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The I-CLEEN Project (Inquiring on CLimate & ENergy). Enhancing an enquiry-based approach to Earth System Science in Italian classrooms

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In the last years, the world of Italian school underwent some slow but deep transformation processes. One of the negative consequences – documented by specific studies – was the further weakening of the use of inquiring educational practices (or kinds of lessons) by science teachers. This occurred in a scholastic framework already traditionally little inclined to those.
The I-CLEEN project (Inquiring on CLimate & Energy, www.icleen.museum) was born in 2008 with the intent to react to (and contrast) this process (trend) by initiative of a staff of science teachers from different regions, all with many years' experience, coordinated and supported by the local museum, the Natural Science Museum of Trento – Trento, Italy.
I-CLEEN is a free instrument of cooperation for Italian teachers, aimed to support and enhance the practice of the inquiring education in explaining themes in range of Climate and Energy and generally about Earth System Sciences. This project is a consequence of what has been experienced and done in Italy by its creators within the Educational and Outreach program of ANDRILL (ANtarctic geological DRILLing).
The core of the project is a database of resources potentially useful to a teacher preparing an inquiring lesson. These are selected by a staff following a specific selection policy. There are also lessons ready to be used in the classrooms, prepared according to a specific editorial standard. These are composed by a paper for the teacher and a paper for the student.
The database is technically an information gateway and it is constantly enriched thanks to a job of critical research in the teachers' practices or the worthiest international educational web projects. These are published in Italian or in bilingual format (Italian-English), always through explicit authorization by the authors and under a Creative Commons license when possible.
This contribution illustrates details about this service which is on-line since December 2009 and is characterized by a peculiar use of the informatics technologies. Indeed, both the parts composing the project (site, resources database, publishers, and users) and their respective activities (editing, publishing, cataloguing, administration of web contents and users) are fully dealt by one open source web platform called LifeRay, purposely implemented for this project.
Also the undertaking and the study of international projects and reference standards were accurate and broad, both in designing and developing the service (DESIRE project – Development of a European Service for Information on Research and Education) and creating the metadata (DCMI standard – Dublin Core Metadata Initiative – and LOM standard – Learning Object Metadata, IEEE 1484.12.1 2002).
The I-CLEEN Project was recently awarded with the GOLD AWARD in the section Mathematics, Science and Technology of the new E-Learning Award 2010 contest. The competition was organized by European Schoolnet, the institution belonging to the EC and the Education Ministries of the member states, which promotes the use of the ICT in schools.