Concept

The Concept Development in Greece:

Productive Learning at 2nd Laboratory Center, Patras

PROVED
Productive Learning in Vocational Education

Co-funded by the Erasmus+ Programme of the European Union

August 2016

Published by:
Institut für Produktives Lernen in Europa (IPLE)
produktives.lernen@iple.de
www.iple.de

Created in the frame of the Erasmus+ project PROVED
www.iple.de/PROVED

Co-funded by the
Erasmus+ Programme
of the European Union

Introduction

The aim of the project PROVED (*Productive Learning in Vocational Education*) was the transfer of the principles of *Productive Learning* (*PL*) from the field of general education to the field of vocational education. Regarding this aim the main intellectual output of the project PROVED are five concepts, developed and implemented in five institutions of vocational education in four countries (Finland, Germany, Greece, Lithuania).

The concept development was supported by the Institute for Productive Learning in Europe (IPLE) by different activities (development of a framework conception and guiding questions, written feedbacks, school-based trainings, teacher training) and by the whole consortium (presentation and discussion of all concepts).

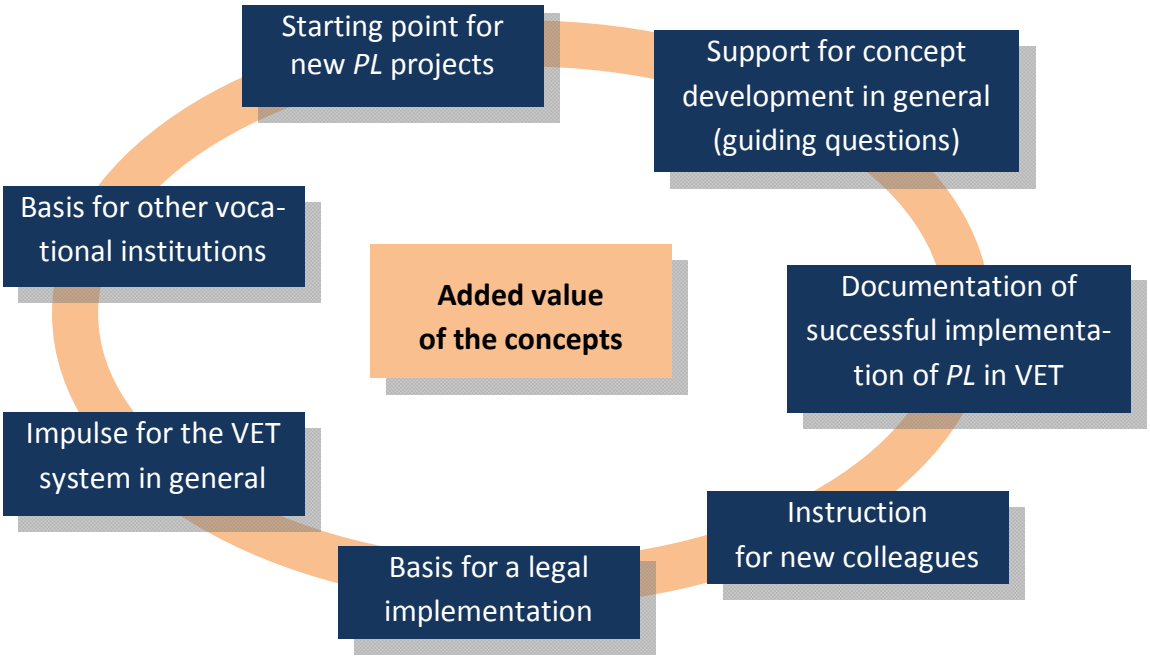
The concept development was closely connected with the development of a Pedagogical Manual. This manual includes a collection of methods and instruments which support the teachers in their concrete pedagogical work with the students.

All concepts were developed "in process" during the whole project period. The focus of the first year ("preparation phase") was the introduction of *PL,* the adaption to the national and local conditions, the design of a first concept draft, the clarification of official permission, the information and preparation of enterprises, colleagues and students. In the second year ("implementation phase") the partners tested their concept with students. In reflection of this experience they modified, changed or add parts of the concept.

During the whole development process the interim results and at the end the final results were presented in the Partner Meetings and to the public. The feedback of partners but also of cooperating institutions was very important for the concept development.

In general the five developed concepts are very different - showing the range of local framework conditions and the resulting possibilities. In Lithuania and Greece for example the "learning outside of school" is not well-known and it was a big challenge for the partners of these countries to realize the "learning in practice" as an important aspect of *Productive Learning*. The "difficult" political situation in Greece during the whole project time influenced the implementation of the concept and its development in the way of changing or not changing school-laws and possibilities of "legal realization". In Germany and Finland the partners were able to connect on existing (dual) structures in the VET-system – one of the challenge here was to point out the differences between existing learning structures and the specific aspects of *Productive Learning* as the connection between the individual experiences and the school-learning.

All concepts are translated in the languages of the participating countries. This is the basis for suistainability and also for the added value of the concepts which were developed.



The concept development in Greece – *Productive Learning* at 2nd Laboratory Center in Patras

The following part will inform you about the concept development in Greece – *Productive Learning* at 2nd Laboratory Center in Patras. The main focus will be the curriculum and methodology connected to the basic ideas of *Productive Learning,* but you will also find information about the framework conditions (current situation of the local educational and employment field), the participants, the cooperating partners and also about organization aspects at school.

In Greece the concept development was influenced by the unstable political situation during the whole project-time. The educators from the **2nd Laboratory Patras** and the supporting multiplier institution PROTASI expected changes in the Greek school-law concerning the focused "apprenticeship-year" were not realized and so the Greek partners had big difficulties to realize the concept which was developed during the "Preparation Phase". Facing this situation in the "Implementation Phase" a lot of changes were necessary to act in a legal way. A new (small) learning-group with "employed adult students" was initiated and a lot of the planned activities were realized. A new chapter "remarks to the implementation/realization" was added to the concept explaining the activities which were realized in the end. A realization of the primarily conception is planned for the next school year.

CONCEPT of a *Productive Learning*-Class at the 2nd Laboratory Center in Patras, Greece

August 2016

Authors:
Giannopoulos Constantinos: Head Master of 2nd Laboratory Center of Patras, Greece
Panourgias Dimitrios: Assistant Head Master of 2nd Laboratory Center of Patras, Greece
in cooperation with: Michael Käselau (IPLE)

CONTENTS

0 Introduction

The 2nd Laboratory Center of Patras is one of the eight partners in the ERASMUS+ project PROVED. Concerning the project targets, the 2nd Laboratory Center of Patras will realize a *Productive Learning (PL)* - class in the school year 2015/2016. Therefore this conception is developed by the participants of the project at the 2nd Laboratory Center of Patras and will inform you about:

- requirements of the project,
- considerations for the planned *PL*-class,
- the aims we will reach with the *Productive Learning* project,
- concrete steps and decisions for the realization of the project.

After giving an overview of the VET system in Greece and the current regional situation, we will describe our school and the importance of the project for the 2nd Laboratory Center of Patras regarding the process of vocational orientation and vocational qualification in the existing VET system of Greece.

Our school has contributed a lot in the education of all the students, for the last three years, providing them all the necessary equipment and knowledge. By the end of the project, our challenge will be that our school becomes a *Productive Learning* guiding institution not only in the prefecture of Patras, but in the whole area of Western Greece, and eventually will be a “pilot” program for the whole Greece.

The conception shows a possible and realistic way for the realization of *Productive Learning* at our Vocational School. Unfortunately this conception was not realized “one to one” in the implementation phase of the project, because the needed change in the school law did not happen in time as was planned. The main reason for this is the unclear political situation, especially in the responsibility of the Greek school authorities.

Following the project’s targets the conception is “partly” realized in the implementation phase with another learning-group as in the conception mentioned. In this way a lot of important elements of the developed conception could be tested and the experiences will be very useful for the future when the conditions of the school law will allow the realization of the conception in a full range. On behalf of this current development/change in the implementation phase the last chapter will give information about the adapted concept and the implementation which was realized.

Hopefully, next school year 2016/2017 the concept will be implemented according to our needs and the project will be adapted according to the upcoming Greek Law.

1 Background Information/Situation

1.1 Labor Market in Greece

Greece's performance on a range of indicators selected to monitor progress in VET and life-long learning across the European Union (EU) is summarized below.

Greece has relatively low figures on many indicators in this group compared with the EU average. The share of upper secondary students enrolled in IVET is low (33.1% compared to 50.4% for the EU). Female enrolment figures differ even more: 26.1% of females in upper secondary education are enrolled in IVET compared to 45.0% in the EU in 2012. The percentage of adults involved in lifelong learning in 2013 (2.9%) is also lower than the EU average (10.5%), and far below the average target (15%) set by the strategic framework education and training 2020. Participation in lifelong learning by adults with low-level education (0.4%), unemployed adults (2.7%) and older adults (0.8%) is also lower in Greece than the EU.

Based on 2010 CVTS data, employee participation in CVT courses and on-the-job training suggest that employer-sponsored training is less frequent than in the EU generally. The percentage of young VET graduates participating in further education and training is lower than the EU average (16.6% in Greece and 30.7% for the EU in 2009). The proportion of individuals who wanted to train but did not (17.3%) is higher than the EU average (9.5%) (based on 2011 data).

