

The critical role of skills development and certification in work-based learning in Greece

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Abstract

This paper examines recent developments for work-based learning in Initial Vocational Education and Training in Greece (IVET). In the first part, the paper reviews key policy development in the EU context from Copenhagen Process to Riga conclusions fostering the role of IVET to labor market entrance and skills development. In the second part, the paper analyses primary key legislative documents on IVET reforms in Greece using the categories of educational tradition, governance, quality assurance, educational structure, curriculum and specializations, assessment, qualifications and certification. Statistical data are used to support arguments and trends. Following the discussion of the results that critically examine the context of work-based learning under the benchmarks of skills development, qualifications and certification, in the last part the paper confirms the gradual but continuous progress being made over the last decade and raises challenges for future development.

Keywords: **IVET, work-based learning, skills development, qualification, certification.**

1. Introduction

Challenges for vocational education and training (VET) is continuous due to enormous and unforeseen economic, political and technological changes. Therefore, VET structural reform is inevitable. Since 2002, EU member states launched the Copenhagen process for European cooperation in VET with the aim to improve lifelong learning and mobility and develop procedures, instruments and principles that help make people's knowledge, skills and competences better visible and easier to compare, understand and recognize. The Copenhagen process led to further policy developments with the last that of Riga Conclusions that reaffirms the inclusive character of VET and its commitment to high-quality (Psifidou & Ranieri 2020).

More analytically, in 2015 in Riga Ministers responsible for vocational skills development from all EU Member States, EU Candidate Countries and EEA countries along with the European Social Partners (ETUC, BUSINESS EUROPE, UEAPME, CEEP) agreed on five VET medium-term deliverables with the aim to modernize VET. Among these deliverables, the role of work-based learning to deliver high training outcomes relevant to labour market is highlighted. VET can only become more attractive if people trust its outcomes and if it provides trainees with opportunities for work experiences and for placements abroad (Kavasakalis & Liosi 2019). VET graduates should get recognition for the skills and according to their qualifications and be able to move on to higher levels of education or training (CEDEFOP 2015).

In the context of EU policy on VET, this paper aims to systematically present recent developments in work-based learning in Initial Vocational Education and Training (IVET) in Greece. In the first

part, the paper examines the key EU milestones of VET reforms in the context of Riga Conclusions. In the second part, the paper systemically presents the policy development for the period 2015-2020 in IVET and work-based learning in Greece. For this end, the paper uses the qualitative content analysis technique and the categories: educational tradition, governance, quality assurance, educational structure, curriculum and specializations, assessment, qualifications and certification. Legislative documents are used as primary data for the analysis and statistical data from EU and national authorities are used as secondary data (Eurostat, CEDEFOP). The paper concludes indicating challenges and prospects for work-based learning to develop skills relevant to the labour market and to connect the learning outcomes of school level to key performance indicators in the work-place.

2. The EU Context: From Copenhagen to Bruges and Riga

The initiative on modernising VET at EU level goes back to Copenhagen process in 2002, which coordinates technical and political support for voluntary cooperation on common objectives, priorities and benchmarks. The members committed themselves to support mobility for work and learning, making access to lifelong learning easier through more transparency, easier recognition of qualifications and competences, improved quality of VET and better information and guidance systems. These priorities have been reaffirmed in the Communiqués of Maastricht (2004), Helsinki (2006), Bordeaux (2008) and Bruges (2010) (Psifidou & Ranieri 2020).

The Bruges Communiqué, adopted in 2010, combined the long-term vision with the short-term actions and it is considered a milestone for the EU policy development on VET, since it was aligned to the overall framework for education and training (ET 2010, 2020) and it defined the agenda for contributing to the objectives of the Europe 2020 Strategy. The Communiqué stressed the dual objective of VET, excellence and inclusion, supported employability and economic growth and promoted social cohesion and respond to broader societal challenges. Specifically, the Bruges Communiqué reflected the following objectives of the Education and training 2020 framework:

- making VET more attractive and relevant and encouraging quality and efficiency;
- making lifelong learning and mobility a reality in VET;
- encouraging creativity, innovation and entrepreneurship in VET;
- making VET more inclusive (Vuorinen & Watts 2012).

