

**Project COMMET Project No. DE/07/LLP-LdV/TOI/147036 COMMET**

**Transfer of innovation and new methods for identifying vocational competence within vocational education in the metal and electrical sector as illustrated by two vocations**

Work Package VI. SPAIN.

Competence Profiles  
Put to a test in the metal and electrical sector in Catalonia/Spain

Since 1990 in Spain Vocational Training (VT) is Post Compulsory Education that is used to be followed by students between 16 to 18 years (mid grade VT) and 18 to 20 years old (upper grade VT)

There is no lower grade of VT because it was substituted by practical knowledge obtained during the Secondary Compulsory Education (12 to 16)

The two main vocations selected to develop Competence Profiles are:

a) For **Electro-Mechanical Technician**

- *Installation and Electromechanical Maintenance of Machinery and Conduction of Lines*, which belong to Middle Level
- *Electrotechnic facilities*, which belong to Upper Level

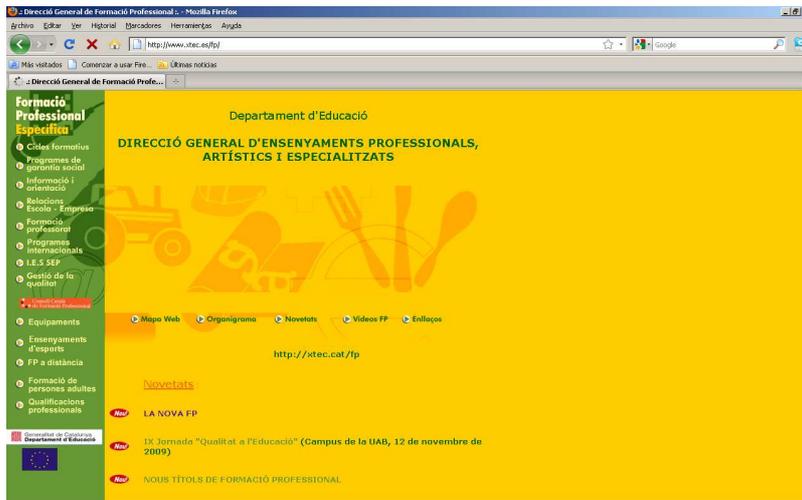
b) For **Metal Cutting Technician**

- *Mechanized*, which belong to Middle Level
- *Production by mechanized*, which belong to Upper Level

The selection of equivalence to the Metal Cutting Technician diploma was very obvious since the moment that Metal Cutting was not considered only the operations related to divide a metal piece in several parts but also covering all kinds of processes including metal deformation, cut, machining, welding etc.

The selection of equivalence to the Electro-Mechanical Technician diploma was not as obvious as in the former one, because there are different families of Vocational Training that include electrical and or mechanical subjects in their programs. The author of this report considered that Maintenance was the most relevant field that covers both, the electrical and the mechanics.

The Competences Profiles are published by the Education Department in both Catalan and Spanish official websites. In this project it has been chosen the profiles available in the website <http://www.xtec.es>



Each Competence Profile includes:

- 1) General Competence. It does not exceed 6 lines.
- 2) Spheres of Competence, with detailed explanation of competences included. Each Competence is formulated by several sentences as duties or actions that the student is supposed to be able to do when finishing the training period.
- 3) Key Competences, which are transversal skills and related to behavior.

#### Interviews with companies: International competences

During this project 5 companies had been contacted.

- 1) First interview was done to solve the next question: Do the education programs match with companies needs?
- 2) After first interview a model of International Competences was developed with the validation of companies.
- 3) Second interview was done to compare the models developed during the project and the companies needs.

#### 1) Enquiries about suitability of education programs

The interviews were always done in the company. The interviewed person was the HR manager of the company and four questions were asked:

1.1. Mark red or green the competences list presented as you feel your company would take advantage or not of each one.

Most of 95% of competence were considered as matching the company needs.

There is one sphere considered useless by all companies which is about administration skills: "To lead the administration, management and commercialization in a small company or factory"

1.2. Give a global opinion about the competence list

All the companies expressed a very good opinion about the programs presented. Nevertheless, they also expressed doubts about the gap between the list presented and the competences acquired by the students.

