



# SUNRISE

**RISING TEACHER & TRAINER  
MOTIVATION AND SKILLS FOR A  
KNOWLEDGE BASED SOCIETY:**

**AUTHENTIC LEARNING,  
EARLIER GAINED COMPETENCES  
FOR INDIVIDUALISED VET,  
ON-THE-JOB TRAINERS' TRAINING**

SUNRISE is a Transfer of Innovations project supported by the Lifelong Learning Program of the European DG of Education and Culture Leonardo da Vinci, developed between November 2007 and October 2009

# Welcome

After twenty years developing European projects in Vocational Education and Training (VET) we are still enthusiastic in learning from each other. Because we are aware of the importance of education: Education is to society what the Sun is to life.

Education must be continuously renewed and adapted to the new conditions and challenges. To solve local needs we can find innovative solutions in use far from our places. Instead of inventing the wheel again, we can count on our European colleagues to learn and adapt -to make a valorisation- of those innovations. Sometimes it is only a matter of “picking low fruits”, just borrow and use ready products; in other cases a harder work is needed to adapt innovations to other environments. In every case a collaborative work among European partners improves efficiency and obliges everyone to analyze and be self-critical, so that both partners: providers and receivers get the benefit from the feedback.

Welcome to our project, a new way of working, a new way of enjoying,

*...a new Sunrise*

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# The project

Through the Sunrise project, three innovations in use in some European institutes are adapted to the conditions of others, on a continuous training for teachers and trainers approach. Both suppliers and receivers of innovations benefit from a feedback process. Five pilot projects are carried out for the implementation of three innovations.

## **Authentic Learning:**

In order to make student learning relevant to real life experiences, learning environments must be authentic. **Authentic learning** is a pedagogical approach that allows students to explore, discuss, and meaningfully *construct* concepts and relationships in contexts that involve *real-world problems* and projects that are relevant to the learner. The term authentic is defined as genuine, true, and real. If learning is authentic, then students should be engaged in genuine learning problems that foster the opportunity for them to make direct connections between the new material that is being learned and their prior knowledge. The true power of authentic learning is the ability to actively involve students and touch their intrinsic *motivation*.

## **Accreditation of Earlier Gained Competences:**

*Do you have to learn again the same things you already know?* One of the priorities of the Copenhagen Declaration (2002) is the *validation of non-formal and informal learning*. Competent and competitive professionals are a main goal of every VET policy. Their competences include a joint of skills and attitudes to be acquired through a Lifelong Learning process, that in many cases do not include formal education. This background is accounted for in some education systems, resulting in

- a) *motivation* for youngsters and adults to joint formal systems;
- b) official recognitions for their competences; and
- c) more realistic and personalised educational programmes.

## **On-the-job Trainers' Training:**

Methodologies separating the working and the learning environments are seriously questioned for long time. Modern tendencies are focused to join them and to reinforce links between education and business world. In different ways and intensities most of the European educational systems include student in-company placements, where tutors (on-the-job trainers) provide support and make the follow-up of the learner's progress. In many countries these tutors must previously follow certain training in education and social skills, acquiring competences to optimize learners' time in the company.

# The results

During two years several pilot projects were carried out to transfer these three innovations. The results and conclusions of these “experimental trials” are attached as digital contents. In global terms, it can be highlighted that:

- The adaptations of an innovation to different countries (thus systems) have produced different results, as it was expected, because the people in the team were different, the needs of the receiving institutions were different, the teams' ways of working were different, or in short: diverse environments produce diverse results. And we think this is an added value of the project.
- Motivation of people involved in the learning processes (mainly students and teachers, but also schools' staff) was increased through their participation in the project.
- Most of the pilot projects conclude with a high interest in the sustainability of the innovation implementation in terms of future. ■



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# **AUTHENTIC LEARNING**

**IN ORDER TO MAKE STUDENT  
LEARNING RELEVANT TO REAL  
LIFE EXPERIENCES, LEARNING  
ENVIRONMENTS MUST BE AUTHENTIC.**

# Authentic learning in education, a learning approach

By Madelon de Beus<sup>1</sup>

## I. Background

### The need for changes in education

In the past ten years the following points often popped up in conversations and regularly occurred on the agendas of meetings about landbased education:

- The number of students in landbased education is decreasing. Young people don't think landbased education is "cool" or "sexy". Things like career prospects, earnings and social status might play a role in this.
- More and more students leave education before they have a diploma or qualification, particularly before they even have a European level II diploma. This problem is recognised in all countries, although the numbers differ.
- The connection with the labour market could be better. Students lack the skills to apply the theoretical knowledge acquired at school in their jobs and they do not learn how to cope with conflicts. The labour market complains about the incoming young workers.

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*Students need to be able to handle problems that they will be confronted with in their future working life. This is an argument that is supported by complaints that companies often express about students they hire as new employees. Companies often argue that students know a lot of facts, but are not competent (Bastiaens & Martens, 2000)<sup>2</sup>. In other words, they are not trained to solve real working problems. On the other hand, at schools and universities students often complain that they cannot see the relevance of a certain subject. They often experience learning and assessment tasks as trivial and as focusing almost entirely on factual knowledge (Birenbaum & Dochy, 1996)<sup>3</sup>. It seems as if the kind of learning that occurs in school does not fit with what companies call competent employees<sup>4</sup>.*

- The quickly changing European labour market asks for employable people; people who have no problem with changing jobs and have the competence to make the switch rather quickly. Also other changes in the landbased sector, such as the position and role of farmers and their contribution to environmental issues, European laws, changing borders, new possibilities and world food problems should have consequences for landbased education.

These points, except the last one, are confirmed by the EU<sup>5</sup> as can be concluded from the Lisbon, Copenhagen and Maastricht meetings about education.

In addition to this also other developments affect education:

- Society has changed from an industrial to an information society. This means that young people can get information from all over the world, without limitation, of a varied nature and in large quantities. Parents, school, church and local newspaper are not the only sources of information anymore. The attention of students is divided and school is not the only and not the most attractive element in their lives.
- New forms of communication and the internet give young people the opportunity to communicate with others from all over the whole world for 24 hours a day. They learn from and with others, they exchange information, they use English. This has their full attention.
- Young people are very emancipated. They have clear opinions of their own and are not afraid to express these in and outside the classroom or school. The teacher is not the only one who knows and leads. How should teachers deal with this?
- People no longer hold the same job for life, like they used to. Workers are expected to be flexible and to continue to learn. Nowadays very often having a diploma does not mean that you have learned enough. How can young people be prepared for a future in which they have to be flexible and employable?