To help realise these overall objectives, the Bruges Communiqué was supported by a series of actions (short-term deliverables) that participating countries worked on over the period 2011-14. On that ground a lot of reforms have introduced the approach of learning outcomes in curriculum design, the development of national qualification frameworks, the link of this frameworks to validation of non-formal learning and the increase of participation in VET (CEDEFOP 2015).

While most national agendas have focused on making VET more inclusive, help reduce early leaving and provide learning opportunities for students at risk, less attention has been given on VET excellence and its labour market relevance. Challenges have been marked to the IVET area and the need to introduce new policies have been stressed. These policies included the need to develop better informed labor market outcomes, and more coherent strategies for continuing professional development for VET. In the policy priorities are also included the contribution of VET -particularly work-based learning and apprenticeships- to tackle youth unemployment, the development of competences for teachers and trainers in VET, the involvement of employers and trade unions in VET governance and management. As an indication of the urgency of reforms in this sector, a considerable number of country specific recommendations has been adopted within

the European Semester. The Rethinking Education Communication (2012) underlined the need to increase participation in work-based learning and invest in building world-class VET systems. The European Alliance for Apprenticeships, Youth Guarantee as well as the Youth employment initiative –all launched in 2013 –confirmed the crucial role of VET to improve employability of young people and stressed the role of learning in the workplace as an effective way to re-train and up-skill adults (European Commission 2013).

On 22 June 2015 the Ministers in charge of VET met in the Baltic city of Riga to renew efforts in raising the overall quality and status of VET in the context of the Copenhagen process with the aim to meet the ET 2020 strategic objectives and reaffirm the support for the wider European growth and jobs agenda.

The Riga Conclusion set five medium term deliverables that are organized around three axes in which work-based learning is included in the first axis. More concretely, the first axis endorses the development of high quality and labour market relevant vocational skills and qualifications, that are based on the learning outcomes approach. Actions related to this axis are: a) the promotion of work-based learning in all its forms, with special attention to apprenticeships, by involving social partners, companies, chambers and VET providers and also the stimulation of innovation and entrepreneurship, b) the development of quality assurance mechanisms in VET in line with the EQAVET recommendation and, as part of quality assurance systems, with continuous feedback on the use of learning outcomes.

The second axis endorses the provision of information to people in order to choose training pathways and achieve long-term employability and adaptability to evolving skills needs. To this end VET systems need to enhance access to qualifications for all through flexible and permeable systems and offer guidance services that embrace validation of non-formal and informal learning. Moreover, there is a need for curricula to strengthen key competences and development of skills in IVET and CVET (Continuous Vocational Education and Training). The last axis calls for successful implementation of reforms and the raise of VET quality and efficiency. To this end the role of initial and continuous professional development of VET teachers, trainers and mentors in both school and work-based settings is crucial (European Commission 2018).

As the policy cycle for European cooperation in VET is coming to an end in 2020, according to EU policy initiatives, the need for high-skilled labour is increasingly seen as of paramount importance to ensure future sustainable and inclusive development in Europe. Work-based learning comes to the front scene in the call for the responsiveness of VET to labor market outcomes. This strategic goal can be supported by different actions, forms and aims as the analysis of Greek case will evidence. These actions can include monitoring initiatives at national level, connecting industrial relations and education practices, setting up institutionalised intermediary support structures with involvement of social partners, support trainees in finding training places e.t.c (CEDEFOP 2019).

3. Methodological approach

This paper presents policy document analysis using as primary data legislative texts and as secondary data Eurostat quantitative sources in order to ensure the reliability and the consistency of the numerical facts presented. The methodology of qualitative content analysis is chosen with the aim to contribute to the understanding of the context and the regulatory framework for work-based learning in Greece. In general, the purpose of content analysis is to organize and elicit meaning from the data collected and to draw realistic conclusions. As per Bengtsson 2016 four stages have been followed: the decontextualisation, the recontextualisation, the categorization,

and the compilation. In the decontextualisation stage the meaning units that cover IVET and work-based learning have been identified according to the broad content areas of EU policy. In the recontextualization stage the legislative texts have been reviewed for their coverage of the all aspect of the categories that came out during decontextualisation stage. In the next stage, categorisation, content materials have been divided into domains-content areas. The analysis that have been followed is of a broad surface structure of the content (manifest analysis) and the unit of the analysis is the theme (Bengtsson 2016).