Skill development and labor market relevance

Data are missing for several indicators of this group; where data are available, the situation in Greece compared to the EU varies. The average number of foreign languages learned in upper secondary IVET is lower in Greece (0.7) than in the EU (1.2). A higher percentage (12.9%) of 30 to 34 year-olds has completed tertiary-level VET (ISCED 5b) than in the EU (8.7% in 2013).

Based on 2009 data, the employment rate of 20 to 34 year-old IVET graduates at medium level of education (ISCED 3-4) differs little from the EU average (78.7% in Greece and 79.1% in the EU). IVET graduates in Greece enjoy a positive premium on their employment rate compared to graduates from general education at the same ISCED level, as well as to graduates at a lower ISCED level. Their employment rate is 4.6 percentage points higher than that of their counterparts from general education; this is a positive employment premium; even though lower than the EU average of 5.6 percentage points. The employment rate of IVET graduates is 5.9 percentage points higher than those with lower-level qualifications (also a positive employment premium, though much lower than the EU average of 17.4 percentage

points). All these employment figures relate to 2009 and exclude young people in further education.

Overall transitions and employment trends

In this section all data refer to 2013 unless otherwise stated. The NEET rate in Greece (28.6%) and the unemployment rate for 20 to 34 year-olds in the country (39.6%) are much higher than the corresponding EU averages (17.0% and 15.1%, respectively). At 39.8%, the employment rate of recent graduates is less than half the corresponding value for the EU as a whole (75.4%). All unemployment- and employment-related indicators have changed substantially in an unfavorable direction between 2010 and 2013.

The share of 30 to 34 year-olds who have completed tertiary-level education (34.6%) is less than the EU average (36.8%). At this level, it is below the Europe 2020 average target (40%) but above the national target (32%). The share of adults with lower level of education is also markedly higher (32.8%) than in the EU (24.8%). The early leaver rate from training and education is lower than the EU average (10.1% compared to 11.9%) and it decreased more than in the EU between 2010 and 2013 (3.6 percentage points and 2.0 percentage points respectively). At 10.1%, it is slightly above the Europe 2020 average target (10%) and the national target (9.7%). (Source: Eurostat, 2015)

Figure 1: Unemployment rates, seasonally adjusted, February 2015 (%) (Source: Eurostat)

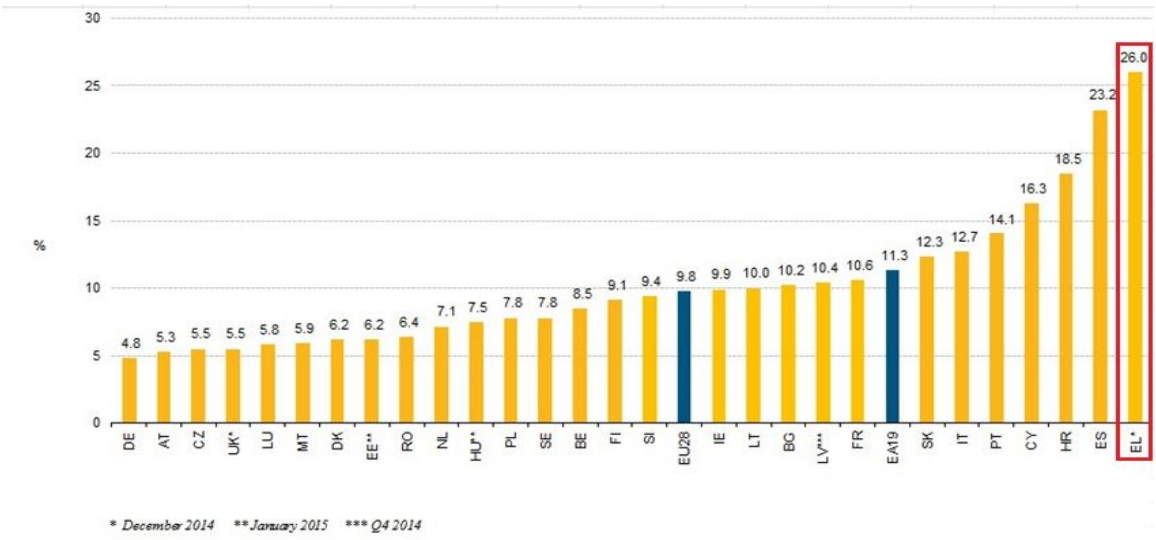


Table 1: Youth unemployment figures, 2011-2013 (%) (Source: Eurostat)

	Youth unemployment rate				Youth unemployment ratio		
	2011	2012	2013	2013Q4*	2011	2012	2013
EU-28	21.4	23.0	23.4	23.1	9.1	9.7	9.8
Euro area	20.8	23.1	24.0	23.8	8.7	9.5	9.8
Belgium	18.7	19.8	23.7	23.9	6.0	6.2	7.3
Bulgaria	25.0	28.1	28.4	28.1	7.4	8.5	8.4
Czech Republic	18.1	19.5	18.9	18.9	5.4	6.1	6.0
Denmark	14.3	14.0	13.0	12.8	9.6	9.1	8.1
Germany	8.6	8.1	7.9	7.9	4.5	4.1	4.0
Estonia	22.4	20.9	18.7	19.1	9.1	8.7	7.4
Ireland	29.1	30.4	26.8	25.5	12.1	12.3	10.6
Greece	44.4	55.3	58.3	57.3	13.0	16.1	16.6
Spain	46.2	52.9	55.5	54.9	19.0	20.6	20.8
France	22.6	24.4	24.8	23.7	8.4	8.9	9.0
Croatia	36.1	43.0	49.7	48.6	11.3	12.7	14.4
Italy	29.1	35.3	40.0	41.8	8.0	10.1	10.9
Cyprus	22.4	27.8	38.9	40.8	8.7	10.8	15.0
Latvia	31.0	28.5	23.2	23.9	11.6	11.5	9.1
Lithuania	32.6	26.7	21.9	20.6	9.2	7.8	6.9
Luxembourg	16.4	18.0	17.4	17.2	4.2	5.0	4.0
Hungary	26.1	28.1	27.2	24.8	6.4	7.3	7.4
Malta	13.8	14.2	13.5	13.5	7.1	7.2	7.0
Netherlands	7.6	9.5	11.0	11.4	5.3	6.6	7.7
Austria	8.3	8.7	9.2	9.9	5.0	5.2	5.4
Poland	25.8	26.5	27.3	27.2	8.6	8.9	9.1
Portugal	30.1	37.7	37.7	34.8	11.7	14.3	13.5
Romania	23.7	22.7	23.6	:	7.4	7.0	7.3
Slovenia	15.7	20.6	21.6	19.9	5.9	7.1	7.3
Slovakia	33.7	34.0	33.7	33.5	10.1	10.4	10.4
Finland	20.1	19.0	19.9	20.0	10.1	9.8	10.3
Sweden	22.8	23.7	23.4	22.6	12.1	12.4	12.8
United Kingdom	21.1	21.0	20.5	19.7	12.4	12.4	12.0

: data not available
* The quarterly youth unemployment rate is seasonally adjusted.