## Looking back

Looking back in history, we learn that schools did not always exist. A young man would just start to work as an apprentice and if he was lucky and a bit talented, he could learn a lot from his master. This of course was not attainable for all young people. Over the centuries systems of learning in this way were institutionalized and more and more young people got the opportunity to learn and develop. In this way of learning there was a one-to-one (face to face) relationship between the master (the teacher) and the apprentice. Sometimes there were more apprentices in one workshop.

With industrialization the need to educate all boys, later also girls, became necessary. Nowadays in western society we consider it normal that all young people learn at school and even get one or more degrees.

The school was born. And we all know what schools are like: far from the real world we put students in classrooms where the teacher lectures and the students listen and write.

<sup>2</sup> Bastiaens & Martens, 2000, *Conditions form web-based learning with real events*.

<sup>3</sup> Birenbaum & Dochy, 1996, *Alternatives in assessment of achievements, learning processes and prior knowledge*.

<sup>4</sup> Quotation by Gulikers J., Bastiaens, Th., & Martens R., 2005, *The surplus of an authentic learning environment*.

<sup>5</sup> Cedefop 2004, *Vocational education and training, key to the future*.

Afterwards the students go home and try to learn things by heart and to understand. In the end the student is expected to be able to reproduce information that has been given by the teacher and the books, or solve theoretical problems. In the best case there are some oral examinations in which understanding is tested.

During the 20<sup>th</sup> century this form of education, knowledge based and teacher directed, was satisfactory to everyone. The school provided the only source of information in a more or less straightforward society. In this way of learning there was one teacher for a whole group of students (usually 25-30). In some countries students in (higher) vocational education had some practical training in companies during their education.

Although there are lots of valuable aspects to “traditional” education, apparently it no longer suits our young people nor our society. Students today do not have the same reasons for learning as students did 30 years ago.

### **This leads to the following questions**

How can we innovate our landbased vocational education to make it more attractive<sup>6</sup> to young people, better connected to the labour market, and how can we provide students with skills and knowledge for life? Here is a list of relevant questions:

- How can we meet the demand of the labour market?
- How can we meet the demand of the government to educate more skilled workers?
- How can we meet the demand of young people and provide attractive and modern education?
- Which knowledge and experience can be of help?
- Are we able to design a conceptual frame that combines all these goals?
- Who are the partners in this and what are the implications for them?
- Which instruments do we have?
- How can this new approach be implemented in the system?
- How can we deal with the differences between countries?

In the next part of this paper I will explain how the conceptual framework of authentic learning can be positioned.

## **II. The concept, an approach to learning from another point of view**

Translated to the level of what the learner should learn and be able to put into practice when he starts working, the qualifications should not be described in terms of knowledge only, but in a way in which knowledge, skills, attitude and transfer are integrated. As you all might know, this is what we call competencies. Examples of such competencies are the ability to solve problems, to communicate with peers or clients, to cope effectively with changes, to define your own learning questions and to take responsibility for personal learning.

*During the last decade, the emphasis in education changed from focusing on the memorization of knowledge, to the development of an integrative whole of knowledge, skills and attitudes. In other words, students need to develop competencies (Stoof, Martens, van Merriënboer, & Bastiaens, 2002)<sup>7</sup>.*

When you ask yourself the question in which situation one has to be able to put these competencies into practice, then there is only one answer possible: in real life, in an authentic

<sup>6</sup> The importance of attractive VET has been signalled by CEDEFOP in their publication “*Vocational education and training, key to the future*”, 2004.

<sup>7</sup> Stoof, A., Martens, R.L., Van Merriënboer, J.J.G., & Bastiaens, Th.J., (2002), *The boundary approach of competence, a constructivist aid for understanding and using the concept of competence*.

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situation, in a context that is similar to working life situations.

The development of broad occupational competencies through learning in a work environment has been identified in the “Maastricht study” as a key dimension of VET innovation. Although it has not yet been proven that this is the solution, it is a challenge to use the idea as a starting point to develop a balanced new model for VET training in landbased education.

### Questions from real life

Authentic learning is an approach to learning that is grounded in research on learning and cognition. One widely held learning theory, constructivism, postulates that students learn best by engaging in authentic learning tasks, by asking questions, and by drawing on past experiences. In short, for students to actually learn something, learning must take place in a way and in a place that is relevant to their “real” lives, both in and outside of the classroom, and deal with real complexity, real questions, real interests.

The theory of constructivism is connected with learning together with others, because learning is a social-cultural activity, for example through the use of language. This leads to the theory of social constructivism.

By definition, the term “authentic learning” means learning that uses real-world problems and projects and that allows students to explore and discuss these in ways that are relevant to them.

This approach differs greatly from the traditional “lecture” class, based on the behaviouristic point of view, in which professors give students facts and other content that students then must memorize and repeat on tests.

*Newmann and Wehlage (1993) argue that students who are confronted with real life learning experiences and with environments that simulate real world problems, with their complexity and limitations, are stimulated to apply higher order thinking processes and active learning strategies. Thus, authentic learning environments stimulate students to develop not only knowledge but also skills and attitudes, which are all required for effective performance in new problem situations (Birenbaum & Dochy, 1996; Herrington & Herrington, 1998<sup>8</sup>).*

The authentic context is the crux of the new approach. Herrington & Oliver<sup>9</sup>, 2000, explain this as follows “An authentic learning environment provides a context that reflects the way knowledge and skills will be used in real life. This includes a physical or virtual environment that resembles the real world with real-world complexity and limitations, and provides options and possibilities that are also present in real life. To show students relevance and stimulate them to develop competencies that are relevant for their future professional or daily lives, electronic applications are often used for implementing authentic learning environments.”

As we all know technology provides a whole range of options for creating a realistic simulation of the real world. The most specific application is, as you might know, second life, a new hype in the virtual world that might give unexpected opportunities. We focus especially on the physical environment, and mention the virtual environment as one of the sources and instruments to support the learning.

### Authentic learning experiences

The types and methods of authentic learning experiences vary widely. But no matter how different the approach, authentic learning experiences embrace the same principles:

- **It uses an authentic task.** It may seem self-evident, but an authentic learning experience must incorporate authentic tasks. These are tasks, which, as much as possible, have a “real world” quality to them and are ones that students find relevant to their lives. The most specific authentic experience one can get by

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<sup>8</sup> Newmann, F.M. & Wehlage, G.G., 1993. *Five standards for authentic instruction*.

