

SAILS Selects the Labdisc as the Ideal Platform for Inquiry-based Science Teacher Training

The SAILS (Strategies for Assessing Inquiry Learning in Science) project is an international initiative aimed at developing new methods for assessing the skills of students engaged in inquiry based science activities. The project has received funding from the European Union's Seventh Framework Program for research technological development and demonstration. Together with Intel, the project consortium consists of leading science education and technology enhanced learning universities from several European countries. The starting point of the project is with teacher training, instructing teachers in how to best apply inquiry-based science education and how to assess their students' skills.

The Challenge

In order to achieve these goals, the University of Piraeus, a SAILS partner, set out to identify a product which could move beyond typical cognitive-based activities or tests, while allowing teachers to develop their pedagogic knowledge inquiry-based learning skills.



“We wanted to train teachers with an engaging product for inquiry-based educational scenarios that would also improve critical thinking and problem solving skills.”

Symeon Retalis, Professor at the Department of Digital Systems, University of Piraeus

Professor Symeon Retalis heads a team that introduced a SAILS teacher training workshop into Greek schools under the University of Piraeus' umbrella.



“We selected the Labdisc because we believe it brings added value to our inquiry-based learning sessions.”

With the help of experienced science teachers Professor Retalis and his team have created several Labdisc scenarios, designed for junior high education. They introduce scientific theory, and practical application which is fully tested in the classroom. The scientific measures are collected

and analyzed and then published to the SAILS consortium in English and Greek for use in teacher training sessions by the other 12 partnering countries. All Labdisc scenarios are accompanied by modern assessment methods: Analytic rubrics, student quizzes and a full portfolio of experiments.

After a full day's training, the Labdisc remains at the school for use in the classroom for a few weeks. Teachers and students are asked to create new Labdisc scenarios which are uploaded for the wider SAILS community use and feedback. Following this independent application of the Labdisc in the classroom teachers receive a training certificate.

“So far more than 500 teachers have been trained with the Labdisc across several junior high schools in Greece. We find the Labdisc an ideal inquiry-based teaching tool because of the following qualities:

- **Convenience:** All schools find the Labdisc easy-to-run, no matter what level of equipment they have in school, and with or without an existing science lab.
- **Shared Knowledge-base:** By contributing their own Labdisc scenarios teachers and students are helping to build a science knowledge-base in the SAILS community.
- **Curriculum support:** The Labdisc and built-in sensors can be used in almost every type of experimentation required by the Ministry of Education's syllabus.
- **Broad technology integration:** The Labdisc and visualization analysis software works with every tablet and computer platform, as well as interactive boards.
- **Intuitive:** The product is very simple to understand so we don't waste critical time in our training sessions training teachers on how to use the product. Instead we focus training on how to convey interactive learning.
- **Teachers LOVE IT:** They can use their imagination to do a limitless array of experiments without spending too much time in a physical lab that might not even exist.
- **Students LOVE IT:** Students are completely engaged. We visit schools where students have never had the chance to perform real experiments and now they can, in safe conditions.



So far the feedback has been clear. Teachers prefer the Labdisc because they see it as usable, affordable and also an effective medium for science education instruction.“

Click here to learn more about the SAILS project: <http://www.sails-project.eu>

Click here to read more Globisens case studies: <http://www.globisens.net/resources/case-studies>