Table 2: Unemployment rate 2002-2013 (%) (Source: Eurostat)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU-28	9.0	9.1	9.3	9.0	8.2	7.2	7.0	9.0	9.6	9.6	10.4	10.8
Euro area	8.5	9.0	9.2	9.1	8.4	7.5	7.6	9.5	10.1	10.1	11.3	12.0
Belgium	7.5	8.2	8.4	8.5	8.3	7.5	7.0	7.9	8.3	7.2	7.6	8.4
Bulgaria	18.2	13.7	12.1	10.1	9.0	6.9	5.6	6.8	10.3	11.3	12.3	13.0
Czech Republic	7.3	7.8	8.3	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0	7.0
Denmark	4.6	5.4	5.5	4.8	3.9	3.8	3.5	6.0	7.5	7.6	7.5	7.0
Germany	8.7	9.8	10.5	11.3	10.3	8.7	7.5	7.8	7.1	5.9	5.5	5.3
Estonia	11.2	10.3	10.1	8.0	5.9	4.6	5.5	13.5	16.7	12.3	10.0	8.6
Ireland	4.5	4.6	4.5	4.4	4.5	4.7	6.4	12.0	13.9	14.7	14.7	13.1
Greece	10.3	9.7	10.5	9.9	8.9	8.3	7.7	9.5	12.6	17.7	24.3	27.3
Spain	11.5	11.5	11.0	9.2	8.5	8.2	11.3	17.9	19.9	21.4	24.8	26.1
France	8.3	8.6	8.9	8.9	8.9	8.0	7.5	9.1	9.3	9.2	9.8	10.3
Croatia	15.1	14.1	13.8	12.8	11.4	9.6	8.4	9.1	11.8	13.5	15.9	17.2
Italy	8.5	8.4	8.0	7.7	6.8	6.1	6.7	7.8	8.4	8.4	10.7	12.2
Cyprus	3.5	4.1	4.6	5.3	4.6	3.9	3.7	5.4	6.3	7.9	11.9	15.9
Latvia	12.5	11.6	11.7	10.0	7.0	6.1	7.7	17.5	19.5	16.2	15.0	11.9
Lithuania	13.9	12.6	11.6	8.5	5.8	4.3	5.8	13.8	17.8	15.4	13.4	11.8
Luxembourg	2.6	3.8	5.0	4.6	4.6	4.2	4.9	5.1	4.6	4.8	5.1	5.8
Hungary	5.6	5.8	6.1	7.2	7.5	7.4	7.8	10.0	11.2	10.9	10.9	10.2
Malta	7.4	7.7	7.2	6.9	6.9	6.5	6.0	6.9	6.9	6.5	6.4	6.5
Netherlands	3.1	4.2	5.1	5.3	4.4	3.6	3.1	3.7	4.5	4.4	5.3	6.7
Austria	4.2	4.3	4.9	5.2	4.8	4.4	3.8	4.8	4.4	4.2	4.3	4.9
Poland	20.0	19.8	19.1	17.9	13.9	9.6	7.1	8.1	9.7	9.7	10.1	10.3
Portugal	5.7	7.1	7.5	8.6	8.6	8.9	8.5	10.6	12.0	12.9	15.9	16.5
Romania	7.5	6.8	8.0	7.2	7.3	6.4	5.8	6.9	7.3	7.4	7.0	7.3
Slovenia	6.3	6.7	6.3	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9	10.1
Slovakia	18.8	17.7	18.4	16.4	13.5	11.2	9.6	12.1	14.5	13.7	14.0	14.2
Finland	9.1	9.0	8.8	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.7	8.2
Sweden	6.0	6.6	7.4	7.7	7.1	6.1	6.2	8.3	8.6	7.8	8.0	8.0
United Kingdom	5.1	5.0	4.7	4.8	5.4	5.3	5.6	7.6	7.8	8.0	7.9	7.5
Turkey	:	:	:	9.2	8.7	8.8	9.7	12.5	10.7	8.8	8.1	8.7
Norway	3.7	4.2	4.3	4.5	3.4	2.5	2.5	3.2	3.6	3.3	3.2	3.5
Japan	5.4	5.3	4.7	4.4	4.1	3.9	4.0	5.1	5.1	4.6	4.3	4.0
United States	5.8	6.0	5.5	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1	7.4

: Data not available

Figure 3: Unemployment rates (among persons aged 25-64 years) by level of educational attainment, 2013 (%) (Source: Eurostat)

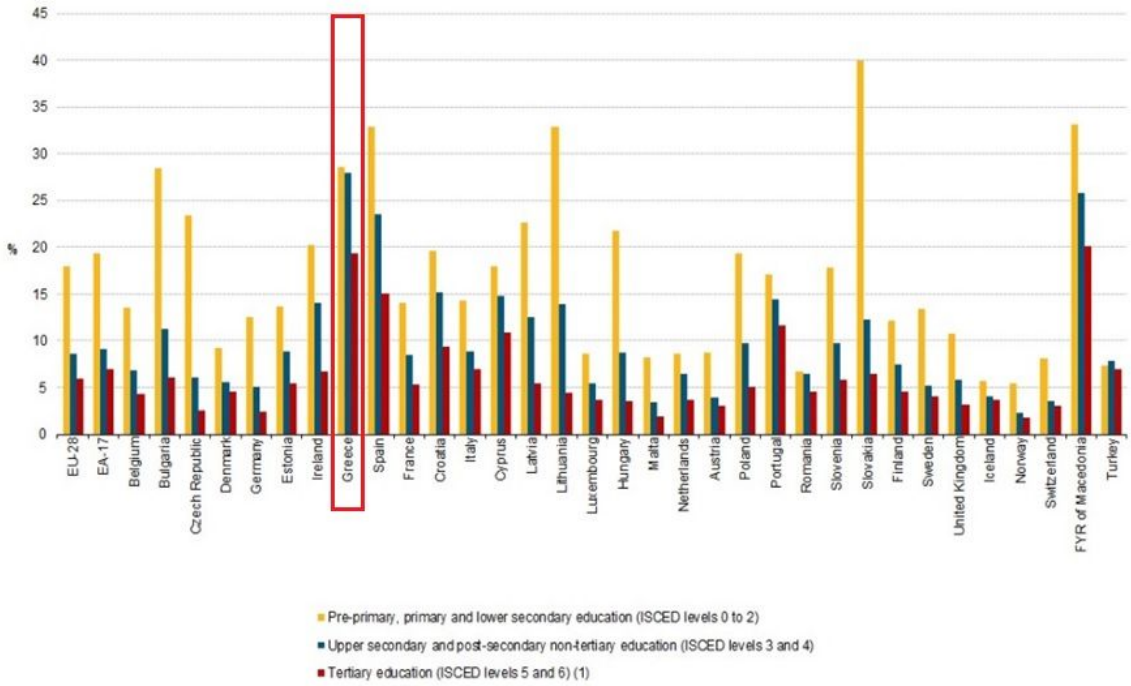
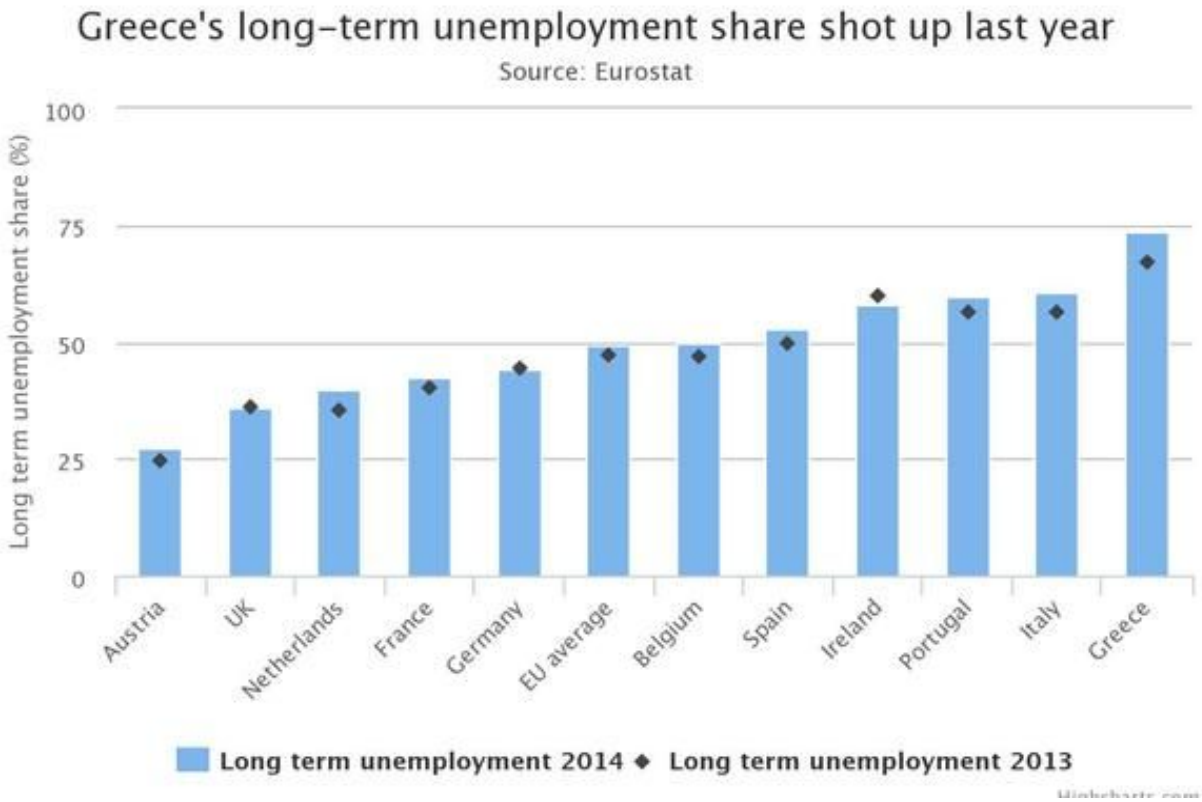
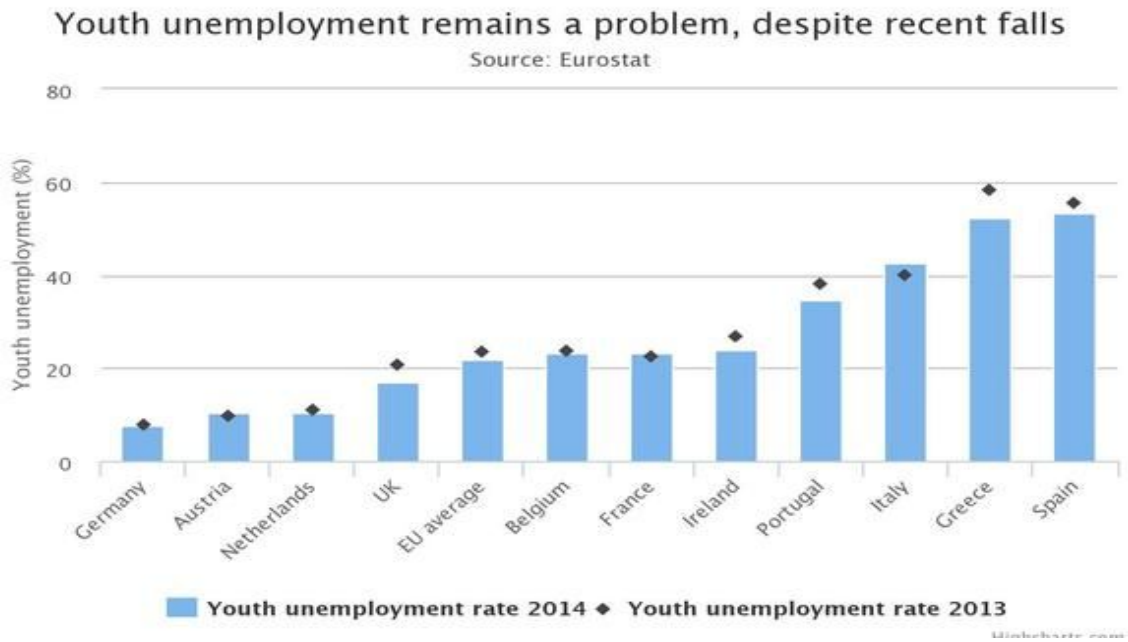