<sup>9</sup> Herrington J., & Olliver, R., 2000. *An instructional design framework for authentic learning environments*.

operating in an authentic professional situation.

- **The learning environment** (in or out the classroom) - **is learner-centred**. In the learner-centred classroom, faculty pay close attention to what the students bring with them into class, their respective knowledge, skills, attitudes, and beliefs. Students are encouraged to ask questions, engage in social discourse, and find their own answers. In this setting, the role of the professor moves more to that of a “co-constructor” of knowledge than a provider of content.
- **Students are active learners**. Just as the role of the professor changes, student roles must change so they do more than passively sit and listen to their professor talking. They must be active participants in the learning process, by writing, discussing, analyzing and evaluating information, and co-constructing knowledge giving meaning to their (professional and personal) life.
- In short, students must take more **responsibility for their own learning**, and demonstrate it to their professors in ways other than on a test.

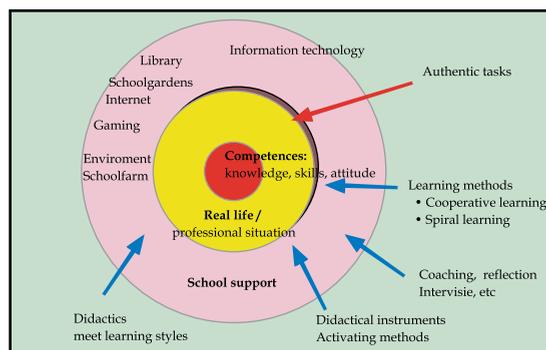
The definition above gives the possibility to start organising authentic learning in the school. Involving industry from the beginning, the place to work on a professional task in an authentic environment is a must to make sure the learning is authentic!

As Wout van den Bor<sup>10</sup> states: “the essence of change of how young people learn and the way learning should be supported can be summarized as follows:

- From teaching to learning: the learner becomes an active learner.
- From knowledge transfer to facilitating: the teacher becomes a coach.
- From group instruction to tailor made learning: catering for individual/ personal needs.
- From a school based temporary learning route to lifelong learning: ongoing learning at the workplace and in life.
- From subject related learning to competence based learning: learning is based on real(istic) working conditions.

“Education becomes the art of temptation and seduction”.

With this approach it is expected that authentic learning could provide an answer to the complaints of the labour market. “Learning authentically means that students should be stimulated to develop relevant competencies by being confronted with learning experiences that simulate their real life or future professional practice”(Herrington & Oliver, 2000; Honebein, Duffy, & Fishman, 1993)<sup>11</sup>.



<sup>10</sup> Bor, van den, 2005. *From learning to living*. (ALIE project).

<sup>11</sup> Quotation by Gullikers, from: Herrington & Oliver, 2000. *An instructional design framework for authentic learning*; Honebein, Duffy, & Fishman, 1993. *Constructivism and the design of learning environment*.

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In the concept of authentic learning we go a step further: not only simulated situations should be part of the learning environment, also real professional situations. Industry should and could play a role in parts of the learning during the initial vocational education and training.

### **III. Who are the partners in authentic learning and what is their role?**

#### **Students**

By learning in the authentic way and competence based the learners will become more “self responsible”, more responsible for their own learning process. Curiosity will lead the learners to new knowledge, new attitudes, new skills: they develop their competencies. But this needs help. The students have to learn how to define their learning questions. They have to know and understand what competence based learning means and that going to a work environment to learn is not the same as going there to work and earn money. It is recommended that every student has a student counsellor. This is not the expert teacher, but the one who helps the student to reflect on his own learning process and can give advice if the student has questions about his learning and personal development.

#### **Teachers**

Authentic learning does not mean that the teacher no longer spends time with his students in class anymore. Of course he does, but his role is different. And when the teacher has other meetings with the student, everything is aimed at supporting the learning process of the student. Teachers have the habit to tell something or to ask questions and immediately give the answers themselves. We do this although we all know that people move when they are curious, eager, inquisitive. Curiosity makes people ask questions and people learn by questioning.

This indicates that the teacher in the year 2010 is different from the one in 1995. He has to change, and needs to have a big “toolkit” that offers all possible didactical tools to challenge the learner to ask questions. It is important that the teacher of the future has learner-activating didactics and coaching skills, knows different working methods, is able to reflect, recognizes different learning styles and knows how to deal with them and is a knowledge co-structor. The teacher should also be able to integrate different educational instruction and learning models like cooperative learning, blended learning, distributed learning, virtual action learning, problem oriented learning.

The new teacher does not give the answers in advance, but only after the student has asked the question. Learning will become learner oriented instead of teacher oriented. The new teacher thinks “out of the box”; the new teacher is able to challenge individuals and groups of students in a way that makes them become eager, as the first phase of learning, eager about real life in the professional context. The new teacher knows authentic situations from his own experience, the new teacher has an intermediate function between practice and theory.

All this is easier said than done. Basically the teacher should find a way to get young people to really pay attention, rather than just be present. It is not necessary for the teacher to enter their world, but he does need to know the contours and peculiarities of their world, to understand the effects of modern virtual networks and the not linear learning processes in their minds and behaviour.

#### **The school**

The school has the role to develop, together with industry<sup>12</sup>, the curriculum for the vocational

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<sup>12</sup> This differs in various countries. In the Netherland it has been ruled by law that the curriculum of (higher) vocational education has to be developed in cooperation between education and industry. In case the curriculum is made on the national level, in fact the same question should be asked to industry.

education. On the school level this means a change in the curriculum, especially in the way the targets are described: from knowledge targets to competence based goals.

These competencies, or groups of competencies, should refer directly to professional tasks, real life tasks. When the curriculum is ready, a programme should be made in which the learner (the young person, the student) can use a learning environment to work on his competencies. As these competencies are written in student language, the student knows exactly what to work on. The school provides a structure of support, in which a student is challenged to learn. This is support in the learning process of the student.

The school could make a scheme stating when the student should be at the work environment, where they have been placed, and when the student should be at school for supportive learning. The school offers an authentic learning environment. And the school could be the intermediary between practical and scientific knowledge by facilitating the interaction between those two while working on authentic tasks.

And beyond a change of the curriculum it means a change in the school as activity system, it changes the school as system too.

An important aspect of authentic learning is the personal learning and development of each young person. As everyone develops in a different way, and has his or her own learning questions, the school should provide in tailor made programs. Young people can not be seen as a homogeneous group. Besides that, all students have different learning styles which implicates that the use of one didactical method in class won't work anymore.

