

## Switzerland (Ticino)

### **Obiettivo: comprensione (Target: understanding)**

*This project focuses at Swiss vocational schools, with the objective to improve students' reasoning abilities by stimulating teachers to use "Understanding by design" methodology to plan their lessons by taking into account the desired outcomes/understandings. Each unit starts with the presentation of the information to the students, followed by an exploration of the topic and in the end an exhibition of the products. So-called School Improvement Advisors are introduced as new figures in the school domain, acting as consultant, critical friend, and academic researcher who help and give advice to the school and the teachers in a non-invasive but scientifically sound way. The aim is to extend the project to other schools in the future, creating local groups of teachers working on the basis of the same methodology and sharing their experiences through cooperative networks. This initiative starts with motivated teachers and progressively involves other colleagues in the use and mastering of the methodology.*

**Main Focus of Innovation:** TEACHERS, CONTENT, ORGANISATION

#### **General Information**

**Name of the ILE:** Obiettivo: comprensione (Target: understanding)

**Location/Address:** Ufficio studi e ricerche - Stabile Torretta- 6500 Bellinzona (Switzerland)

**Website:** <http://www3.ti.ch/DECS/sw/temi/scuoladecs/>

**Rationale**

*Why do you suggest that it should be included in the project? How does it respond to 21<sup>st</sup> century learning challenges?*

The aim of our action is to lead an extended number of students of some Swiss vocational schools to develop forms of authentic understanding, interacting with their teachers in a framework inspired to the methodology "Understanding by design (UBD)" by Wiggins and McTighe (Wiggins & McTighe, 1998; McTighe & Wiggins, 1999; Wiggins & McTighe, 2007). This whole process takes place in a collaborative environment and is based on a systemic view, where a School Improvement Advisor-researcher (SIA) helps and give advice to the school and to its teachers in a non-invasive, but scientifically sound way (Ostinelli, 2007; 2008).

Our next operational objective is to further extend the experience, originally limited to only one school (namely, the Scuola professionale artigianale e industriale - SPAI of Mendrisio), to other schools of the same domain (the first group includes the Scuola superiore medico-tecnica - SSMT of Lugano, the Scuola professionale per sportivi d'élite - SPSE of Tenero, the Scuola cantonale degli operatori sociali (SCOS) of Mendrisio and a teacher from the Formazione Empirica a service for students with special needs.

The aim is to create local groups of teachers working on the basis of the same methodology and sharing between themselves their experiences through the participation to a cooperative network.

The philosophy of the project is to start small and local, with some more motivated teachers, produce and share some results in a collaborative way, and progressively involve others colleagues in the use and mastering of the methodology. This kind of approach can lead to the overcoming of the well-known problems linked to the top-down, indiscriminate way to operationalize the results of educational research (Ostinelli, 2008). It serves, as you request, students between 15 and 19 years, is innovative at both levels of teaching and school improvement, it provides optimal learning for students with the casting of learning over the 6 dimension of UBD, including cognitive, meta-cognitive and socio-emotional elements. Since the learning, both at the student, teacher and SIA level occurs within frameworks, there is wide space for the expression and negotiation of needs by the actors. Since we are trying to replicate the experience in other public (conventional) schools, there is an evident potential of reply in mainstream education without high fees. Our ILE is sustained by the Divisione della formazione professionale (DFP) of the Dipartimento dell'educazione, della cultura e dello sport (DECS) of the state of Ticino (Switzerland), and is conducted by the Ufficio studi e ricerche (USR). It should also be stressed that the ILE is the result of an ongoing process of self-evaluation in a group of schools (Dispositivo di autovalutazione e autoanalisi del PQ, DAAP), including the SPAI of Mendrisio and the SPSE of Tenero.

**Evidence**

*Is there any evidence or indications showing that this initiative achieves the outcomes that it is aiming at?*

The first results from our experience, on the basis of the data stemming from a questionnaire for the assessment of teaching by the students are positive and were presented to the 2008 Eera-Ecer meeting in Göteborg (Ostinelli, 2008). In order to further corroborate these results, we are planning to conduct some interviews and gather data obtained from the units of authentic evaluation carried out in the classrooms. All these information will be the basis of a paper proposed to the next Eera-Ecer meeting in Vienna ("The circle of understanding") in the context of a symposium on teacher professionalization, to be held in collaboration with other colleagues from England and Belgium. As a matter of fact, it needs to be stressed that the assessment of understanding can't be done with ordinary test practices (that are however used for the evaluation of knowledge and skills), requiring rather forms of shared formative evaluation on the basis of authentic performances.

**Learning Aims / Intended Learning Outcomes of the ILE**

*What are the core learning aims and which knowledge, skills or attitudes are to be acquired? (These may include outcomes related to learners' social, interpersonal, or meta-cognitive development)*

In a fast-changing environment, where the access to information and the communication skills are of primary importance, the ability to reason correctly and to interact with others are essential. Traditionally, the school lets the development of similar features to the pupil's aptitudes, and this excludes "de facto" a big percentage of students, that can at the most reproduce in a very superficial way some knowledge. We think that, with the approach we are experimenting, a more consistent number of pupils can develop in a satisfactory way at least some reasoning ability. Moreover, since we practice and promote forms of cooperative and collaborative learning, and take in account aspects like empathy, aspects like socialization and interpersonal relation are for us of great importance.