Figure 4:



Attica is the area which has been dramatically affected by unemployment compared to other cities in Europe (77,3%). Especially the area of western Greece (where Patras is included) is high rated with 76,6%.

Figure 5:



1.2 General Ways in the Greek Education System

In Greece schooling is compulsory for all children aged 5 to 15. Compulsory education includes primary (kindergarten, one year, and primary school, six years) and lower secondary education (three years), at a day or, for working students, an evening school.

Graduation from lower secondary education completes the cycle of compulsory schooling and students can then choose whether to continue in general or vocational education. If they choose to continue in general education they will attend classes at a general upper secondary school (GEL), for three years of upper secondary education; there are also evening schools for working students, and in these school the duration of the program is four years. Students enter upper secondary school at the age of 15 and graduate at 18. During the first year, the program consists of general education courses, while in the second and third year students take both general education and special orientation subjects. The choice of subjects is informed by educational or vocational guidance offered through the decentralized structures of the Ministry of Education's Vocational Orientation Guidance and Educational Activities Directorate (SEPED) (see Section 4.2). Those who graduate from a general upper secondary school can participate in the national examinations for admission to a tertiary education program.

According to the new law regulating secondary education (Law 4186/2013), which aims among other things to attract more students into VET, students now have the following options in addition to the general upper secondary school:

a. initial vocational education within the formal education system in the second cycle of secondary education at a vocational upper secondary school (day or evening school),
b. initial vocational training outside the formal education system (referred to as non-formal) in vocational training schools (SEK), vocational training institutes (IEK), centers for lifelong learning and colleges.

1.3 VET in the Greek Education System (source: Greece - country report, CEDEFOP 2015)

In Greece, VET is in transition. The 2013 legislation on secondary education aims to promote VET and strengthen its work-based component. The action plan for youth employment intends to link "smoothly" both education and work, upgrade VET, boost apprenticeship and broaden career guidance offered to young people. This comes at a time when addressing high youth unemployment and other labor market imbalances are more urgent than ever.

According to the law on secondary education (Law 4186/2013), vocational education is provided by the vocational upper secondary school. These schools (public or private) are founded exclusively by the Ministry of Education and Religious Affairs and may be operate during morning or evening. The minimum age for enrolment in a vocational evening school is 16.

The public vocational upper secondary schools offer the specialties that are listed in the legislation. The programs are organized by sector, group and specialty, with most sectors offering two or more specialties. The sectors currently covered are information science, mechanical engineering, electrical engineering/electronics/automation, construction, environment and natural resources, administration and economics, agronomy-food technology and nutrition, welfare and occupations in the merchant marine (captain, mechanic).

According to the new law specialties should be tailored to regional and national economic needs, following the recommendations of the ministries, regional administrations and social partners. Curricula can be developed according to the European credit system for VET (ECVET), and take into account, where these exist, related job profiles certified by the National Organization for the Certification of Qualifications and Vocational Guidance (EOPPEP). Programs at vocational upper secondary school can lead to two levels:

(a) A three-year program;
(b) An additional 'apprenticeship year'.

In the day-time schools the secondary cycle comprises three school years. Students with lower secondary certificates or equivalent qualifications enroll in the first year without en-

trance examinations. Students promoted from the first year of a vocational upper secondary school are entitled to enroll in the second year of a general upper secondary school: this means that the system allows the horizontal mobility.

The «apprenticeship year» (education in the workplace or in school laboratories), which is optional and is an innovation introduced by the new law, is open for those students who have earned the certificate and diploma attesting completion of the three-year upper secondary education at a vocational upper secondary school. Implementing OAED's «dual-system learning» principle, it includes learning at the workplace, a specialization course, and preparatory courses for certification at the school. The vocational upper secondary schools and OAED share responsibility for implementing the apprenticeship year, assigning the students to work placements, and all that this entails.

Those who complete an upper secondary program are awarded a vocational upper secondary school certificate (equivalent to the general upper secondary school certificate) and a specialization diploma at European qualifications framework (EQF) level 4, following school examinations administered by EPAL. Graduates of the «apprenticeship year» receive a diploma at EQF level 5 issued jointly by the Ministry of Education and OAED, after procedures for certification of their qualifications by the national agency have been completed. Graduates of a vocational upper secondary evening school do not have to enroll in the «apprenticeship year» but can apply for certification of their qualifications if they have worked for at least 600 days in the specialty which they will graduate after the third year. The organization which is responsible for certification of qualifications and for awarding specialization diplomas to graduates of «apprenticeship year» is EOPPEP, either alone or jointly with OAED. Those who pass certification examinations receive both the related specialization diploma along with a license to practice their trade. As appropriate, other ministries that issue corresponding occupational licenses may take part in conducting the examinations.

Also, EPAL graduates and those holding an equivalent certificate from a previous form of school or program or equivalent certificates from another country are entitled to take part in national examinations for admission to a technological educational institution in specialties corresponding or related to their diploma; the number of such places is governed by a quota system. They can also take part in national examinations for admission to universities and TEI (Universities of Applied Technical Sciences), following the same terms and conditions that apply to graduates of general upper secondary schools.

For the «apprenticeship year» responsibility for students' work placements and associated matters is shared equally by both the school (EPAL) and OAED. The "Apprenticeship year" programs are to be financed from national and/or EU funds, with no contribution from the

participating enterprises or students, in contrast to most other European countries that implement apprenticeship systems.

1.4 The 2nd Laboratory Center of Patras

The school was founded in 2000 by the Ministry of Education and it is located about two kilometers outside the center of Patras. It is fully equipped with over 25 different laboratories which are financially supported from the local municipality of Patras with government funds. It consists of one mail building which is in the place where all vocational schools in the area are operating. Also form the school year (2015-2016) one more building where some special laboratories are operating, is part of the school too.

The 2nd Laboratory Center (LC) of Patras is the transformation of the second TEC Patras, in the new organizational structure of the Ministry Education and belongs to the secondary vocational education (EDU-SCHVoc). The purpose of the 2nd Laboratory Centre of Patras is to provide through the fully equipped laboratories, support to Professional – Technical schools, and other educational training structures (e.g ambulance services, DIEK, etc). In these laboratories students as well as teachers are trained and develop exceptional practical skills. All the above are coming from the following public Vocational schools: 2nd EPAL of Patras, 6th EPAL of Patras, 5th Evening EPAL of Patras, Public Vocational Training Institutes and Ambulance Services of Patras.

Overall, the 2nd LC provides services up to 1600 students of the above schools and employs over 150 teachers of various technical disciplines. Operating hours are from 8:00 to 22:30 at a daily basis. The 2nd Laboratory Center offers almost all of the programs at vocational upper secondary school and supports *only* the laboratory part of the courses which are taught in the following vocational fields areas: a) Electronics b) Electrical c) Computers d) Health and Welfare, e) Mechanical, f) Aesthetics and Hairdressing, g) Graphical Arts and Design.

The purpose of the school is the improvement and development of the professional - personal skills of staff, and to respond to a series of issues, such as early school-leavers, increasing the attractiveness of the programs studies etc. In the 2nd LC of Patras various training seminars are organized and implemented for the teachers of various specialties. Also seminars on issues of interest to the general public are hold.