This brings us to the conclusion that it is inevitable to maintain the "teacher-class-in-classroom" model for the school organisation.

### **The industrial world**

The real-life work environment is the most adequate place to learn about the needed competencies. This is not just exercising some skills at the work place, but meant as a place to get curious and become inquisitive. At the company, or whatever real life work environment the student has been placed, someone has to have the skills to support the student and answer questions. The student takes the more theoretical questions back to school, where teacher and student(s) can work this out further. The role of the industrial world is important: as provider of real professional situations to learn in, and as guide for the student. It has to be said here that especially this connection to the industrial world might lead to a better, more fluent transfer from the student to the labour market.

The industrial world has its own responsibility in the education of young people. Not all companies are convinced about this; in their opinion the school is responsible. An important question for the future is how schools and companies can work together in facilitating the learning of young people. In fact the industrial world should think of itself as co-educator.

## **IV. The ingredients for the learning environment**

### **The design of an authentic learning environment in professional situations<sup>13</sup>**

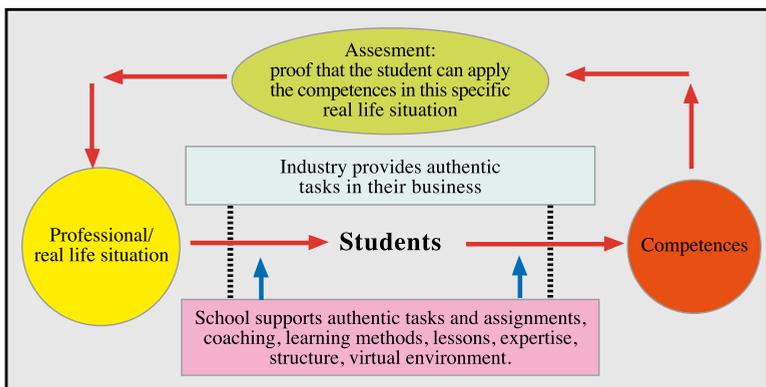
The change to this contextual learning by taking the real professional life, the work environment as the starting point of the learning process, is not just a matter of organising placements in the curriculum and asking the industrial world to provide these. It means the development of a new didactical approach. Introducing learning in a real work environment is just part of the innovation.

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<sup>13</sup> A professional situation is a complex situation in which different tasks have to be fulfilled and different competences have to be applied. Depending on the level of education the context and expected competences and the development from task to situation can be defined.

Introducing this learning, based on the authentic situation, means that the whole learning environment of the student should be organised around these real life situations. It is not just “learning on the job”, which is more an authentic task, “a learning task that resembles a task performed in a non-educational setting and that requires students to apply a broad range of knowledge and skills (Roth, 1995)<sup>14</sup>.

As a school for example you have to re-design the curriculum: providing in these authentic learning experiences involves the development of authentic tasks as well as authentic learning environments. We expect this to result in cognitive as well as motivational benefits for students.



The authentic learning environment has various sources:

- The student, as his own source with his own knowledge, ideas and questions;
- Authentic work environment, the possibility to learn competencies in a real professional situation and get authentic experiences;
- Simulated real working life situations and tasks to “do” at school;
- The teacher-expert, the one who makes the students curious, and asks questions. The one who is able to answer questions at the moment they are receptive to his knowledge;
- Internet sources, games, simulations, libraries;
- Digital instruments like digital portfolio, web log;
- Digital communication and learning communities: messenger service (msn), knowledge forum, electronic meeting room, blackboard, lotus learning space, chat boxes.

But that is not enough. It is crucial that there is a curriculum that describes the authentic situations and the competencies one needs to be able to fulfil the specific tasks for this authentic situation, the way this will be judged, and of course the way the student will be supported by the industrial world and very important, by the teacher.

## V. Implementation strategy

### Steps for the implementation

You might be interested in the idea of authentic learning. But where should you begin?

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<sup>14</sup> Roth, W.M., 1995. *Authentic school science; Knowing and learning in open-inquiry science laboratories.*

It is possible to begin with small steps, but if you want to do it radically, and change your curriculum according to this approach on the school level, you have to facilitate an innovation of the system. This has a tremendous impact on the whole organisation of your school, on the relationship with real life, on all people involved.

A change in that way is a revolution. Of course there is also the way of evolution, by using the policy of small steps. Although at a certain moment you have to make the complete switch to authentic and competence based learning at the school.

### **Step by step**

What can you do as a teacher?

In our project we have developed a step-by-step implementation strategy that can easily start in the classroom.

Step 1: As king in your own classroom you can start experimenting in two ways:

- Use different didactical methods that facilitate the learning process: activate the student to be curious, to ask questions. Don't give the answers. Use methods for activating didactics, collaborative learning, and knowledge creation didactics. Activate the student to set up a log and a portfolio. Reflect with them on their own learning process.
- Transfer your knowledge oriented lessons into an authentic task oriented approach, e.g. give the task to organise a lunch for ten international guests. They need all kinds of skills for that. Guide them.
- Try to find a colleague who wants to join in and develop a task together.

Step 2: Try to broaden the scope of authentic learning:

- Go OUT of the classroom.
- Find a company or an institute that is willing to organise some tasks students can do in order to get authentic experiences.
- Organise activating workshops for your colleagues and principal.
- Show them how it works by letting students do this!
- To get proof: compare the results of a class that is educated the traditional way with an authentic learning group.

Step 3: Is your conclusion that this makes sense? In that case:

- Try to influence the curriculum makers to institutionalise this and use the approach in the whole school.

It might help if you use the five indicators<sup>15</sup> for authentic learning to find out if you are really on the track.

## **VI. Conclusion**

Is this approach suitable to:

- Support and initiate life long learning based on the initial learning?
- Meet the demands of the labour market?
- Meet the demands of the learner for attractive, lively education?
- Help making vocational education (including higher vocational education) more attractive?

If we all could learn everything we need on the job, schools would not exist. But schools do

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<sup>15</sup> Bor, W van den, 2005, *Learning by Living*.

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exist, and have the role to structure the learning process of the learner, to provide the learner with information sources, and to answer questions the learner asks, all within the context of their learning domain.

A young person who has developed the skills to learn from authentic experiences during his or her initial school-time can use these for life. This approach also supports and initiates lifelong learning and is very suitable for adult education.

Learning in an authentic environment leads also to a new view on evaluation and judgement of the results. To get a good insight in the professional competencies a student has got, one single exam is not sufficient; it is not possible to judge all the competencies in one session. A real authentic assessment is composed of different kinds of tests that together give a correct reflection on the essential competencies needed for a specific professional task<sup>16</sup> or professional situation. The components of an assessment depend on the competencies the assessor wants to assess. Different tests could be considered, for example: portfolios, skill tests, logbooks, reflection reports, observation lists, and standardised exams.

