Consumption and Environmental Education



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Consumption and Environmental Education

A module descriptor for teachers of **12-15** year old students' Research | Reflection | (Re) Action







"The Partnership for Education and Research about Responsible Living (PERL) is a network of educators and researchers developing methods and materials to encourage people to contribute to constructive change through the way they choose to live."

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Introduction

Many problems of the present day including environmental pollution, decreasing biodiversity or diseases of civilization can be in some ways attributed to the increase in global human population but also to pressure for the continuous acceleration of economic growth, stimulated by unbridled consumption. Simultaneously, huge social imbalances, negating fundamental needs of human beings, such as the issue of malnutrition, affect a significant proportion of the world's population.

This situation requires immediate action in all areas; macro and infra-structural changes are possible through international agreements, national and local policy, and establishment of proper tax laws or resource management.

On the other hand, the consequences of the actions mentioned above will play out in the future and will directly impact the lives of the next generation. To sustain these effects, the fundamental necessity now becomes the education at all school levels of why these actions were taken and the importance of continued action, in order to consolidate pro-environmental behavior patterns in society, but also to help the understanding of the impact and meaningful nature of everyday life choices on the environment. Such education will form and shape future politicians and experts, but above all will affect the consumer, whose responsibility will be based on knowledge and awareness.

To ensure adequate and efficient education, teachers with interdisciplinary knowledge and a holistic approach, who have the ability to explain the complex processes are needed. Aware of this need a group of experts gathered around a PERL Network and established a working group to prepare Teacher Training Modules. This document is based on previous experiences of CCN and PERL programs: including such documents as 'Here and Now! Education for Sustainable Consumption' and others.

The Teachers Training Modules proposed in this document have focused on selected aspects of sustainable consumption:

- Tourism helps us recognize problems we don't always recognize in our own daily lifes. However, irresponsible tourism itself may pose a potential threat to the environment;
- Communication it provides a basis for effective transmission of information about risks and ways to prevent them;
- Issues relating to soil, water protection and climate change
 to ensure an adequate level of practical knowledge of the sources of the emergent changes in the environment.

The modules have been developed in this way, so that they can be applied in various regions of Europe, can be adapted to different cultures, philosophies and local educational requirements.

The modules targets teachers of different subjects' such as: biology, chemistry, physics, and geography but also ecological or health education, civic and European education, or native and foreign languages. However, it was assumed that it will apply to teachers of children aged 12-15 years old.

The methodology of teaching suggested in this booklet include approaches which develop creative thinking skills and students vision of sustainability.

Work group n#4c

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Using this material

This booklet is one of a series of publications delivered by the PERL Network that should be used by teachers for teachers training courses. The following pages present the basic structure of a syllabus relating to one of the main themes of the Global Citizenship Course.

These were designed by specialists interested in delivering new ways to promote some basic concepts amongst future teachers regarding Responsible Living, Consumerism and Global Citizenship. It can also be used by teachers who need to promote lifelong learning activities.

The basic prerequisites for these booklet users include teachers for 12-15 years old students (secondary school students mainly).

The time frame to apply these concepts depends a great deal on the curriculum calendar for the relevant teachers in higher education institutions. It has to be adapted to the institutional and pedagogical constraints and also to the main contents of the education course. Each country has different approaches that have to be taken into consideration.

If you are a teacher and realize that these materials would be interesting for your work with your learners, please do use them. You can also download the materials from the PERL webpage resources. This booklet may be translated into other languages besides English in the future.

In the second stage of development of these booklets, the Workgroup responsible for these materials will transform both of them into an e-learning course, called Global Citizenship, which will be available on the internet. If you want to receive information regarding future developments of this booklet, please send us an email or visit the PERL website.

In any case, you should read the 'Here and Now! Education for Sustainable Consumption' document before using this syllabus. It's also advisable to consider your school study plans, core subjects, the available time and resources, the learners profile and expectations as a prior step to the application of any school program. In all cases the material must be adapted to the local experience, taking into account cultural, environmental and social aspects in order to obtain the best results.

If more information or support is needed, feel free to contact us on the Acknowledgments page by email. We would also appreciate your contact if you use this resource.