According to the above, the following categories and sub-categories have been developed to guide policy analysis:

1. Educational tradition: 1.1. IVET reforms, 1.2 IVET role, 1.3 key features, 1.4 educational culture.
2. Policy Development: 2.1 governance. 2.2. quality assurance, 2.3. regulatory Bodies.
3. Educational Provision: 3.1. educational structure, 3.2 curriculum, 3.3. assessment
4. Qualifications: 4.1 level and type of qualification, 4.2. double qualifications, 4.3 certification procedures.

Last, in the compilation stage hermeneutical analysis is attempted. This analysis is presented in the chapter four that follows.

4. The context of IVET and Work based learning in Greece

4.1. Tradition and distinctive features of IVET

Greek society has always been characterized by the demand for general education and university education. General Lykeio (GEL) has been introduced with 1976 reform and it remains since then the only and the main route of upper secondary education with almost 70% of the pupils of the corresponding age to study in it over time. Since mid- 1970s there is a constantly trend to enforce VET role for its output in the labor market and its potential to provide access in Higher Education (University and/or Technological). The "Ralli" 1977 Reform (Law 576/77) took place with a dominant orientation the "turn to technical and vocational education" and the establishment of Technical-Professional Lykeia (TEL), Technical-Professional Schools (TES) (Pagalos 2017).

Law 1566 in 1985 established a new administrative structure, Center for Vocational and Technical Education (KETE) and among others, introduced Comprehensive Multidisciplinary Lyceums (EPL) and School Laboratory Centers (SEK). This structure retained for almost 20 years and it is abolished in 1998 with the "Arseni reform". The Arseni Law 2640 /1998 introduces Technical Vocational Schools (TEE) which gave no access to Higher Education and in turn lessened even more their social demand. Since 2000 the Greek state enforces the social acceptance and attractiveness of VET. With Law 3475/2006 (during the Ministry of Mar. Giannakou) another reform is attempted in VET. The TEE are abolished and the Vocational High Schools (EPAL) and the Vocational Schools (EPAS) under the Ministry of Education are established. Since there were no specific criteria to divide vocational specialties in the two school types, Law 4186/2013 abolished the EPAS education form under the Ministry of Education and the Law 4386/2016 established EPAL as the main VET route in upper secondary education. Further to this school type, currently IVET at upper secondary level in Greece is provided in two-year apprenticeship programmes (EPAS) of the Organization of Employment and Labor force. Since 2016, post- secondary level integrates work-based learning as a main method for vocational training in three different education institutes: a) Post-Secondary Year-Apprenticeship Class, b) Institutes of Vocational Education and Training, c) and Centers of

Adult Learning (KEE), established in 2018 and abolished in 2020 (Theodorou 2017, Manousaridis & Poulakos 2018).

Despite an educational culture that favours general education, data show that there is an increasing trust in VET and its outcomes although Greece stands well beyond the EU (28) average in specific indexes. According to Eurostat data the total number of learners in upper secondary VET has slightly increased from 353,054 (2014) to 344,893 (2018) and the majority of them were male (66%). The total number of pupils enrolled in post-secondary non-tertiary education have also increased from 15,852 in 2014 to 82,860 in 2018. As for education and training outcomes, the share of young people neither in employment nor in education and training (15-24 years old) have been constantly decreasing in Greece from 20.4% in 2013 to 12.5% in 2019. On the other hand, the employment rate of upper secondary, post-secondary and non-tertiary education graduates (20 to 64 years old) have increased between 2011 and 2019 from 51,4% to 57,4%. Participation rate in adult education and training remains stable between 2010 and 2019, 3,3% and 3,9% respectively which below EU 28 countries mean 10,8%.

Last decade reforms endorse apprenticeship and work-based learning in IVET to enable smooth education to work transition and contribute to low youth unemployment and percentage of NEETs. National standards, training regulations and the quality assurance framework ensure the quality of IVET programmes. Companies provide apprenticeships in accordance with the training regulations, developed by Ministry of Education with the contribution of Social Partners. In order to increase the permeability of IVET, recent policies open the access to Higher Education for IVET graduates (CEDEFOP 2018a).

These changes in VET follow the Riga Conclusions fostering the role of work-based learning and apprenticeship schemes in VET and improving access for all to VET and to professional qualifications through more flexible and permeable systems.