When we apply the basic idea of authentic learning in vocational education and training, a variety of authentic experiences can be organised by the school, preferably in connection to the real professional world.

The authentic learning approach offers new possibilities and answers the questions we asked in the beginning. In fact, all the ingredients exist, but to implement those a system innovation is needed. An innovation as such has an impact on all people involved, especially on the staff of the schools, because they fulfil a crucial role in the innovation and development.

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## References

- Bastiaens & Martens, 2000, *Conditions form web-based learning with real events*.
- Birenbaum & Dochy, 1996, *Alternatives in assessment of achievements, learning processes and prior knowledge*.
- Burke K, 2005, *How to assess authentic learning*, (4th edition), London: Corwin Press ISBN: 15 7517 9407.
- Bor, W. van der, 2005, *Learning by Living*, article on behalf of the Leonardo project "Authentic Learning in Land-based education, ALIE".
- Cedefop 2004, *Vocational education and training, key to the future*.
- Gulikers J., Bastiaens, Th., & Martens R., 2005, *The surplus of an authentic learning environment*.
- Herrington J., & Olliver, R, 2000. *An instructional design framework for authentic learning environments*.
- Honebein, Duffy, & Fishman, 1993, *Constructivism and the design of learning environment*.
- Roth, W.M., 1995. *Authentic school science; Knowing and learning in open-inquiry science laboratories*.
- Stoof, A., Martens, R.L., Van Merriënboer, J.J.G., & Bastiaens, Th.J., (2002), *The boundary approach of competence, a constructivist aid for understanding and using the concept of competence*.
- Newmann, F.M. & Wehlage, G.G., 1993. *Five standards for authentic instruction*.

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<sup>16</sup> Burke K, 2005 (edition 4), *How to assess authentic learning*, London: Corwin Press.

# Authentic learning: the Spanish pilot project

Constructivist methodologies - Authentic Learning (AL) - are used at Wellantcollege (the Netherlands) as a way of improving creativity, motivation and connecting the learning and working environments. Authentic learning is a pedagogical approach that allows students to explore, discuss and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant to the learner. Through this pilot project, the Centro Integrado de Formación y Experiencias Agrarias de Torre Pacheco (CIFEA) in Spain implemented an adaptation of the AL methods in order to increase the motivation of the students and teachers.

The AL method is applied holistically at Wellantcollege, meaning to the entire learning process of the student, rather than being divided into themes, subjects or modules. As a first approach to this methodology, the Spanish-Dutch work team decided to apply this innovation to one module of a training cycle. Nonetheless, common projects were established involving other modules.



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The general phases followed to implement the pilot project were:

1. Research and information through bibliography, seminars and visits to Scholz and companies in the Netherlands.
2. Methodological approaches for the pilot project.
3. Election of the student group.
4. Drawing up a work plan.
5. Implementation of the project with the students.
6. Evaluation.

It was decided that as a prerequisite, the selected student group should be in a module whose intrinsic characteristics would facilitate the application of AL, in matters of time, competencies, the visibility of project results, etc. The student group chosen for the project was in the Second Year of Gardening specialty, and the module was Interior Gardening and Flower Arrangements.

The implementation of the project with the students involved the following tasks:

- Search for clients.
- Prior teacher-client agreement.
- Presentation of the project to the students to facilitate student acceptance.
- Establishment of work groups.
- Work plans made by groups.
- Student commitments made, which will serve as the basis for future evaluation.
- Dutch experts in AL serve as consultants for the project development.

The groups acted as a real company with real customers (Centro de Artes Escénicas de Torre Pacheco -CAES-, owned by the city), planning their tasks, searching for materials, preparing budgets, discussing with the customers, etc. It took from September 2008 to April 2009 to complete the whole project, as established in the school calendar for the module.

Participating students presented their work to students from other regional schools; they officially delivered the final product to CAES in April 2009.

The evaluation was carried out jointly among students, Spanish teachers, and Dutch experts, and addressed both the competencies acquired by the students and their opinions of the AL system.

The principle result, as specified in the general objectives of the project, was an increase in student **motivation** due to the fact that they felt more responsible and as active participants in their own learning process. In fact, throughout the project, the students consistently asked for support and feedback from their teachers, and willingly held team meetings, worked on the project in CIFEA workshops and visited supplier establishments, all outside of regular class hours.

The main **conclusions** to be highlighted are as follows:

- The Authentic Learning system, synonymous with Authentic or Situated Learning, was applied holistically at Wellantcollege (the Netherlands), meaning to the entire learning process of the student, without divisions into subjects and modules.
- Such an application is impossible in Spain given the existing laws. Nonetheless, the concept is adaptable and useful on a different scale, as it can be applied to an individual module, or collaboratively among several modules.
- Following are several key concepts to keep in mind:
  1. This is a change in methodology in that the student takes on a more active role