1. Module aims

This Consumption and Environment Education module aims to develop consumer citizens with:

- The ability to understand the effect of Consumption on the Environment
- The ability to acquire, assess and use information on the consequences of consumption, specifically on the environment
- The capacity to develop Critical awareness, Ecological responsibility, Social responsibility, Action and involvement and Global solidarity (basic learning outcomes of ESC1 as defined in 'Here and Now! Education for Sustainable Consumption').

Objectives

To apply selected topics from the United Nations Environment Programme (UNEP) document 'Here and Now! Education for Sustainable Consumption' in a module that can be used for teacher training:

- To give teachers working in Teacher Training Courses some basic tools to work with complex and relatively new themes that in some cases are not addressed in the higher education institutions.
- To apply a holistic perspective and intercultural appreciation of the themes in a way that allows the development of a reflective action by potential students. These future teachers will be enabled them not only to understand the concepts, but will be able to apply them in the classroom.
- To develop critical thinking, rearranging the perceptions and beliefs of future teachers for the mobilization of knowledge that can be used with pupils aged 12-15 years old (mainly secondary school students).



Key Concepts about Consumption and Environmental Education

Students should develop an understanding of themselves as human beings, of relationships with other people and of interaction with the environment. This involves students developing an understanding of concepts such as:

- Contemporary social, cultural, environmental and economic issues;
- Issues relating to usage of the world's natural resources and to conservation;
- International policy initiatives such as the United Nations Commission on Sustainable Development, United Nations Conference on Sustainable Development - Rio+20, EU policies.

The 'Here and Now! Education for Sustainable Consumption' document lists a number of general themes of which students should have knowledge. One general theme is titled `Consumption and Environment Education' that is developed into the following sub themes:

- · Product life cycles and traceability
- Packaging
- · Recycling, reusing, repairing products
- Energy
- Housing
- Transportation
- Communication
- Entertainment
- Tourism
- Climate, soil and water protection
- Biodiversity
- Waste management
- Ecological impact

This document addresses three of these sub themes: (i) Communication; (ii) Tourism; (iii) Climate, Soil and Water Protection. To achieve the module aims the proposed structure includes the following items: Initial Approach; Communication; Tourism; Climate, Soil and Water.

Initial approach

Don't just talk, walk the walk! To achieve results theory and practice should be intertwined. In order to do so it's simply not enough just to change the light bulbs: we need a paradigm shift, the goal of which is to achieve Global Citizenship.

The main idea in this initial topic 'Introduction to the basic concepts' is that students should understand their roles as citizens, consumers and, in this particular case, as teachers, not only from an individual perspective, by single acts, but in a triangular relationship: themselves (integrated in society, a community and a school), business and the environment. In this particular document, the basic concepts dealt with are sustainability (the sustainable consumption perspective), citizenship and consumerism.

However, for each of the selected themes, there are some specific items that should be included in the module, e.g. consumerism, eco-consumption, fair trade, sustainability, sustainable development, citizenship, consumption, etc. Time should be devoted to the development of strategies in the classroom that teachers can choose from to apply with their own students.

This is intended to prepare the participants from different fields of knowledge, giving them the same common ground to start from. After this you can choose where to start from the i), ii) or iii) sub themes and even which items to work with: only one, two or all the sub themes.

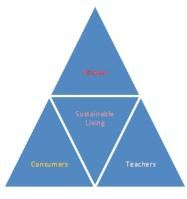
• Communication

Communication is a fundamental element in our lives, and is complex and challenging. But this module just considers its connection with Literacy which is commonly defined as "the ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society (UNESCO, 2005)." (apud Martínez & Fernández, 2010)

It is fundamental not only to receive information but to understand it and to know what to do with it. In a time when each individual that has access to internet is able to be, simultaneously, a receiver and a producer of contents, it is essential to give each citizen the tools to interact with his /her surroundings in a reflective and questioning way, and not only to be receptive to every stimuli. A significant amount of citizenship ability, including the ability to act, depends on the individual capacity to use information: "The end of the nineteenth century industrial model and the advent of "mass customization" model, at the age of "the individual mass media" [Castells 2006, doc. online] implies the strengthening of information literacy." (apud Favier, 2010)

"Media literacy is today regarded as one of the key prerequisites for an active and full citizenship in order to prevent and diminish risks of exclusion from community life." This is the Commission Recommendation of 20 August 2009 on media literacy in the digital environment for a more competitive audiovisual and content industry and an inclusive knowledge society (2009/625/EC).