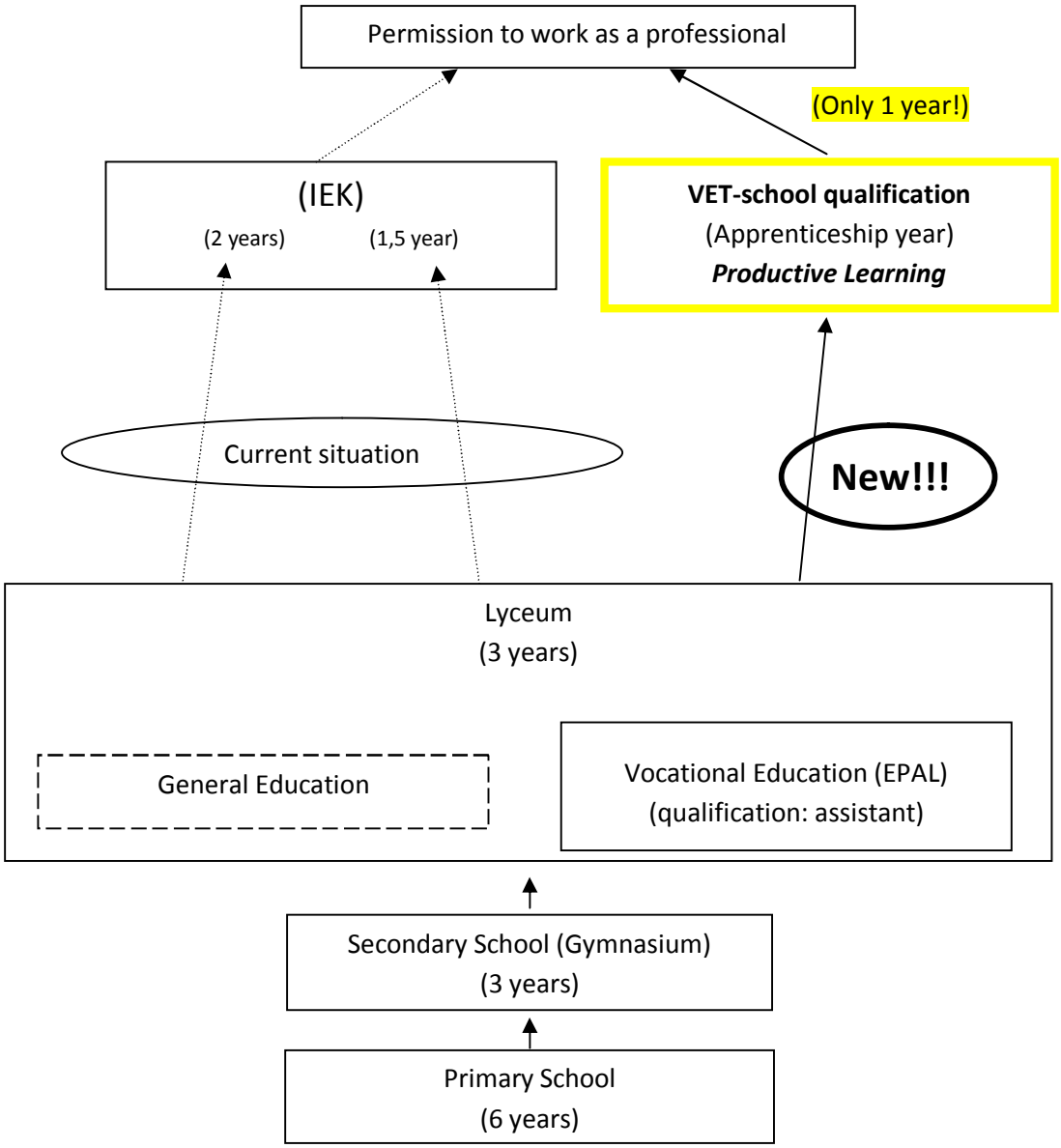
Both the Director of the school and the Assistant Director are members of INEPS Organization (*International Network of Productive Learning Projects and Schools*).

In school's web site *http://2sek-patras.ach.sch.gr/* there are a lot of information along with various pictures of the school (laboratories, equipment, buildings, etc.). The school-specific

logo for the project PROVED was also partly implemented with the assistance of our school teachers and students.

The reason for participating in the PROVED project is to involve our teachers with *Productive Learning* and become acquainted with various implementation of it throughout other European countries and cultures, since it is going to be implemented in a slightly different way starting next school year (2016-2017), by the Greek Educational System concerning Vocational Education.

1.5 Position of the planned "*PL*-class" in the Greek VET System



Basic ideas to the planned realization of *Productive Learning* (1 year):

- Part of the pilot project mentioned in the school law [2 days (7 h) at school and 5 days (28 h) at learning at the workplace (companies)]
- Working according to the conception of *Productive Learning*
- All students from the all professional fields
- 1 class per professional field with max. 25 students
- 2 teachers per class
- Payed working hours for the teachers for individual counseling and visits at the practice sites
- Contracts between OAED (Manpower Employment Organization)/student/companies
- Practice sites found by EPAL and OAED

Remarks:
The realization of this «VET-school qualification *PL*» depends on a legal frame of the current school law which is still «in process».

According to the law on secondary education (Law 4186/2013), «apprenticeship year» will start from September 2016. That is a difficulty we had to face. According to a recent law (Law 4310/2014) there is a planned «pilot program» that typically started on January 2015 involving certain Greek territories. Our intended goal was to make several appointments with the new elected officials in the Ministry of Education and ask them to include our territory (Northern Greece) and particularly our school (2nd Laboratory Center) in a «pilot» program starting from September 2015. This did not happen and so we decided to implement important elements of the conception into another running learning group (see last chapter).

2 Aims of *Productive Learning*

This «class» will reach the next educational level which will allow them to work as professionals. The main aim is the «vocational qualification». According to the possibilities there should be one minimum class with 25 students. The «vocational orientation» in the professional field is another target. The exchange of «real working-world experiences» in the learning group will give insights into the big range of special professional fields.

Another aim in general is to reduce the rate of dropouts. The *PL*-class should be more attractive for the students realizing the following aspects:

- learning in ‘social real-life situation‘,
- individual learning and learning in groups,
- educational consultation (personalized and continuously),
- assessment of achievement (personalized and continuously).

After the «apprenticeship year» with included *PL*-ideas (following this conception) our students will be issued with a certification (level 5).

Remark to the school-development:
The planned connection between these real-life practical experiences and the subjects of school learning will support the understanding of «why to learn theoretical knowledge». The students are asked to bring questions from their practical/vocational place for realizing the needed school-learning and in the other direction they should take concrete questions from the school subjects to these places out of school. In this way the current needs from the «world of work» will “update” the school-learning-process.

3 Target Group

Participants who already reached the first level of VET-system (they are “assistants”) concerning the vocational field of “mechanics”. The other professional fields of the school (5 more: Electronics, Electrical, Computers, Health-Welfare, Graphical Arts) should be also one option depending on the possibilities of realization. Our educational format *Productive Learning* is targeted to all the above mentioned students if:

- they want to learn in a more self-responsible way,
- they are open-minded to new methods of learning,
- they are willing to learn to find practical places themselves,
- they are willing to learn to reflect the own learning process (individual skills),
- they are willing to learn to work with other people (minimum social skills).

Other more formal prerequisites will be specified by the new law concerning the year of apprenticeship. Regarding the importance of a “well-oiled” learning-group it would be nice to have a group which members are mixed/heterogeneous (gender, age, immigration background etc) and to prevent a one-sided orientation. To build up such a “wished” learning group there is planned to realize a special setting of admission and orientation.

4 Participating Teachers

According to the planned number of participants there are planned at minimum two educators to support the students. According to the professional fields there might be the necessary of participation of several "field-experts" "special subjects teacher" and in this way more than 2 educators are involved. In general it should be a *small team* to make sure a good communication, short ways of decisions and a good relationship to the students. Information events at our school shown that most of our teachers are willing to participate in concept development and testing and there will be a process (seminars etc.) that will determine the final team.

The pilot *PL*-class should be realized in the professional field "mechanics", because the teachers involved in the PROVED project are experts in this field. After this pilot learning-group the *Productive Learning* should be offered also in the other mentioned professional fields. The involved teachers/educators in the planned pilot project (school-year 2015/16) are as *PL*-educators:

- Mr. Giannopoulos Constantinos (teacher of Computer Science),
- Mr. Panourgias Dimitrios (teacher of Mechanics & Graphical Arts),
- Mr. Papadopoulos Sotirios (teacher of Electrical-Electronics & Computers).

Other involved teachers from regular school:

- Siachos Christos (teacher of Mechanics & Graphical Arts).

The participating teachers will work as a team with the learning group. The three colleagues are used to work together as a team. This team-experienced group will support the needed teamwork in the *Productive Learning* project. The participating two out of the three teachers are also the creators and writers of this conception and so the examination of the teacher's roles in the *Productive Learning* project is one very important focus. The listed teachers are experts in the following subjects which are part of the *PL* project:

- Technology of Mechanical Constructions (Mechanics) (2 hrs)
- Design and description of machines (Mechanics) (2 hrs)
- Freehand Drawing (Graphical Arts) (4 hrs)
- Principals of Electronics (Electronics) (4 hrs)
- Electrical Installations (Electrical) (4 hrs)
- Computer Programming (Computers) (4 hrs)
- Usage of Computers (All fields) (1 hr).

5 Structural Framework

The initiation of this class will be part of a "pilot project" mentioned in the current school-law. The permission of the realization depends on the O.K. of the national Ministry of Education. First contacts/communications are already made with the authorities. But at the beginning of the school-year 15/16 there was still no decision and so the implementation was realized in another learning-group (see last chapter). According to the law (4186/2013) students will attend classes five days per week (during the evening time) and will be occupied by the companies in the mornings (five days per week).

