of Science useful to the progress and growth.

During a brainstorming phase, students, teachers and experts, defined objectives, the strategies and the method to be adopted to realize new multimedia viable products to induce correct behaviours regarding food waste.

In the second step, the objective was to create effective communication products for dissemination of good behavioral practices within the family and the territory, enhanced by peer tutoring activities directed to younger class-mates for food waste reduction and environmental and health risk prevention.

These products may be then widespread through the media channels supported by the researchers. To encourage the students to be aware of their capabilities and achieve effective communication products, the support of expert researchers in the field of "nudging - gentle push" or a psycho-behavioural model was necessary.

The model drives the consumers to adopt best practices and good behaviour in daily life.

In fact, the application of the model aims to change behaviour for reducing food waste and its impacts both on people's health and on the environment, and it consists of two different kind of nudges: a nudge that involves physical/environmental factors and a nudge based on motivational/emotional factors.

The environmental nudge consists in the creation of a space inside the school where students may have meals prepared at home (the lack of a such dedicated space seems to encourage students to buy food at the school bar or from a vending machine placed inside the school that offers foods that are mostly unhealthy and not environmental friendly).

The motivational/emotional based nudge consist of meetings with a motivational coach, a person who works with the students at an emotional and creative level to inspire them about their potential to be active participants in choices that are relevant for them and for the whole environment. These meetings are designed to make students able to thrust in their capabilities to make important changes in their lives.

Finally, the dissemination of results will be carried out through the drafting of a final document, and a public presentation of the final results, where students will be the protagonists and actors of the event as well as recipients of the educational process.

<https://youtu.be/gLwBmr5r03Q>

Key lessons (positive and negative) that can be learned from your example

The Project has the purpose of raising awareness among young people (a pre-occupational category/pre-University studies) and to educate them and to induce correct behaviors regarding wasted food and to become testimonials and possibly "cult" multimedia spreader of correct information and behavior. Every action of the Project requires the synergistic involvement of the main "actors" (students, teachers, experts and families) called to dialogue and contribute to common goals. Following training and emotional meetings, students are producing social – network interactive products or video, for their class-mates and youngsters with the intent to disseminate good practices on food waste in environmental and health risk prevention perspective.

Some of the products realized by students, to date, include leftover food recipes, amusing street interviews, a photo exhibition, the creation of a learning unit on food waste and a script for a short film. In conclusion, the Project allows to provide education and information about food waste and health field to high school students, and to test by smart indicators the perception of teenagers on this issue.

Moreover a SPAIC toolkit has been developed, that could be downloaded by web site (www.insite.it) as a tool for promotion of strategies and initiatives conducted by the pilot school in the field of food waste in relation to the specificity of their living environment, as an educational model replicable by the schools.

In addition, the Ministry of Education and Research in collaboration with Ministry of Health are planning to develop a new platform (www.foodedu.it) containing also the SPAIC toolkit for the dissemination and replication in all Italian schools.

This innovative educational "SPAIC" strategies, using different type of nudges for different needs, has been applied in other project: Erasmus project for inclusive education (TIE) and National Inail Project regarding safety at work and sustainable development (Noble milk Project); and tested during an event related to the European Biotech Week "Biotechnology and healthy lifestyles to protect the fragility of young people and territory" (<https://youtu.be/uI6pls6jUDg>).