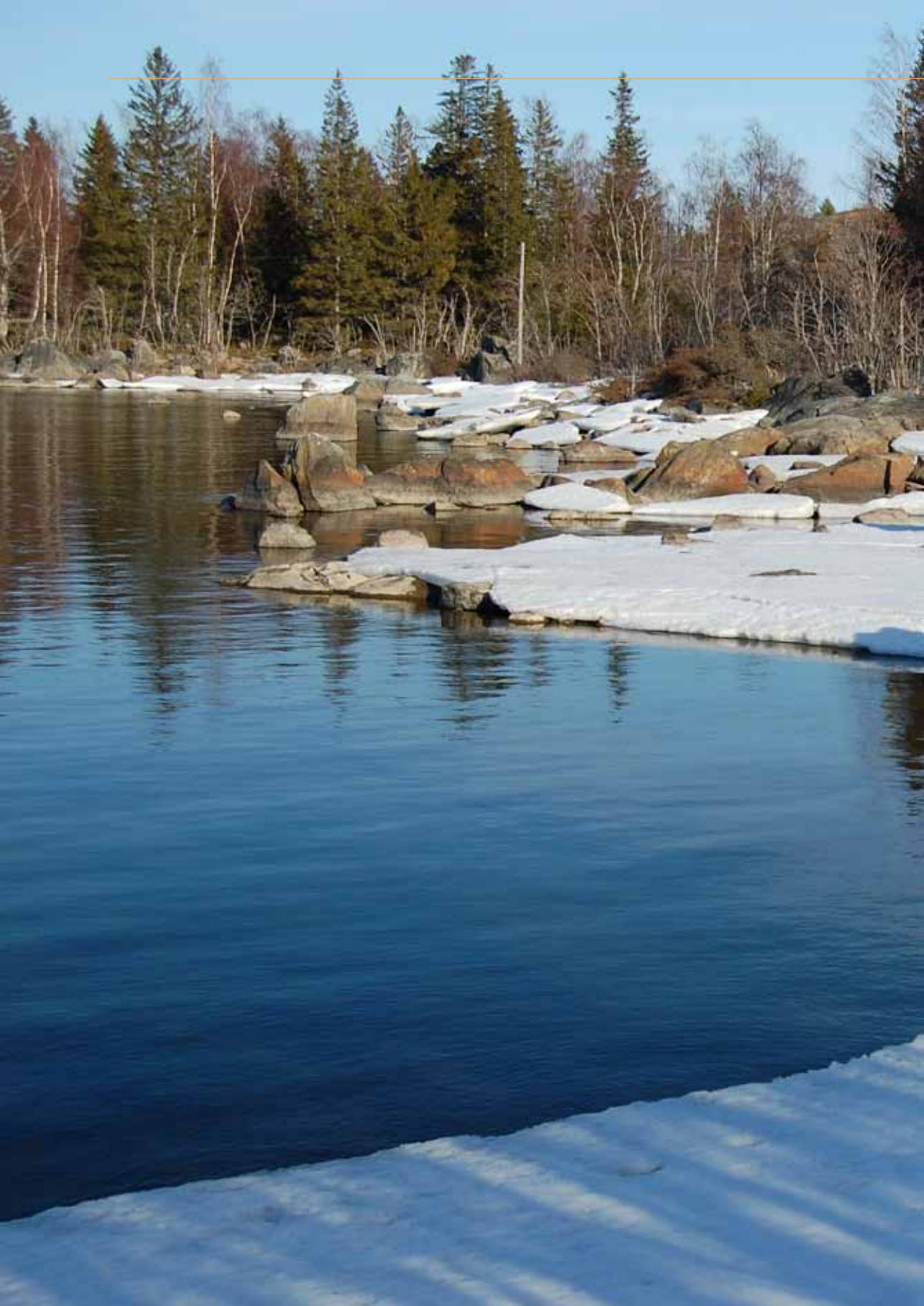
in his own learning.

2. Student learning takes place as a result of doing real projects that guarantee the acquisition of competencies specified in the curriculum (professional skills and capacities).

3. The student actively participates in his own evaluation (as well as in that of his classmates), based on the evaluation criteria developed from the mutually agreed-upon objectives to which the student had previously committed.

- The method seems as though it would be more easily applicable in some subjects and specialties more than in others, however the observed examples lead us to think that it could be successfully applied to all (see the projects realised by teams AL2 and AL3 in Latvia and Finland, respectively).
- At CIFEATorre Pacheco, given the interest generated among other groups of students and teachers, it is anticipated that this method will continue to be used in successive courses, as well as in other modules and Training Cycles (Ciclos Formativos).
- In addition, there are components of the method that were not used in this pilot project, such as the portfolio, which are of interest for the future.
- Finally: The clear increase in participant motivation in the learning process (both students and teachers) is a double success, including not only the acquisition of competencies, but also a sense of personal satisfaction.





# Authentic learning: the pilot project in Latvia

Abstract of the implementation of authentic learning in Latvia

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Latvian project leader: Ilze Talmane

Participating schools:

- Riga Food Producer Secondary school
- Valmeira Food Producer Secondary school
- Ergli Vocational Secondary school
- Smiltene Technical school
- Viski Vocational Secondary school
- Bebrene Vocational Secondary school
- Rezekne Vocational Secondary school
- Luznava Vocational Secondary school
- Vecbebri Vocational Secondary school
- Bulduri Vocational Secondary school
- Kandava Technical school
- Skruna Vocational Secondary school
- Saulaine Vocational Secondary school



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## Objective

The project is a continuation of the ALIE project (Authentic Learning In land-based Education – a Leonardo da Vinci transnational network project) to improve on results obtained in the past through further introduction and implementation of authentic learning.

## Methodology

### Phase 1

- Research on the initial situation at the participating schools.
- Orientation on the present situation of the Latvian school system.
- Setting a strategy for how to reach and evaluate our goals.

### Phase 2

Implementation of the knowledge and skills required in authentic learning by:

- PowerPoint presentation
- Exercises on working with a portfolio including practising the European Language Portfolio (ELP) and using portfolios made by Latvian representatives.
- Presentations by Latvian representatives of their proposals for integrated exercises.
- Exercises in coaching.
- Discussions about:
  - The benefits of AL and lifelong learning in general.
  - The organisation of examinations in practice with companies.
  - What companies demand.
  - The shifting of responsibilities between teacher and student.
  - The connection between theory and practice.
  - How to work with the different skill levels of individual students.

### Phase 3

- Showing and distributing the DVD we made in the Netherlands about examination in practice (English subtitles).
- Explanation and distribution of a test-role which can be used in the coaching process.
- Visiting companies. Interviews with students and managers about skills and examination in practice.
- Exchange of ideas with teachers about AL and examination in practice.
- Exchange of ideas on the subject with students.
- Strategic decisions were made for continuation of the project at two leading schools. (Bulduri/Jurmula and Ergli)
- Making a film about exercises in practice, feedback and the use of a portfolio in the Latvian context. The film will show the skills of all participants It will be distributed at participating schools and must be a contribution in the preparations for AL.
- The film itself is an example of AL. Two students from a media college in the Netherlands are using this performance in practice for their examination.
- Teachers from Latvia will come to the Netherlands to deepen their knowledge.
- The use of a portfolio will be further introduced at the leading schools.

### Phase 4

- Making the film
- Evaluation: appointments were made with the two leading schools.
- Final report of the Latvian project leader.

## Results

At the two schools, in Bulduri/Jurmula and Ergli, good progress was made with the introduction of AL. These two institutes will be an example for the other schools we have been visiting in Phases 1,2 and 3 of the project. A group of teachers from these schools will come to the Netherlands to experience Authentic Learning methodology at Wellantcollege.

The DVD will be distributed by the project leader and available for everyone interested on the Web site. This year, 2009, a new government in Latvia will decide on the new educational programs. Hopefully, there will be a future for Authentic Learning in Latvia.