The school year is divided in two semesters, and in both semesters the students will follow the same vocational field as selected.

Overview:

1st Semester		2nd Semester
Orientation 4 weeks	1. Learning at practical places 2. Supportive Laboratory Courses	1. Learning at practical places 2. Supportive Laboratory Courses
Selected vocational field courses		

September 15 → May 16

The schedule which is implemented this shool year (2015-2016):

Monday	Tuesday	Wednesday	Thursday	Friday
Working in practical places (7hrs)	Working in practical places (7hrs)	Working in practical places (7hrs)	Working in practical places (7hrs)	Working in practical places (7hrs)
			Communication group (1hr)	Communication group (1hr)
Regular Courses Laboratory Courses (according to the field) (5hrs)	Regular Courses Laboratory Courses (according to the field) (5hrs)	Regular Courses Laboratory Courses (according to the field) (5hrs)	Regular Courses Laboratory Courses (according to the field) (5hrs)	Regular Courses Laboratory Courses (according to the field) (5hrs)

The schedule which will be implemented next shool year (2016-2017):

Monday	Tuesday	Wednesday	Thursday	Friday
Learning in practical places (3hrs)	Learning in practical places (7 hrs)	Learning in practical places (4hrs)	Learning in practical places (7 hrs)	Learning in practical places (7 hrs)
Communication group (1hr)		Communication group (1hr.		
Supportive Laboratory Courses (according to the field) (3hrs) - Technology of Mechanical Constructions (Mechanics) (2 hrs) - Freehand Drawing (Graphical Arts) (2 hrs) - Principals of Electronics (Electronics) (2 hrs) - Electrical installations (Electrical) (2 hrs) - Computer Programming (Computers) (2 hrs) - Usage of Computers (All fields) (1 hr)		Supportive Laboratory Courses (according to the field) (2hrs) - Technology of Mechanical Constructions (Mechanics) (2 hrs) - Freehand Drawing (Graphical Arts) (2 hrs) - Principals of Electronics (Electronics) (2 hrs) - Electrical installations (Electrical) (2 hrs) - Computer Programming (Computers) (2 hrs)		

6 Curriculum und Methodology

The curriculum in *Productive Learning* is connected to the general curriculum of the professional field's qualification and will be specified by the new law concerning the "year of Apprenticeship". One target is to develop individual curricula (learning plans) for each student connecting on the "frame-curriculum". Guided by personal learning interests and the individual practical experiences these individual learning plans are important elements to reach the goals of *Productive Learning*. In sum these individual learning plans are equal to the content of the "official curriculum" developed by the Greek Ministry of Education.

To support the students reaching the listed aims in *Productive Learning* (see above "2. Aims of *Productive Learning*") the 2nd Laboratory School will make sure that basic methods/ procedures are realized:

6.1 Admission and Orientation

Admission

Our intention is to inform all school students for the purposes of *Productive Learning*. So, in cooperation with the other school directors and teachers we will inform all potential students. All the students that were interested in the project applied for it voluntarily in written form. During the admission phase the students followed the next steps:

- application,
- decision about an invitation for the interview,
- interview (along guiding questions),
- invitation to project start (orientation).

Orientation

In the beginning of the school-year the new learning-group should have the possibility of orientation. The aims of the learning-group's 'orientation phase' are:

- to build up the group,
- to reflect the individual situation and needs,
- to be sure about the chosen vocational field,
- to understand how *Productive Learning* is running,
- to make the first practical experiences.

This 'orientation phase' is planned to be organized with supporting methods and the duration should be 4 weeks. During the 'orientation phase' a special committee (involved educators) evaluated the applications and the applicants with the following criteria:

- interest of the applicant for the context and the purposes of the *PL,*
- applicant's intention for dropout,
- social economic and living conditions of the applicant,
- school behavior of the student,
- sex,
- age,
- grades,
- field of expertise.

At the end of the 'orientation phase' there will be the decision about the continuation of *Productive Learning*. The decision-makers are educators and students together. They have to

decide together if this alternative learning way is the right way. This might be decided in a individual dialogue.

6.2 Learning in "Social real-life Situations"

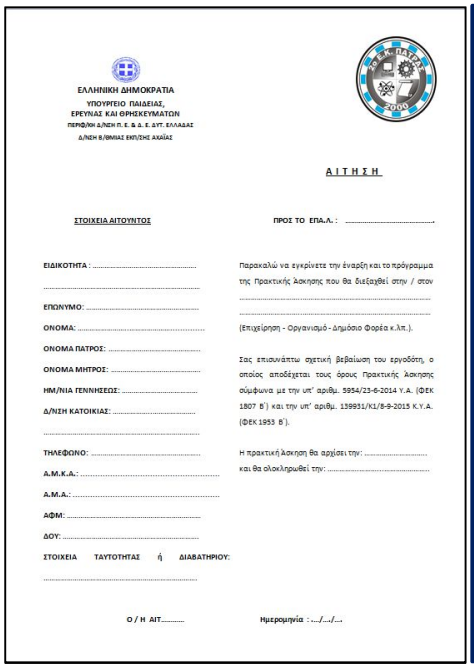
The learning in "social real-life situation" will be realized in areas close to the district of the school (companies, offices, etc). The full requirements will be specified by the new law concerning the year of apprenticeship. Companies are already informed about the planned project (local seminars) and there is a willingness to offer such practical places.

The students are going out of school for five (5) days for a total of 28 hours. They have not the possibility to change the practical place during the school year. They also attend school two (2) days per week for Supportive Laboratory Courses per each individual field. The students will be working according to the conception of *Productive Learning*.

Other conditions:

- Students are all from the professional fields described above;
- There is one (1) class per professional field with maximum of 25 students;
- There will be two (2) teachers per class (Supportive Laboratory Courses);
- The working hours will be payed for the teachers for individual counseling and visits at the practical sites;
- Practice sites found by the students or by EPAL.

For the realization of these practical experiences there are already developed materials – here some examples. Contracts for the companies/schools/students:



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ,
ΕΡΕΥΝΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
ΠΕΡΦ/ΚΗ Δ/ΝΣΗ Π. Ε. & Δ. Ε. ΔΥΤ. ΕΛΛΑΔΑΣ
Δ/ΝΣΗ Β/ΘΜΙΑΣ ΕΚΠ/ΣΗΣ ΑΧΑΪΑΣ

Α Ι Τ Η Σ Η

ΣΤΟΙΧΕΙΑ ΑΙΤΟΥΝΤΟΣ

ΠΡΟΣ ΤΟ ΕΠΑ.Λ.: .....

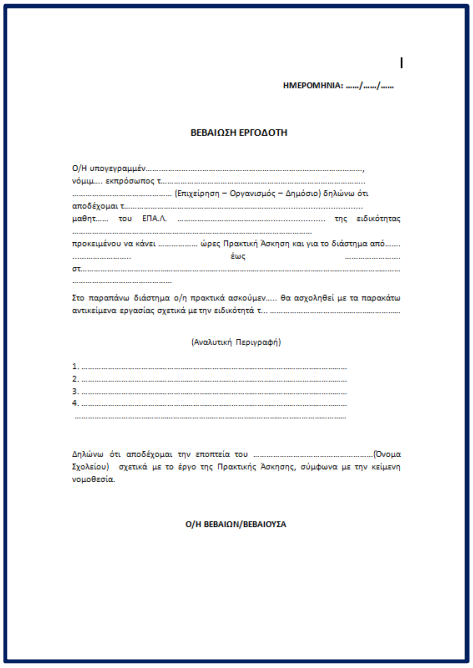
ΕΙΔΙΚΟΤΗΤΑ: .....
.....
ΕΠΩΝΥΜΟ: .....
ΟΝΟΜΑ: .....
ΟΝΟΜΑ ΠΑΤΡΟΣ: .....
ΟΝΟΜΑ ΜΗΤΡΟΣ: .....
ΗΜ/ΝΙΑ ΓΕΝΝΗΣΕΩΣ: .....
Δ/ΝΣΗ ΚΑΤΟΙΚΙΑΣ: .....
.....
ΤΗΛΕΦΩΝΟ: .....
Α.Μ.Κ.Α.: .....
Α.Μ.Α.: .....
ΑΦΜ: .....
ΔΟΥ: .....
ΣΤΟΙΧΕΙΑ ΤΑΥΤΟΤΗΤΑΣ ή ΔΙΑΒΑΤΗΡΙΟΥ:
.....

Παρακαλώ να εγκρίνετε την έναρξη και το πρόγραμμα της Πρακτικής Άσκησης που θα διεξαχθεί στην / στον
.....
.....
(Επιχείρηση - Οργανισμό - Δημόσιο Φορέα κ.λπ.).

Σας επισυνάπτω σχετική βεβαίωση του εργοδότη, ο οποίος αποδέχεται τους όρους Πρακτικής Άσκησης σύμφωνα με την υπ' αριθμ. 5954/23-6-2014 Υ.Α. (ΦΕΚ 1807 Β') και την υπ' αριθμ. 159951/Κ1/8-9-2015 Κ.Υ.Α. (ΦΕΚ 1953 Β').

