

Development of a Database aimed to the didactics of Environmental Sciences

The environment is a laboratory native for learning that can be used as a gym for teaching many knowledge of many disciplines with direct experiments.

Besides this, there is a progressive separation of society from science that is put in evidence by the students attitude towards scientific subjects. In this context, the role of school is changed, considering that in the digital era Internet plays an important role as a tool to acquire knowledge.

For this reason into the environmental database carried out at the Istituto Veneto di Scienze, Lettere ed Arti of Venice a section for disseminating environmental knowledge has been organized (URL: www.istitutoveneto.it/venezia/divulgazione/divulgazione.htm).

The database realization aims to collect information regarding ecological, physical and social aspects of wetlands dynamic, with particular attention to Venice Lagoon; to organize in systematic way acquired knowledge; and finally to put these information at everyone's disposal. In the Dissemination section, information and tools are given to make easy the understanding of the database contents and to promote its use for didactical purpose. This section is divided into four chapters: *Descriptions*, with generalities about the types and the dynamics of environments; *Cards*, with specific information about objects, phenomena and categories; *Didactics*, offering *Training Experiences*, *Educational Course* and *Games and Simulations*; *Glossary*, with technical terms and idiomatic forms.

The aim is to stimulate users' curiosity and to satisfy the request of dissemination tools coming from those who work in training field.

We started this project driven by the consciousness of the importance of some aspects:

1. few environments present the complexity that characterizes the Lagoon of Venice, and this brings from one side to the production of a lot of studies and researches, and from the other side to a progressive separation of the citizens from the territory in which they live;
2. a lot of agencies and institutes carry out environmental education activities and projects, besides scientific researches and works, but these products often are not spread;
3. it is important to increase levels of public understanding of environmental systems in order to prevent fuzzy management of costal areas. Further, a successful management policy needs public consciousness of the importance of environmental safeguard.

The aim of the project is to make these resources available and to supply instruments useful to their use, entering in contact both with research institutions and with schools, making so that one's peculiarity could meet the other's requirements.

In this research it has been developed a project of environmental didactic and education that uses the lagoon environment as a tool for the dissemination of Environmental Sciences and as a mean to increase consciousness of the issues regarding Venice and its territory.

Developing the project, three aspects have been considered, that are fundamental in order to realization of a multimedial didactic and educational tool effectively usable and useful:

1. pedagogical characteristics of learning process,
2. potentiality of computer as a tool that teachers can use in order to support science teaching,
3. peculiarities of environmental sciences as study subject.

One of the project aims is to bring constructivism in science didactics as a method to overwhelm the difference between learning methodology and teaching ones.

For the planning and compilation of the didactical section, secondary school teachers have been involved, in order to get a first hand understanding of their requirements and also tap from their on-the-field experience when it came to deciding contents organization.

Finally, a survey on students attitude towards the Dissemination section has been carried out,