# Authentic learning: the pilot project in Finland

## **Abstract**

Project “Sunrise” has been underway for two years. In work package 3, five teachers, two experts, one steering group member and two student groups were involved. The pilot project included two different courses for adolescent students of Practical Nursing. Both courses were held with two different students groups. One of the courses was very theoretical and the other one was more practical. The experts visited the school three different times.

Authentic learning was defined as follows: “Authentic Learning starts with the individual students’ earlier knowledge and their own way of thinking and understanding “the world”. Authentic Learning develops situations where learning is done in situations as authentic as possible, so that the student can connect his own learning to real-life situations. Knowledge is acquired in a holistic way, not as specific aims as usual. The teachers create learning situations in such a way that every individual student has the possibility to learn in his own preferred way. A basic premise of Authentic Learning is that students learn from each other. When students describe what they learn and how they think, then the others also can start thinking in new ways, and start to understand other people who do not think in the same way. Thus they can widen their own views. Authentic Learning requires that every student take



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responsibility for his own learning. In that way the teachers' task is to illustrate the target or goal in as many ways as possible and to coach the students in their own ways of learning."

The pilot project in Authentic Learning was a positive experience, both for the teachers and the students. The results from the teachers' perspective also included some points to develop for the future. One important view is that the relations between the experts and the teachers have to be built on mutual respect and trust of the others' expertise. If respect and trust don't exist then it is difficult to implement something new. Different cultures (countries as well as individuals) and those with different views on educational methods need different "backgrounds" in theory and experience. The situation is the same as the pilot project with the students. In this case the starting point has to be in the teachers' point of view or understanding of the world. These pilot project teachers needed a theoretical background on which to base their understanding. When this was not the reality the process had a weak point. But everyone worked hard to achieve good results for the students using new innovative educational methods.

Organizing the teachers' work situation and time is a very important issue. If the teachers get the feeling that it takes more time from them than ordinary teaching, then it is easy to go back to the old system. This is a task between the school leaders and the teachers to find solutions for, and a very important one. The teachers' control of the students' activity in the learning process is one of the main tasks. An understanding of the importance of supervision, difficulties in planning, drawing conclusions and making analyses are things to work on more. The most important thing was to find out that what was difficult for the students, then the teachers knew what it was important to work on.

The expected results were reached. The students were more active and took more responsibility for their own learning. The courses were based in in the students' own reality and understanding of the world. The students' level of communication and learning from each other was higher than before. Knowledge was also easier to acquire in a holistic way. The teachers think that the knowledge the students gained will stay with them for a longer time. The students' evaluation was also an important view in the process. Their point of view in this case was more positive when compared to earlier studies. Later in their studies, it could be interesting to ask these students to compare this method to others in the vocational school to find out where they learned more.

The good methods implemented in this pilot project will be continued with the teachers who were involved. There are other teachers inspired by the pilot project teachers who also find this way of thinking interesting. We hope these teachers will also have the power to find new methods. In a long-term perspective, these lessons will be part of the pedagogical development that the whole school will work on.



# ACCREDITATION OF EARLIER GAINED COMPETENCES

DO YOU HAVE TO LEARN AGAIN THE  
SAME THINGS YOU ALREADY KNOW?

### Accreditation of Earlier Gained Competences (also called Prior Learning)

YA – Yrkesakademin i Österbotten – Finland.

Vocational Education and Training (in Swedish shortened as YA!) was formed on the 1st of January, 2009 when three earlier educational organizations (The Swedish Vocational Institute, Korsnäs Kurscenter and Vocana) merged into one. The strength of YA! is good and sound knowledge within the field of vocational education (for both young people and adults). The school has a high level of cooperation with the working life on all levels.

Wellantcollege – Randstad – the Netherlands

Vocational Education and Training in the west of the Netherlands is a non-profit agricultural vocational education institute. This is the biggest green vocational school with app. 14.000 full-time students and 10.000 adult students in short courses. The education is all about the integration of living, learning and working within dynamic, pluralistic learning arrangements.

Land – Source of Income Foundation

The “Land – Source of Income Foundation” was initiated in 1998. The goal for the foundation is for Roma Families to get a livelihood, property, opportunities and hope for the future. The “Land – Source of Income” Programme has supplied more than 150 Roma families with financial resources for farming. For the last three years, the Land LLC has used its microcredit programme to buy 270 acres of land for farming, a tractor, pumps for irrigation, seeds, fertilizers, and chemicals for Roma families in the region. The Agro-Information Centre, also based in Plovdiv, Bulgaria, organizes regular trainings and offers agricultural, business, and legal consultations for the participants of the programme.

### Prior Learning in the SUNRISE project

Prior Learning in the Netherlands and Finland has different starting points and working methods. In this SUNRISE project we have described the differences between the two systems.

Accreditation and Recognition of Prior Learning in The Netherlands is related to the Dutch Knowledge Centre for Accreditation of Prior Learning (APL) and carried out by commercial departments of the educational institutes and by private companies; it is not yet part of the educational system. Finland, on the other hand, gives us the opportunity to look into a system in which the schools have a major responsibility in the accreditation and recognition of earlier gained competences, prior learning.

YA – Yrkesakademin i Österbotten

In Finland the recognition of prior learning has been applied in the educational systems for youth and adult vocational education. This has been in the law for vocational education since 2005 (**30 § (15.7.2005/601)**). One can find two different paths in the Finnish system: the recognition of competence-based qualifications and the recognition of curriculum-based qualifications.

The competence-based qualification is meant for the adult education system. All staff members involved in the recognition of prior learning must be evaluated by qualified assessors. Every student gets his own personal study plan. In this system, the competences gained in prior learning give the participant an opportunity to reduce the in-school learning time and can even lead directly to qualification after a practical assessment.

The Qualification Committee is a body appointed by the National Board of Education. The Qualification Committee **controls the quality** of the examination systems in the schools and makes the final decision as to whether the student will get the credits. The assessors recommend whether the student should get the credits or not. It is also the Qualification Committee that gives the diploma to the students.

In the curriculum-based qualifications, the students are assessed by a special group of teachers who will be involved in the professional education of these full-time learners.

The study counsellor will be responsible for recognising the students' prior learning. The study counsellor then nominates the students to apply for official recognition of the learning they have done before. If this prior knowledge is only part of the full course in a vocational aim, then the

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vocational teacher will be responsible for recognising this prior learning.

In this project, these prior learning topics have been studied and researched in the Finnish system. The complete results can be found in this SUNRISE project.

Wellantcollege

The starting point of the Dutch system is completely different.