Η πρακτική άσκηση θα αρχίσει την: .....
και θα ολοκληρωθεί την: .....

Ο / Η ΑΙΤ..... **Ημερομηνία : .../.../...**



ΗΜΕΡΟΜΗΝΙΑ: ...../...../.....

ΒΕΒΑΙΩΣΗ ΕΡΓΟΔΟΤΗ

Ο/Η υπογεγραμμέν.....,
νόμιμ.... εκπρόσωπος τ.....
..... (Επιχείρηση – Οργανισμός – Δημόσιο) δηλώνω ότι αποδέχομαι τ.....
μαθητ..... του ΕΠΑ.Λ. ..... της ειδικότητας
.....
προκειμένου να κάνει ..... ώρες Πρακτική Άσκηση και για το διάστημα από.....
..... έως .....
στ.....
.....
Στο παραπάνω διάστημα ο/η πρακτικά ασκούμεν..... θα ασχοληθεί με τα παρακάτω αντικείμενα εργασίας σχετικά με την ειδικότητά τ... .....

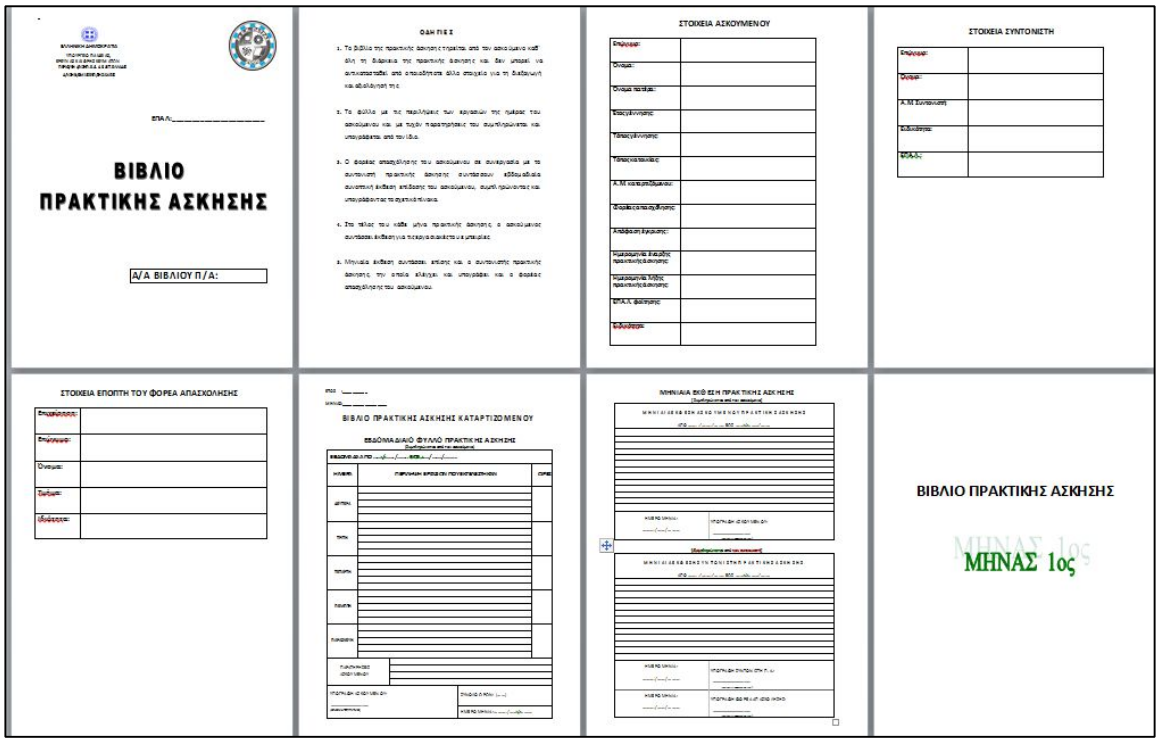
(Αναλυτική Περιγραφή)

1. .....
2. .....
3. .....
4. .....
.....

Δηλώνω ότι αποδέχομαι την εποπτεία του .....(Όνομα Σχολείου) σχετικά με το έργο της Πρακτικής Άσκησης, σύμφωνα με την κείμενη νομοθεσία.

Ο/Η ΒΕΒΑΙΩΝ/ΒΕΒΑΙΟΥΣΑ

Forms for documentation:



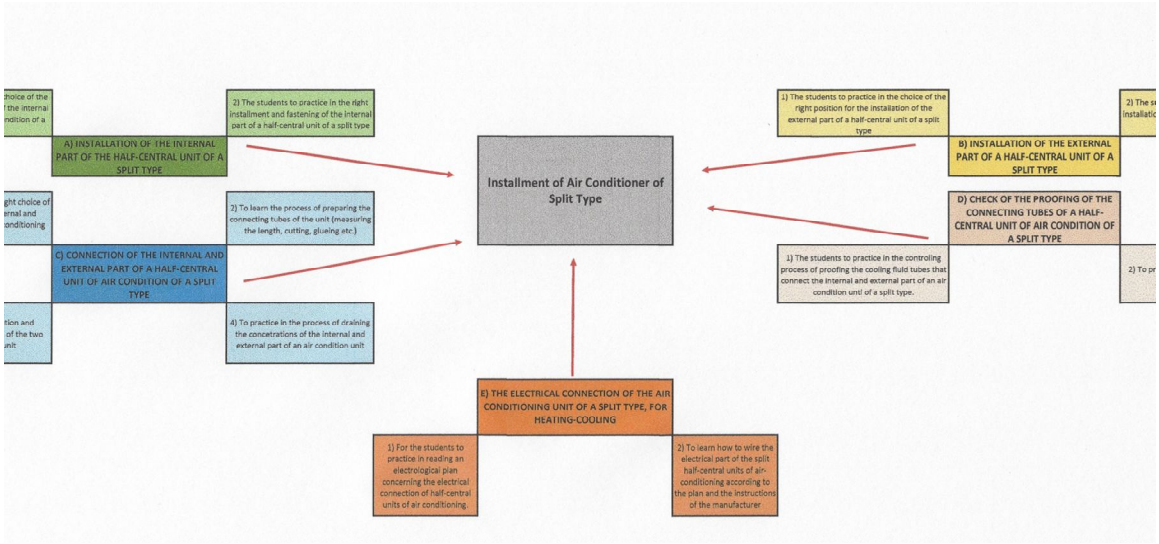
6.3 Individual Learning and Learning in Groups

The lessons are organized according to the timetable (see above “structural framework“). There is the possibility for the students to work individually at the practical places and at school. They will also have the possibility of learning in groups during Supportive Laboratory Courses following the principals of *Productive Learning*. A well-equipped learning area will help the students to learn in a good way (learning workshop). Communication group will be held two (2) days per week, according to the schedule and all the students along with the teachers will participate, to make sure the exchange of experiences and about the individual learning process.

Important instruments for the individual learning are the individual learning plans. Content are concrete tasks connecting the practical experiences and the school subjects/topics. The tasks are developed by the students supported by the educators. Regarding the school subjects and the activities at the practical place, the students will follow the questions:

- What I am interested in?
- What kind of concrete questions there are?
- What kind of learning task will give me the answers?
- How to fulfill the learning task?

Good method for working on this development is starting with a “mind-map”. Therefore they will be supported by the educators in individual consultations. They will document these learning processes in individual learning plans. Find an example of such a mind-map here:



6.4 Educational Consultation

The students will have continuously individual consultation with their educators (in each field) supervised by the Director and the Assistant Director of the 2nd Laboratory Center of Patras. It is organized in the way that, every month each field instructor will visit the student’s practical place, record all comments from the participating members (employer, student) and communicate them over during ‘communication group’. There should also be the possibility to make the consultation at school if it is not possible to visit the practical place every week. The responsibility for the students consultation shall b shared by the members of the educational team so that every colleague is consultant of a certain range of students.

Aims of the individual consultations are:

- communication about the personal condition of the student,
- communication about the practical activities and the school learning,
- development of the individual learning plan.

The results of the individual consultations should be documented by the educators in a short way to collect these steps for the evaluation of the student’s progress. The needed time for the consultations should be part of the paid working hours of the educators because it is part of the educational process! Also the travel expenses should be mentioned!

6.5 Assessment of Achievement

One important element of *Productive Learning* is the consideration of the personal development in the frame of the whole evaluation of the qualification. Therefore the performances shown in the individual learning plans should be part of the total grading.

Through exercises that are implemented to help students develop both their educational skills and the practice that is implemented in their working places. Our school teachers are highly trained professionals in their field of expertise for many years, so they can offer their knowledge to the students in a high degree.

At the end of the project all the teachers, after a thorough discussion where all participants of the project in the school (mentors, teachers and students), decided that all the work (assignments, exercises etc.) that will be handed-in by the students, will count for a total of 30% to the students final grade.