**Learners**

*Which group(s) of learners is it aiming at? Who is eligible to take part? How many learners are there? What are their ages?*

As said, the learners are students of Swiss vocational schools, with an age ranging from 15 to 19 years, even if at the SCOS they can be more aged than 19. All students can take part to the experience. The SPAI of Mendrisio is a school with 701 students, while at the SPSE they are 106, at the SSMT 87 and at the SCOS 346. The students of the service of Formazione Empirica are 122.

**Facilitators**

*Who are the teachers/facilitators? Who are the leaders? What are their professional backgrounds? What are their roles?*

The teachers participating to the project are working in the Swiss vocational school domain, mainly teaching cultural subjects. We are planning to involve in our project, starting with the next school year, some teachers of technical and vocational subjects. The building of our ILE is sustained and followed by a School Improvement Advisor/researcher (SIA), a new kind of figure in the school domain, which brings together the roles of consultant, critical friend and academic researcher, assuring on a part-time basis a regular presence in the individual schools with whom he cooperates.

**Organization of the ILE**

*How is learning organised? How do learners and facilitators interact? What kind of pedagogy do they follow? What curriculum is used?*

The learning is organized on the basis of a "backward planning", where the foreseen understandings are stated in the first instance, followed by the determination of the acceptable evidence (evaluation) and, at the end, by the real planning of the learning experiences. Actually, each unit starts with a presentation to the students (where); then, their motivation is aroused through interesting and stimulating questions to be debated (hook); thereafter the students will be equipped and scaffold in order to conduct a rigorous enquiry on the theme (explore & equip); these stages are followed by a deep reflection (rethink & revise) and the process will end with a "product" (exhibit and evaluate). Cooperative and collaborative forms of learning are widely used, and, where possible, the evaluation is formative, with the use of rubrics. Of particular importance is the authentic performance, a kind of concrete situation that ends the cycle of lessons. More can be found on the before quoted works of Wiggins and McTighe. In the vocational Swiss schools, every school defines in an autonomous way its curriculum inside a framework provided by the federal office (UFFT).

**Learning Context**

*In which context does learning take place? What does the physical learning environment look like? Are community resources used to facilitate learning and how?*

The learning takes place in the classroom, but some experiences can occur outside of it, inside the school (e.g. poster exhibition) or even outside the school (e.g. visit to an aqueduct).

**History of ILE**

*Who initiated it? For what reasons was it started and with what purpose? Have these changed since?*

The ILE started as a topic stemming from a school improvement process done through a self-evaluation project (DAAP). The first idea, to review the evaluation forms used to assess the pupils' work, led to a more extended issue, including the question of the real understanding of the curriculum contents by the students and its assessment. The SIA scrutinized various approaches and found that UBD was quite interesting and of practical use.

So he proposed to the school to develop something inside the framework given by this methodology (it has to be remembered that USB is underpinned by a constructivist approach).

**Funding of the ILE**

*How is it funded?*

The Cantone Ticino is at the present funding this ILE, in the context of the DAAP project.

**Learning Outcomes**

*What are the learning outcomes achieved by the ILE, including academic, social, interpersonal and meta-cognitive outcomes? How is learning assessed?*

The learning outcomes are mainly at the level of the development of understandings by the students, which are pointed out through the expression of their competencies during the units and in particular during the authentic performance. More understandings are developed, at another level, by the teacher and the SIA. Since the methodology is based on six dimensions (explain, interpret, apply, have perspective, empathize and have self-knowledge), the learning is multi-dimensional and does include academic, social, interpersonal and meta-cognitive outcomes. Assessment depends on the object of the assessment: whole understandings requires at least one authentic performance; individual understandings can be stated i.e. through the evidence of convincing explanations; formal knowledge can be assessed more traditionally with i.e. a checklist; skills can be evaluated through the correct realization of a task.

**Documentation describing or evaluating the ILE**

*Is there documentation on this learning environment? Is there a website? Films? Research reports or evaluations? Other forms of documentation? (please supply references or links)*

The ILE is described in two papers presented, respectively, to the Colloque Admee 2008 in Geneva, and to the Eera-Ecer 2008 meeting, in Göteborg. Both papers can be found on the Web at the following addresses:

<https://plone.unige.ch/sites/admee08/communications-individuelles/m-a1/m-a1-4>

[http://www.eera-ecer.eu/publication-database/conference/2008/contribution/the\\_school\\_improvement\\_advisorresearcher\\_sia/](http://www.eera-ecer.eu/publication-database/conference/2008/contribution/the_school_improvement_advisorresearcher_sia/)

The latter is currently under review for a publication on an international educational review.

**Other information you consider to be relevant to describe the ILE**

[http://www.eera-ecer.eu/publication-database/conference/2008/contribution/the\\_school\\_improvement\\_advisorresearcher\\_sia/](http://www.eera-ecer.eu/publication-database/conference/2008/contribution/the_school_improvement_advisorresearcher_sia/)

Wiggins, G., McTighe, J. (1998) Understanding by design. Study guide (Alexandria: ASCD)

McTighe, J., Wiggins, G. (1999) The Understanding by design handbook (Alexandria: ASCD)

Wiggins, G., McTighe, J. (2007) Schooling by design. Mission, action and achievement (Alexandria: ASCD)