Taking this into consideration, the basic concepts should be literacy and literacy types; information, knowledge, communication, visual culture, images, multimedia and social media, networking, citizen journalism.



Sustainable living diagram

Tourism

The current consumer society of images and products means that school staff have to acquire some basic skills in the tourism sector in order to be able to exercise their profession in any organization favoring the practice of responsible tourism.

If we merely recognize the rapid and continuous changes in today's society, involving not only the participants, but the places they attend - for example, the creation of new recreation centers - and new forms of enjoyment, we can understand that the subject is fundamental.

Unfortunately and due to its more immediate relationship with marketing, management, entertainment and hospitality industry in general this is not a topic included in the curricula of training courses for teachers. However, we can establish a natural relationship with geography (tourism and leisure) or languages (within the component of translation and interpretation).

The current changes in society require the inclusion of these themes for teachers who will work in a concerted way with other experts from multiple industries: for that purpose a dynamic view of the intervention of these specialists in the community should be adopted.

As in previous topics some concepts have to be included otherwise the module goals will be limited: tourism, intangible goods, stakeholder, tourism resources, expectations, responsible tourism, leisure, quality tourism, agents, agencies, mass and alternative tourism, "green washing" should be some of the key-terms to be explored.

• Climate, Soil and Water Protection

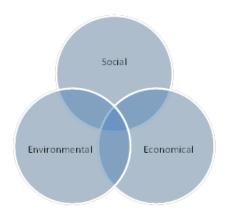
This sub theme from "Here and Now! Education for Sustainable Consumption" is broken down into three separate topics for the purpose of clarity:

- Climate change
- Soil protection
- Water protection

Soil - you walk on it every day but you do not notice its importance in your daily life. Water – you just pay attention to its significance when you open the water tap and nothing happens. Both elements have an extraordinary impact on our lives, the existence of life on Earth and the balance between all the components of any healthy ecosystem that is sought. And therefore on climate...

From the ecological functions of soil to the types of land use, the beginning and end of the food networks which have a major role in agriculture, some of the key themes will be studied in this topic. What kind of soil exists in your garden/neighborhood is a central question in order to understand and to protect the landscape - by naming the characteristics of the landscape around you, in your neighborhood, or which features are natural and which are artificial, for instance.

It's also advisable to pay attention to the environmental burden created by products. Young consumers need an awareness of a concept called "Life cycle assessment". A life-cycle assessment is a technique to assess environmental impacts associated with all the stages of a product's life from-cradle-tograve (namely from raw material extraction through materials processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling).



The three pillars of sustainable development

Skills

Education for sustainable consumption involves generic competences like:

- · Critical awareness,
- · Ecological responsibility,
- · Social responsibility,
- · Action and involvement and Global solidarity
- · and also the following competences:
- Appreciation of nature and of human diversity and multiculturalism,
- · Concern for justice, peace and cooperation,
- · Self-awareness,
- · Concern for quality,
- Appreciation of the interrelatedness of individuals and society,
- Capacity for empathy/compassion,
- · Ability to make critical, reflected decisions,
- · Ability to apply knowledge in practice,
- · Ability to cope with one's emotions,

- · Information management skills,
- · Capacity for generating new ideas,
- · Capacity to adapt to new situations,
- · Willingness and ability to be of service to others,
- Ability to recognise global perspectives.

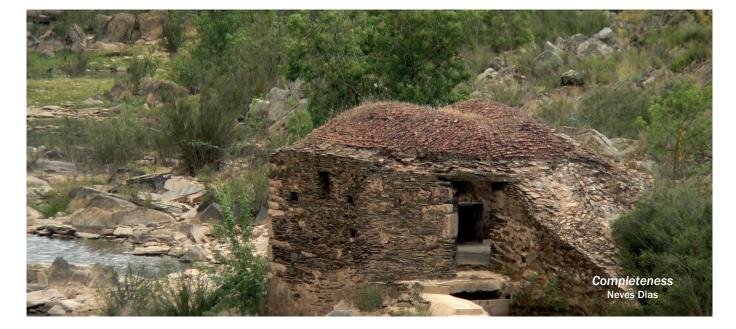
Learning outcomes

On successful completion of the module, students should be able to:

- Understand the role of consumption and consumerism in the world today;
- Describe the relationship between consumption and the environment;
- Discuss the importance of developing critical media literacy skills;
- Acquire, assess and use information on the consequences of consumption on the environment;
- Outline the responsibility of global citizens in protecting the environment through sustainable consumption practices.

