



Employer Led Vocational Education and Training in Europe (ELVETE)

Case Study no. 3: Successful path for Low-voltage electricians at the “Dimitrie Leonida” Technical College
in Iasi

Highlighting of good practise in 14 -19 VET education

Work Package 2

Developed by: A.I.P., Romania



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Executive Summary

Case study Report structure

Summary

The case study will present the education and training path proposed by the “Dimitrie Leonida” Technical (VET) College in Iasi as regards the Low-voltage electricians profile.

Due to a good combination of the theoretical part with the practical activities in the companies, the college succeeds to have over 50% of the graduating students employed as electricians.

Although following the main national curriculum for this profile, the college in cooperation with the tutors at the company have developed several specific “local development curricula” aiming at certain knowledge and skills that have been proposed by the companies, being necessary for future employees as low-voltage electricians.

The training path is composed of: theoretical study and practical work/practises both in the technological laboratories as well as in the profile companies that cooperate with the VET school. The practical activities consist of: an average number of 3 hours weekly (either in the laboratory or in the company) and a full period of 6 weeks of practical work in the company (that is usually organized at the end of the school year).

The example of “Dimitrie Leonida” Technical (VET) College proves that success can be obtained even if the work-based period in the company is short (6 weeks/annually), as long as it is well organized, targeting the specific skills needed by students, and as long as there is good cooperation between the school and the company.

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General Information on VET Organisation



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The VET school was established in 1965 under the name of “Energy School” offering classes for professional training, post-high school classes and foreman school.

A year later the Industrial Energetic High School was set up, providing high school education, both day and evening classes. The two schools have functioned independently until 1972, when they were merged under a single management.

The energetic profile of the VET school was maintained from the establishment until today.

Starting with September 2010, the name of the school changed to Technical College “Dimitrie Leonida”.

Currently the Technical College "Dimitrie Leonida" comprises vocational school classes, TVET day and evening form of education in electrical, electromechanical and mechanical fields as well as foremen school.

The College currently provides the following training paths:

- Computing technician
- Electrical wiring technician
- Mechatronics technician
- Electro-mechanical technician
- Low voltage electrician
- Electrician in relay protection, automation and energy installations measurements
- Refrigeration
- Electrician –electrical and energetic equipment

In this case study we will focus only on the training path for Low voltage electrician for which 2 years of study are necessary.

For this training path lasting 2 years, the school is following the compulsory national curriculum that aims at the acquirement of the competences required in the national Professional Training Standard, but has also inserted certain “local development curricula”, which are additional modules proposed by the company where the practical/work-based learning is carried out.

The training path is composed of: theoretical study and practical work/practises both in the technological laboratories as well as in the profile companies that cooperate with the VET school. The practical activities consist of: an average number of 3 hours weekly (either in the laboratory or in the company) and a full period of 6 weeks of practical work in the company (that is usually organized at the end of the school year).

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General Information on business involved

For the training path for low voltage electrician (as well as for other training paths), the practical activities are very important.

Thus, in each of the 2 years of study, a student must carry out an average number of 3 hours of practical/work-based activities every week (either in the laboratory of the school or in a profile company), as well as a period of 6 weeks of practical training (6 hours per day, 5 days per week) in a profile company from the electrical field.

The VET college has a series of partnership contracts with different companies in the field who receive students to carry out their work-based/practical work period, under the supervision of a tutor.

The companies are very involved in the training of students, having influence also in the curriculum (through the additional „local development curricula” they suggest), as their aim is also to recruit students after graduation.

Detailed information on areas of cooperation

As previously mentioned, the main period of work-based learning within the company is of 6 consecutive weeks (6 hours per day, 5 days a week), supplemented also by other weekly hours (e.g. average 3) that can be performed either in the company or in the school labs, according to the planning of the teacher together with the company tutor.

For the practical work in the company for the low-voltage electrician class during the school year 2014-2015, the focus was on the modules „Electrical equipment”, „Electrical measurements” and „Technology in electrotechnics”.

For carrying out the practical activities in the company during the 6 weeks period, the students are organized in groups of 10-12 people, under the supervision of a tutor within the company. The students are aged between 15-17 years old, but we need to mention that there is not an age limit for carrying out this training, as the VET school is open to enrol also students who have dropped out from education, therefore they can be aged also 20 or even more.

For the 6 work-based learning weeks in the company, the tutor cooperates closely with the teachers in the school, both for establishing the learning objectives, content of activities, etc., but also for providing feedback on the performance of the students. Sometimes the teachers also go in the company to support the students.

Evaluation and testing: the assessment of the training path is made by means of tests, portfolios, as well as practical tasks assessed by the teacher together with the company tutor.

Influence of the companies on the curriculum:

Although the school is following the compulsory national curriculum that aims at the acquirement of the competences required in the national Professional Training Standard, they has also inserted certain “local development curricula”, which are additional modules proposed by the company where the practical/work-based learning is carried out. The new suggested modules have as basis the needs of the students and represent the areas where the company tutors felt that the students need more knowledge and skills that were not covered in the main curriculum.

Visit schedule and Visit report

Two visits were made to the Technical College “Dimitrie Leonida”: the first one on the date of 9th October 2014 when a meeting took place with the School Secondary Principle, professor Carmen Burlibasa, and the second one on 12th January 2015 when the draft of case study was discussed also with professor Carmen Burlibasa and a meeting took place with 5 students also.

The visits revealed that the cooperation with the profile companies for carrying out the practical work is very effective, since over 50% of the graduating students manage to be employed as electricians (many of them actually in the companies where they performed the work-based learning).

The interviewed students have stated that they are very satisfied to have chosen this training path and they feel that they can apply the knowledge they achieve. They also confessed they like very much the practical activities in the company and would actually like to have more practical hours, if it were possible.

ICT seems to be very relevant for this training. On the one hand, the teachers and students use PowerPoints, handouts in Word, e-learning materials, etc., on the other hand, both students and teachers need to be constantly updated with the technical instructions of the producers for the different equipments, which are found on the Internet.

Short analysis of the information

The training path for low voltage electrician proposed by the “Dimitrie Leonida” Technical (VET) College in Iasi represents a good practice due to a good combination of the theoretical part with the practical activities in the companies.

Although the main work-based learning period in the company is relatively short - 6 weeks annually (according to the national curriculum), the students manage to acquire the necessary knowledge for an easy transition from school to the labour market.

This is due especially to the good cooperation between the school and the company, the later having influence also on the curriculum studied by students.

ICT also seems to be relevant for this training path. Teachers are using PowerPoints, online materials, are assigning students different portfolios, etc. On the other hand, students also need basic ICT competences for their profession as electrician to be constantly updated with technical issues in the field.

The evaluation process is complex, using both tests, portfolios and practical tasks in the company that are assessed both by the teacher and company tutor.

Commonalities/differences – compare and contrast

The “Dimitrie Leonida” Technical (VET) College in Iasi manages to succeed in the ultimate goal of integrating students on the labour market after graduation through a good organization of the theoretical and practical activities.

Their success is confirmed by the high rate of students who manage to be employed in the field soon after graduation – over 50%.

Although the VET school must comply with the national regulation and follow the national curriculum, they have managed to introduce also local development curricula, which are training modules proposed by the companies where the work-based learning is performed.

Also, the example of “Dimitrie Leonida” Technical (VET) College proves that success can be obtained even if the work-based period in the company is short (6 weeks/annually), as long as it is well organized, targeting the specific skills needed by students, and as long as there is good cooperation between the school and the company.