4.2. Policy Development: Governance and quality assurance

IVET in Greece is state regulated combining school-based and work-based learning. IVET is offered at upper secondary and post-secondary level. Overall responsibility is with the education ministry, in cooperation with the labour ministry. Since the enforcement of work-based learning in upper secondary and post-secondary education a delegation of responsibilities in competent bodies and different levels of administration is foreseen.

In 2016 the Ministry of Education has launched the Strategic Framework for IVET which introduced work-based learning as a milestone. The framework sets out 10 strategic priorities translated into implementation measures. In short, the 10 priorities intent to:

1. improve VET's governance and introduce a mechanism that follows up implementation;
2. making visible the social role of VET and enhance VET's contribution to society;
3. improve and expand apprenticeship;
4. improve VET and labour market connection;
5. improve quality in VET;
6. improve VET's efficiency;
7. enhance permeability and mobility;
8. improve VET's attractiveness;
9. improve excellence in VET;
10. ensure the efficient use of public VET's infrastructure (including Human Resources) (Ministry of Education 2016).

For the implementation of the strategic framework, i.e. the establishment of a regulatory basis four laws/amendments, one presidential decree, eleven Joint Ministerial Decisions and eighteen Ministerial Decisions were issued. Law 4610/2019 integrated all the amendments related to apprenticeship and addressed the issue of access to tertiary education.

In 2017 another benchmark has been added. A common ministerial decree has introduced the new Quality Framework for Apprenticeship. For the governance of the Apprenticeship system a number of responsibilities are delegated to the social partners, chambers, the Central Union of Chambers, the Union of Regions and the Central Union of Greek Municipalities. According to this Apprenticeship is defined as the educational system in which learning time alternates between workplace and educational structure. The apprentice is bound by an Apprenticeship Contract with the employer, receives a fee or allowance, in accordance with applicable law, and has insurance coverage. Apprenticeship is implemented based on a learning program which is divided into the workplace and the educational structure. The employer undertakes to provide the apprentice with on-the-job training, according to a defined program, which, in combination with the learning program in the educational structure, leads to certification of the knowledge and skills acquired by the apprentice and leads to a specific specialty (Common Ministerial Decree 26385/2017).

The Common Ministerial Decree 26385/2017 also introduce new criteria for curricula design that considers the professional-occupational standards (*Eppagelmatika perigrammata*) certified by the National Organization for the Certification of Qualifications and Vocational Guidance as a basis for developing training curricula. It endorses the development of curricula in the approach of learning outcomes. The Quality Framework foresees development of knowledge application skills and problem-solving skills in authentic professional environments and enforces skill alignment to the acquisition of qualifications in accordance with the National Qualifications Framework. Active learning and the development of social skills, innovation and entrepreneurial skills and skills for adaptability are considered as high importance for training curricula review.

The shift to the work-based learning has also affected the methods of assessment of its leaning outcomes. Portfolio assessment, task completion, workplace diaries are recommended in policy texts for the evaluation of laboratory and workplace learning. Also, the article 4 of the Common Ministerial Decree 26385 (2017) defines that programmes for workplace learning are developed according to the Framework of the Vocation (Eppagelmatiko Perigramma) and the curriculum adopts the approach of the learning outcomes.

For the governance of Apprenticeship system, the Quality Framework for Apprenticeship ordines a National Coordinating Body for Design and Implementation of the apprenticeship with the participation of the co-competent Ministries of Labor, Social Security and Social Solidarity and Education, Research and Religions, the OAED, the Union of Regions), of KEDE (Central Union of Municipalities of Greece).

The National Coordinating Body may consult with scientific chambers and scientific bodies and then suggest to the competent Ministers regarding a) improvement of the institutional framework and b) issues concerning the design, implementation and evaluation of the Apprenticeship programs.

Also, in Centers for Employment (KPA2) of Greek Manpower and Employment service (OAED), Apprenticeship Support Groups are established in which participate teachers of EPAS Apprenticeship School of OAED or the Liaison Office of EPAS and teachers of Ministry of Education or trainers of Institutes of Vocational Training (IEK). The apprenticeship is coordinated by the

OAED representative (Common Ministerial Decree 26385/2017). The same CMD foresees responsibilities for Local / Sectoral Apprenticeship partnerships and the role of Social Partners.