From theory to action: back to basics

We are all consumers, but only a few of us have the opportunity to be teachers. This is the vantage point from which we are called on to intervene actively in the context of our work. It's fundamental to reflect on how to apply the knowledge previously acquired in topics Initial Approach; Communication; Tourism; Climate, Soil and Water Protection to teachers training courses. The goal is that these pages will become a tool for teachers by making them capable of dealing not only with some of the most commonly discussed concepts, but also more complex concepts. It is intended that participants of the modules will be able to reflect on the methodologies they use, beyond mere adoption so that they can adapt existing tools and possibly create new tools.



Introduction to the basic concepts

- Setting the context the policy framework, eg UNCSD, etc
- Sustainable Consumption
- Education for Sustainable Consumption
- Key themes developed in 'Here and Now!
 Education for Sustainable Consumption'
- From globalization to development cooperation
- The impact our consumption choices have on our natural resources and ecosystems
- Seeking reconciliation between the consumer and the citizen

Communication

- The technical revolution: from Gutenberg to the web 3.0
- · The media system: the old and the new media
- The media phenomenon and its implications
- The emergency for literacy: just one more trend or
 essential to citizenship
- Literacy and literacy types
- Tools to better understand and communicate: a breakthrough to the heart of citizenship

Tourism

- Tourism as a factor in economic and social development
- Tourism in the world: evolution and trends
- From nature tourism to eco-tourism (and other tourism types): a recent phenomenon
- Fundamental conditions for tourism development
- Challenges and good practices: examples throughout the world

Climate, Soil and Water Protection

Climate change

What is climate change?

Government responses to Climate Change

The impact of personal consumption on climate change How can you 'control' climate change?

• Soil

Basic definitions: from soil and process of soil formation to the different types of soil

The methods of land use and the ecological function of soils

Agriculture: sustainable agriculture and eco agriculture versus intensive farming

Soil degradation, the types of degradation and methods of protection: how to fix them

The protection of the landscape is the protection of the world natural heritage

Water usage

The role of water in human life and nature

Forms of water in nature and its circulation in environment

"Miraculous" properties of "ordinary" water

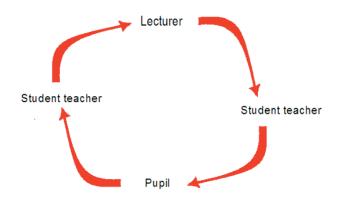
The (mis)uses of water: available freshwater, water consumption in different regions of the world, water pollution and waste water

3. Teaching tools and learning strategies

This section of the module is aimed at developing and encouraging participants to reflect on their own teaching practice and to consider different teaching and assessment methodologies than they currently use. The major aim is to help participants to learn, to reflect and to act in relation to sustainable consumption. Each teacher must find the teaching methodologies that are more likely to fit to the profile of their own students. There are many ways of presenting the materials covered in this module. The goal is to make the learning process interesting and relevant. Learners may refer to the ESC methodologies presented in the 'Here and Now! Education for Sustainable Consumption' document (26-29 p.).

It is also recommended to apply a simple questionnaire beforehand in order to find out what are the teaching tools most commonly used by those taking this module. This could be an opportunity to develop different approaches towards the teaching of sustainable consumption issues. Don't exclude the possibility of using methodologies inside and outside the classroom. Some of them also imply the use of specific places, equipment and time frames – consider each of them and weigh up the constraints and benefits of each one.