The advantages of Accreditation of Prior Learning (APL) are increasingly recognised by labour market parties, educational institutions as well as governmental authorities.

The Netherlands have the Dutch Knowledge Centre for accreditation of prior learning (APL). This centre is responsible for knowledge management and dissemination on the subject of APL. It also is responsible for the quality standards for APL in the Netherlands.

Accreditation of Prior Learning (APL) is the common name given to the process of recognising the competences an individual has gained through formal, informal or non-formal learning in various settings. This implies that professional competences acquired by learning on the job, in a home setting or in voluntary work are in principle comparable to those acquired in formal learning situations. Moreover, competences include more than knowledge, skills and attitude. They also implicitly refer to the talent to adjust to changing circumstances, flexibility or deployment potential. Therefore, competences not only include professional competences but social and personal competences as well.

Recognition means awarding certificates or diplomas on the basis of a generally recognised standard, such as the qualification structure for vocational education. Obviously, there are also other standards relating to the labour market which employers and employees regard as relevant. External legitimacy is the key requirement for recognition. The APL provides courses for being an assessor in a certain professional field. Only these assessors are able to recognise prior learning.

In the Netherlands prior learning is an initiative between an employer and his employee. They both take the initiative to start the procedure for getting a higher qualification, not only by following a course as a part-time student but as a part-time student with a special learning plan in which earlier gained competences will be rewarded. This student will be provided a tailor-made study programme that includes only those missing links in his/ her education necessary to be qualified at a higher level. The cost for the assessment of an employee's prior learning is rather high and most of the time will be paid by the employer.

The Ministry of Social Affairs and Employment reduces the tax for employers that send their employees to a prior learning routing.

Wellantcollege has a commercial department with Prior Learning assessors in the professional fields of agriculture. Aspiring adult students can be assessed by qualified assessors of Wellantcollege, who will provide assessment from the very beginning to the end of the recognition of qualifications in a final assessment. With the outcomes of this assessment, the student can go to Wellantcollege on a personal learning plan, which gives the student the opportunity to reduce his learning time to get qualified.

In this SUNRISE project you can find a description of the working method used by Wellantcollege.

Land – Source of Income Foundation

In the project, this partner organisation from Bulgaria studied the Finnish and Dutch systems for recognition of prior learning. This organisation also participated in a pilot project with two different vocational schools in Bulgaria. This pilot project was based on the Finnish and Dutch systems for recognition of prior learning as compared with the vocational schools' curriculum. In this experiment, an assessment commission included only teachers and experts from different schools and not in cooperation with the working life. Recognition of prior learning is not an established method in the national educational system in Bulgaria. That is why the pilot project could only be an experiment.

You can find a more detailed description of this SUNRISE project experiment in the final report.



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# **ON-THE-JOB TRAINERS' TRAINING**

**ARE IN-COMPANY TUTORS AWARE  
OF HOW IMPORTANT CAN BE THEIR  
CONTRIBUTION TO VOCATIONAL  
TRAINING?**

The tutors at the companies (On-the–Job Trainers) have a key role in the training process of the students. The On-the–Job Trainers are usually chosen because of their position at the companies; their professional skills are also taken into account. Sometimes, their fundamental role as part of an educational process can be overlooked in the selection process: their pedagogical and social skills, knowledge about the educational system with which they are actively collaborating, etc., may not be accounted for. Thus, a lack of effectiveness might occur.

OJT training is compulsory in Finland and in The Netherlands in order for a company to host student placements. The Finnish system is flexible, and the training can be a traditional course for a group or structured as private meetings between the teacher tutors and the OJTs. The Dutch system follows the structure of a course. Both are carried out in three to five or four sessions. The contents include information about the education system and the role of the OJT as well as some pedagogical skills.

In order to transfer this innovation from YA! (Finland) and Wellantcollege (the Netherlands) to CIFEA Torre Pacheco (Spain), a Working Team was put together with experts from the providing partners and a group of Spanish teachers. The main aim was to plan and implement a pilot course in the receiving institution, as a means to test and adapt the innovation to the receiving institution's own learning, legal, and administrative environments. As a result, the team had to develop a final product consisting of documents and multimedia issues to be distributed among future potential users.

The Spanish course was carried out in two sessions. The opinion of the OJTs was positive in general, and they especially remarked on:

- a) The previous lack of information they had about their role, in a holistic perspective;
- b) How they now feel like key elements of the VET system; and
- c) How, as a result, their motivation as guides/coaches/supervisors has increased.

The survey for the students showed that in general they had a positive impression of their OJTs. Nonetheless, higher marks were given to the OJTs who had attended the course compared to those who had not attended the course. The trained OJTs were especially well evaluated in communication and in the responsibility given to the students.

On this basis, the following conclusions can be highlighted:

- A course for OJTs gives participants new perspectives on their own role, increasing their motivation.
- The course cannot be too long, but five hours seems to not be sufficient.
- It is important to generate active behaviours during the course, using workshop methodologies.
- The course is a source of feedback to improve the in-company placement system.

# QUALITY MANAGEMENT PLAN

Leonardo da Vinci Lifelong Learning Program requires in its forms the implementation of a system to monitor the quality of the project processes and products. The Sunrise partnership decided to introduce an innovation as an added value, as it is the use of quality actions on the approach of continuous improvement following the cycle PDCA (Plan – Do – Check – Act).

A Quality Management Plan (QMP) was established including tasks, dates, responsible people, objectives, and indicators. Thus, it was fixed from the beginning which concrete actions were needed to implement every Work Package (2, 3, and 4, related to the project contents) and for the Project Management. Apart from individual calendars, tasks, objectives, etc; some common indicators were defined.

All this was included on the Quality Management Cards, as project monitoring tools, in order to detect time deviations in the tasks; and contribute information about the fulfilment of objectives and indicators; all this following a previously fixed periodicity.

Due to the length of the project (nearly two years) it was important to plan the needed actions to monitor the project development, and every partner had to be aware of them. In this way decisions could be taken in advance to avoid delays with regard to the planning.

The QMP included the project organization structure through an Organization Chart showing the positions and Work Packages of the project.

They were established general procedures for the project implementation explaining the steps to carry out both the technical and the administrative organizations through a flowchart, in which are represented responsibilities, carried out actions, and records to prove the execution of every planned action.

The chosen improvement tool was the non conformity record (entry), to register the incidences happened along the project development, as well as the corrective and preventive actions. The aim of this information is to provide a guide for other projects in the future, trying to avoid those non conformities, or facilitate their management in order to close them as soon as possible.