4.3. Educational provision of work-based learning in IVET

Work-based learning in Greece is provided at upper secondary and post-secondary level and it is an integral part of IVET programmes. The turn into workplace learning began with Article 23 of Law. 4186/2013 on "Restructuring Secondary Education and other provisions" as it has introduced the work-based component in the Internship-Traineeship in Institutes of Vocational Training (IEK). Further regulations have changed the provision of workplace learning in IVET. Milestone to these legislative developments is policies for EPAL and Post-Secondary Year Apprenticeship Class in 2016 since they extended work-based programmes in a new non-formal learning education type, enriched the training content with technical specialties and rose the awareness on the alignment of education to labor market needs (Ministry of Education 2016).

Work-based learning in Greece is provided in upper secondary and post-secondary level with the aim to strengthen student knowledge and skills and enhance work experience in internship places offered by organizations and enterprises (companies) of public and private sector.

4.4. Work-based learning in upper secondary level

Compulsory schooling lasts until age 15 and completion of lower secondary education programmes (*Gymnasio*). There are two main routes at upper secondary level: general education and VET. Both lead to an equivalent upper secondary school leaving certificate at European Qualification Framework (EQF) level 4. On completion of the first year, learners are allowed to change direction from general to vocational education and vice versa.

The main IVET route is *Epaggelmatiko Lykeio* (EPAL) which uses three-year vocational programmes and lead to a specialisation degree. The structure of EPAL is as follows:

- grade one: common for all learners (general education);
- grade two: learners choose among nine sectors;
- grade three: specialisation year.

Following this structure, curriculum is organised accordingly. In the first grade of these programmes, students follow orientation courses for 20% of their teaching hours and occupation specific courses for 17,2%. General education subjects cover the rest 62,8% of their teaching hours confirming the introductory character of the first class as broad occupation induction to further programme choices. The second grade is organised in 9 occupation domains and the occupation specific courses extend to 70,9% and the rest 29,1% corresponds to general education subjects. The last grade of these programmes is organised in 35 occupation domains but the analogy of occupation specific courses to general education subjects remains stable to 70,9% and 29,1% respectively (Ministerial Decree F20/63868/D4, 2019).

Regarding the assessments, Law 4610/2019 reduces at a range of more than 50% the number of examinations in all the classes of EPAL (Article 117), changes the type and the method of assessment in progression and final assessments of EPAL and also of Post-Secondary Year Apprenticeship Class. According to the competent Ministerial Decree F4/72379/D4 (2019) examined courses are assessed with written examination (open questions and multiple choices) and no-examined course are assessed with multiple methods as portfolio assessment, demonstration of skills e.t.c.

EPAL programmes are also offered at evening classes for adults and employed students below 18 years old with lower secondary education. General upper secondary education graduates are entitled to enrol in the second year of EPAL.

EPAL graduates can take part in national examination for admission to tertiary education. Recent legislation, Law 4610/2019, reinforces VET permeability and its equivalence to general education. Quotas for EPAL graduates in higher education programmes are: (a) 5% admissions quota to departments and introductory directions of polytechnics, departments of medicine, dentistry, veterinary medicine, pharmacy, physics, biology and geology, (b) 10% admissions quota to university departments and introductory university directions, (c) 20% admission quota to the School of Pedagogical and Technological Education (ASPETE). The graduates of the evening EPAL are also admitted to additional positions in Higher Education at a rate of 1% of the total number of applicants. Hence, the Ministry expands for the first time the possibility of access to Higher Education for graduates of the evening EPAL.

As per the above analysis although EPAL does not provide workplace learning programme, they are presented in detail for the opportunities of vertical mobility they provide to their graduates, namely entrance in higher education level (university and technological) and/or Post-Secondary Year-Apprenticeship class. This opportunity of gaining a double qualification is an innovation for IVET in the Greek case since for the most than 40 years this school type struggled periodically to provide access in subject specific courses in the technological domain of Higher Education.

Furthermore, two-year apprenticeship programmes are provided from the school type of EPAS, the vocational apprenticeship school of the Greek Manpower and Employment Service (OAED). EPAS implement a dual apprenticeship system, which combines work-based (on-the-job) learning with theoretical and laboratory courses at school. EPAS schools are open to young people, 16 to 23 years old. Admission to the Vocational Apprenticeship Schools (EPAS) is possible for holders of First High School Class Diploma and age to 23 years. The admission to the EPAS is reached after specific points awarded candidate criteria (degree of qualification, social and economic criteria). The Greek Manpower and Employment service (OAED) operates a total of 51 Vocational Apprenticeship Schools (EPAS).