If you are teaching on an eLearning basis consider what must be done in order to achieve the best results. Even if you don't intend using ICT tools in the classroom, it's advisable to look for an interactive platform that enables all participants to interact and become active learners:



1. The lecturer as a leader explains the issue that has been selected, suggesting how the teacher can provide this issue to pupils. The methodology is discussed with students/teachers

2. Teachers discuss the issue in their class with pupils

3. Pupils prepare the task, for example, sketch, drawing, photo gallery, essay, presentation, etc.

4. Then, together with the leader, teachers discuss the results achieved in their classrooms.

Here are some possible general teaching/learning methods and tools:

Conventional lectures and taught lessons are a safe choice when the classes are large. But it's better to not only use PowerPoint and transparencies, but also film and video presentations, educational broadcasts and audio tapes, practical and studio work, field trips, debates and panel discussions, invited speakers, visit exhibits, demonstrations and experiments (inside and outside the laboratory).

Learning should be complemented by the study of open-learning materials, assignments, projects (especially action projects), photo language, critical essays and case studies. Emphasize group work, like role-playing, buzz groups, dramatizations, games and simulations, storytelling, crossword puzzles, photo albums/ portfolio, photo marathon (much more interesting and effective in groups), buzz sessions, class discussions, seminars, group tutorials, games and group projects, etc.

When the module takes place in a traditional classroom (and not through eLearning) the use of computer-software (eg free software like the wiki collaborative tools) and the Internet are strongly advised, for research purposes, for instance. In any case, it's preferable to use cooperative and collaborative learning, a demanding but very rewarding method among students.

Also consider the value of Critical Thinking and Active Learning methods in order to get the best results which will help students to develop the skills of active citizenship. For instance, regarding Active Learning there are several toolkits available in and off the web like the ones developed by PERL at http://sites.google.com/ site/perlactivemethodologies/home Along with the classroom (virtual or traditional) component of the module development the learners can be assessed. Taking the proposed structure (initial approach; communication; tourism; climate, soil and water protection) several approaches could be adopted, but here you can find some possible assessments, with a particular emphasis on the practical impact and the application of the students' knowledge:

Structure	Activity	Description	Evaluation
Initial approach	The perfect triangle	Taking the definition of sustainabi- lity, the students should be able to name the different concepts and their implications	Creation of a glossary or a class dictionary
Communication	Live 2 tell	Use the internet or the library to look for media articles related to the key terms in the media	Creation of a database using the selected articles
Tourism	2 know, 2 love, 2 protect	Use the internet or fieldwork to look for the local/regional richness – emphasis on the cultural and natural heritage	Creation of paths and guided tours
Climate, soil and water protection	Who educates whom? Can you educate / teach your parents?	Experiments in order to find out if it's possible to live one day without or with limited amount of water, by putting the students in the role of a national state with a small quantity of water available or to find out if contaminated soil can be productive	 Creation of a logbook or a short video to record the impressions of the change in habits in 1 day or week. There are several choices: just using 2 liters of water per day for drinking, cooking, washing clothes or personal hygiene; do not use tap in each home, being obliged to transport water An attempt to grow a plant in a pot with soil contaminated by decomposing batte- ries
From theory to action	From the cycle of cynicism to the cycle of hope	Looking for examples of positive and negative attitudes inside and outside the classroom to prepare a model action plan	Creation of a portfolio: the application of the model action plan, documents that attest the implementation of strategies and teaching techniques in the classroom. For example, photographs, pictures, texts, newspaper articles, videos,

Table 1

It is good practice to carry out an evaluation questionnaire at the end of the module.

Students should be able to demonstrate a knowledge and understanding of the topics as outlined in the various sections of the course. The final assessment of this module is the production of an individual research report that meets the learning outcomes. The topic can be selected by the student but must be able to show the ability of the student to:

 Report their knowledge and understanding of the underlying themes of the syllabus through written/visual and oral presentation;

- Use sustainable consumption terminology in their proper context;
- Critically evaluate media coverage of issues encountered during the module;
- arry out basic research using a variety of primary and secondary resources;
- Present information in a multi-media context.

5. Resources

Teachers and lecturers should ensure that they use resources appropriate to the context in which they are teaching the module and also the age and existing knowledge of the learners. The following links are resources developed by PERL or in association with PERL and UNEP for use in classrooms.

http://www.perlprojects.org/Project-sites/PERL/Resources/ Teaching-guidelines-methods-and-materials/Guidelines-and-recommendations

http://www.perlprojects.org/Project-sites/PERL/Resources/ Teaching-guidelines-methods-and-materials/Teaching-learning--methods-and-materials

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