Some of the companies considered there is not much difference between middle level and upper level, as the general subjects were quite similar.

One of the company pointed out that it is a pity in Spain there is no more the Lower level of Vocational Training, as it used to be in the past for the age 14-15 year old students.

Most of the companies consider the educational system not good to combine education with apprentice, for legal reasons related to Safety restrictions. Most of them do not accept any student under 18, when students become legally adult.

1.3. Add the competences that your company need and are not provide to students

Again there was unanimity about the lacks of the competence list: *All companies expressed the need of including the capability to understand English documentation.*

1.4. Explain if your company is using Europass certificate

None of the company was using Europass and only one heard about Europass but never used it in a Human Resource procedure.

## 2) International Competences

International Competences grid was proposed by the expert in Spain, complemented with proposals made by other experts and validated/modified by technical managers and HR managers from the companies involved in the project. The first proposal includes competences that companies considered too high for the company needs.

For example, I proposed the Competence “Able to write reviews of repair and other technical documents in English” was changed to lower level “Able to write reviews of repair and other technical documents in *elementary* English”, as the VT technician is not supposed to have high level of English.

## 3) Enquiries about Competence Models developed

Again the interviews were done in the 5 companies and they were asked

3.1. Have the spheres of activity (taken and compiled from the vocational education framework plans and the framework curricula for vocational training and education) been correctly drawn up and demarcated?

100% of companies answered that the spheres of activity are defined and outlined appropriately

3.2. Have the process phases (parts of the complete activity) been correctly described?

The general answer was that the process phases were not described in the model used but the spheres of Competence describe in a concise way the complete parts of the processes.

3.3. Are the competence dimensions (specialist competence, methodological competence, social competence, and personal competence) plausible?

Companies agreed that competence dimensions are feasible.

3.4. Are the competence grids suitable, for instance, as certificate supplements for europass?

As described above, europass is a not a known tool in Spanish companies. When europass was explained to the interviewed all of them agreed that it was a good idea to include a short description of the vocations to compare with other

the programs of other countries. Nevertheless, companies point out the descriptions should not exceed 10 lines in order to remain usable.

3.5. Are there other fields of HR management where the competence grids can be used?

Three of the five companies agreed that competence grids could be used as a HR tool, but those who had developed their own model preferred that one and the ones that had not used any model considered this as a mid term possibility.

### Sample of Europass Certificate

As there is no europass for Technicians in Spain, the expert adds a proposal for Europass certificate which applies to the vocation of Spanish Metal Cutting Vocation.

Europass Certificate should include this description and the person filling the CV could mark the Competences he/ she acquired with formal and non formal education.

Metal Cutting Technician is able to:

#### A. Knowledge and methodological competences

- To determine the processes of mechanized of unitary pieces
- To prepare and to program machines and systems to proceed to mechanize
- To mechanize products by metal cutting procedures
- To mechanize special products by abrasion, conformed and other special procedures
- To verify the characteristics of the product
- To develop operational processes of mechanized, conformed and assembly
- To develop the programming of systems automated of mechanized, conformed and assembly
- To program and to control the production in mechanical manufacturing
- To manage and to supervise the production in mechanical manufacturing
- To control the quality in mechanical manufacturing
- To lead the administration, management and commercialization in a small company or factory

#### B. Social and personal competences

- Problem solving
- Organization of work
- Responsibility
- Team work
- Autonomy
- Interpersonal relationships
- Initiative

#### C. International competences

- Able to understand a maintenance book in English in order to set up and use a machine
- Able to understand measurement units and notation systems from International, English and American System, in order to produce parts or assemblies according to the specifications required for an international client
- Able to understand notes added to technical drawings in order to produce parts and assemblies according to the specifications required for an international client
- Able to understand quality claims written in English by the client, referring to parts delivered in order to detect problems.
- Able to be tolerant to others, and work in teams with people from other countries and different cultures.
- Able to speak English to give technical training to use and maintain equipment at the time of receipt by the client
- Able to be open minded to different cultures that demand different solutions.

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