The success of the participants will be accomplished through the development of their skills according to classes along with reviews from the practical places. The criteria for assessment will be:

1. assignments 30%,
2. exercises 30%,
3. test and quizzes 10%,
4. individual performance 10%,
5. final exam 20%

The results after the completion of the project will be positive to all participants and will be helpful to all parts especially for the full implementation of it which will take place next school year. Also, self-assessment of participants, peer-assessment and the assessment of mentors at places of practice will contribute to a high degree to the overall assessment of the project, giving all the chance to express them in the best way and analyze all the steps and the difficulties along with their proposals for improvements.

The educational development will be documented through reports that were specially designed from the school staff (included). All the participants will receive a certificate that will prove that they participated in the project. The students will be receiving also a report concerning their grades earned, supplied from their school (EPAL) of origin according to the Greek Law.

7 Dissemination and Cooperation

In order to inform the interested parts (students, parents, companies) it is important to publish a leaflet or information flyer (see attachment) and make a public advertisement. Also the presentation and advertisement of the project can be part on the school web-page or local web-pages.

Cooperation with school institutions and with institutions outside of school:
The school is already connected to several partners (see above). For the realization of *Productive Learning* the following additional cooperations may be helpful:

- companies,
- VET-schools,
- parents‘ unions,
- local authorities.

Cooperation inside the School
We held a local seminar in 2nd Laboratory Center of Patras (11th of February 2015). Also since the two participants in the project are the Director and the Assistant Director of the school there is continuous information which is provided to all school teachers.

Team Cooperation
The participating teachers are working together as a team in the last four years, cooperating in many other different projects concerning the school, teachers and students. The cohesion between the team members is very high, so they achieve the maximum results.

Cooperation with Partners of the Project PROVED
During the project time it was very important to have the exchange and discussion about the own work with the PROVED-partners. Hopefully there will be a continuation of the fruitful exchange with the PROVED-partners after the project’s period!

8 Remarks to the Implementation/Realization

The conception of a *PL*-class at our 2nd Laboratory Center was developed in the preparation phase of the project PROVED. The decision for developing a concept for the new “apprenticeship year” as it is described in the chapters before, assumed the planned changes in the school law which would be the basis for the realization. In the process of the project, especially in the beginning of the implementation phase, it became clear that these changes are in process but not clear regulated. In behalf of this situation, the PROVED-team in Greece decided to change the implementation as planned. The *PL*-typical elements of the concep-

tion are now (partly) realized and tested with another learning-group to make sure the project's goals.

Learning-group in the Implementation Phase

For having a good comparability and transferability the chosen learning-group is also one in the qualification field "mechanics/electricians" – only one level underneath the learning-group in the conception. The students are part of the Vocational Education (EPAL) and will get the qualification "assistant" (EQF level 4) at the end of the school-year. It is the fourth year of their qualification, organized in the "evening school" (during the day they are working at companies in the professional field). After this school-year they want to continue in the "apprenticeship year" which is the field of the conception to reach the higher qualification (EQF level 5).

Advantages for this decision:

- The students are interested in *Productive Learning*.
- The students will continue next school-year in the *PL*-class as mentioned in the concept and might be prepared for this very well.
- The students are working during the day in companies of the professional field and so they already have "practical places".
- The planned staff in the conception is also mainly responsible for the chosen learning-group.
- The teachers are going to visit regularly (at least once a month) the students.
- Two days a week (duration: one hour per day), before regular classes start, they participate in a 'communication group', in which all the issues concerning the project will be discussed.

Regarding these requirements it will be possible to practice and test important elements of the conception concerning *Productive Learning* with this learning-group.

The participants in the realized period:

The learning-group consists of six students, only men (16 – 27 years) from mechanical and electrical fields. All of them were dropped out from school when they were teenagers because of different reasons (family problems, financial issues etc.). They decided to give themselves a second chance by attending a vocational school so they will be eligible to attain a lyceum degree along with a certificate of specialization in a technical field (mechanical or electrical).

Practical sites:

The participating students were working at daytime at the following companies: Psictothermiki SA (http://www.psictothermiki.gr) and Trikalinos Battery Center, Patras.

The teachers in the Implementation Phase

The involved teachers / educators in the Implementation Phase (school-year 2015/16) are:

PL-educators: Mr. Giannopoulos Constantinos, (Computer Science teacher),
Mr. Panourgias Dimitrios, (Mechanical & Graphical Arts teacher),
Mr. Papadopoulos Sotirios, (Electronics & Computers teacher).

Other involved teachers from regular school:
Siachos Christos (Mechanical & Graphical Arts teacher).

The participating teachers will work as a team with the learning group. The three colleagues are used to work together as a team. This team-experienced group will support the needed teamwork in the *Productive Learning* project. The participating two out of the three teachers are also the creators and writers of this conception and so the examination of the teacher's roles in the *Productive Learning* project is one very important focus. The listed teachers are experts in the following subjects which are part of the *PL* project:

- Technology of Mechanical Constructions (Mechanics),
- Design and description of machines (Mechanics),
- Freehand Drawing (Graphical Arts),
- Principals of Electronics (Electronics),
- Electrical Installations (Electrical),
- Computer Programming (Computers),
- Usage of Computers (All fields).

Realized structural framework in the Implementation Phase

The students are working during the day (5 a week) at companies in the professional field "mechanics/electricians". In the evening (5 a week) they are learning 25 hours (5 h per evening) at the vocational school. Subjects/Topics at school:

- Greek Language (2 h)
- Mathematics (5 h)
- Physics (3 h)
- Professional subjects (13 h)
  - Installation Air Condition
  - Installation Cooler
  - Electrical Machines
  - Electrical Installation
  - Electricity

Realized Schedule:

Mon	Tue	Wed	Thu	Fri
Daytime: Working at companies in the professional field "Mechanics/electricians" (including regular visits/consultations with educators)				
	Communication group		Communication group	
Evening (7:00 – 10:30 pm) Learning at school (subjects/topics appropriate the qualification curriculum)				

Important Elements of the Concept realized in the Implementation Phase

As far as possible the pedagogical process of the described learning-group should follow the ideas mentioned in the chapter "Curriculum and Methodology" of the conception. In this way the target of the PROVED project, to test the conception in the implementation phase, will be reached. Possible elements of the conception, which may be realized with the learning-group in the implementation phase:

Learning in ‚social real-life situations'

The learning in "social real-life situation" are realized at the existing working places of the participants. Companies are already informed about the planned project (local seminars) and there is a willingness to offer needed support. For the realization of these practical experiences at the working places there are already developed "forms for documentation".

Individual Learning and Learning in Groups

The lessons are organized according to the timetable (see above "structural framework"). There is the possibility for the students to work individually at the practical places and at school. They will also have the possibility of learning in groups during Supportive Laboratory Courses following the principals of *Productive Learning*.

Communication group will be held two 1 day per week, according to the schedule and all the students along with the teachers will participate, to make sure the exchange of student's experiences and about the individual learning process.

One instrument for the individual learning are the individual learning plans. Contents are concrete tasks connecting the practical experiences and the school subjects/topics. The tasks are developed by the students supported by the educators. Regarding the school subjects and the activities at the practical place, the students will follow the questions:

- What I am interested in?
- What kind of concrete questions there are?

- What kind of learning task will give me the answers?
- How to fulfill the learning task?

Therefore they will be supported by the educators in individual consultations. They will document these learning processes in individual learning plans.

Educational Consultation

The students will have continuously individual consultation with their educators (in each field) supervised by the Director and the Assistant Director of the 2nd Laboratory Center of Patras. It is organized in the way that, every month one teacher will visit the student's practical place, record all comments from the participating members (employer, student) and communicate them over during 'communication group'. There should also be the possibility to make the consultation at school if it is not possible to visit the practical place every week. The responsibility for the student's consultations shall be shared by the members of the educational team so that every colleague is consultant of a certain range of students. Topics of the individual consultations are:

- the personal condition of the student (family, friends…),
- practical activities and the school learning,
- development of the individual learning plan.

The results of the individual consultations should be documented by the educators in a short way to collect these steps for the evaluation of the student's progress. The needed time for the consultations should be part of the paid working hours of the educators because it is part of the educational process! Also the travel expenses should be mentioned!

Assessment of Achievement

One important element of *Productive Learning* is the consideration of the personal development in the frame of the whole evaluation of the qualification. Therefore the performances shown in the individual learning plans will be one part of the total grading.

Differences between Conception and Implementation

According to the changes mentioned above, not all elements of the conception will be realized in the implementation phase as contemplated. Reasons are on one side the different framework structure and on the other side practical considerations. Examples are:

- admission process (not necessary),
- 'orientation phase' (the group already existed),
- change of the learning environment/learning workshop (places were already planned),
- small educator-team (operation schedule was set – only small changes possible),

- only partly implementation of *PL*-typical methodology (only certain space for changes in the 4th year).

Although the implementation phase will not follow the conception in 100%, the colleagues of the 2nd Laboratory Center are optimistic to get a lot of first experiences in the work of *Productive Learning* in VET. One very positive aspect is the preparation of the students for the *Productive Learning* in the following school-year.

August 2016

Published by:
Institut für Produktives Lernen in Europa (IPLE)
produktives.lernen@iple.de
www.iple.de

Created in the frame of the Erasmus+ project PROVED
www.iple.de/PROVED

Co-funded by the
Erasmus+ Programme
of the European Union