In EPAS the educational programme is occupation specific and the total learning hours are in favor of laboratory and work-based learning, since school-based curriculum with both general subject knowledge and laboratory courses have equal learning time with work-based learning. The laboratory part of the course is carried out in EPAS laboratories or in school laboratories of the Ministry of Education. The on-the-job training (work-based learning) takes place four or five days a week in public or private sector enterprises on terms specified in the relevant apprenticeship contract. Participating enterprises are subsidized. The school is responsible for finding work placements for its students.

Each theoretical module is assessed through examinations both continual written examinations and final-semester/yearly examinations. Each laboratory module is assessed through practical examination which can combine written, oral or mixed mode and/or an exemplary construction by the end of the semester/year (Common Ministerial Decree 40087/6-12-2007).

Graduates of the Vocational Apprenticeship Schools (EPAS), upon completion of exams, receive a license to practice a trade or profession and they are absorbed in the labour market as skilled technicians. The qualification awarded on completion of EPAS programmes is the Vocational School (EPAS) Certificate. This qualification is at Level 4 (NQF/EQF). EPAS graduates can also continue their education in post-secondary VET programmes.

4.5 Work-based learning in post- secondary level

Work-based learning in post-secondary education level is provided in Post-Secondary Year - Apprenticeship Class and in Apprenticeship courses in Institutions of Vocational Education and Training (IEK).

More analytically, Law 4386/2016 enacted the "Post-Secondary Year - apprenticeship class", a "Post-secondary Studies Circle " which belongs to the non-formal education sector in Greece. The programme aims to offer EPAL graduates the opportunity to upgrade their education qualifications and obtain work experience. The "Post-secondary year - apprenticeship class" is optional. Admission to the "post-secondary year - apprenticeship class is possible for holders of: a) Diploma of General Upper Secondary Education (Geniko Lykeio), b) the EPAL Diploma of Upper Secondary Vocational Education, as well as of older types of vocational schools, equivalent to EPAL according the Law. The "Post-secondary year - Apprenticeship Class" implements the dual education system (apprenticeship), has a duration of one (1) school year and includes: a) apprenticeship training in the workplace, the work-based learning component, and b) Specialization courses.

The " Post-Secondary Year - Apprenticeship Class " has run for the school year 2015-2016 on a pilot phase in two EPALs of the country, namely EPAL Koropiou (South Greece) and 2nd EPAL Stavroupolis (North Greece). The implementation of the "Pilot Apprenticeship Class» lasted for nine months and the specialties that have been offered are: a) Electrical installations, b) Modern agriculture business. The Ministerial Decree F7/179513/D4, 1.11.2016, FEK 3529 broadens for the school year 2016-2017 the implementation of the Apprenticeship Class for each and every EPAL, which corresponds to the prerequisites: a) laboratory tutors, b) laboratory resources, c) Apprenticeship placements (CEDEFOP 2018b, CEDEFOP 2019).

Since then, participants have more than doubled (+231%), there are 49% more EPAL schools offering apprenticeship programmes, and there are 128% more apprenticeship programmes offered all over the country. In the school-year 2019 Post-Secondary year - Apprenticeship class has run in 21 specialisations, five more than in 2017-18 and 15 more than in 2016-17. The number of learners has risen sharply from 1 118 in 2016/17 to 3 706 in 2018/19. In total there were 5 000 applications in 2018/19, marking a 50% raise in comparison to the previous year. A figure that also highlights the successful expansion of the Post-Secondary year - Apprenticeship class is that almost half of the placements are in the private sector; this significantly increases participation by the private sector in the new apprenticeship programme from 25% in 2017/18 to 48% in in 2018/19 and signals that the reform is well-received by the labour market. The most popular specialisations are: vehicle technician (718 apprentices), assistant nurse (518 apprentices), electrical systems, installations and networks technician (390 apprentices), day-nursery assistant (344 apprentices) and administration and finance clerk (294 apprentices) (CEDEFOP 2018b).

The one-year apprenticeship programmes lead to EQF level 5, (WBL 100%) The educational programme embodies 100% occupation specific courses and it is divided in 203 teaching hours laboratory courses (16,87%) and about 1000 hours (83,13%) work -based learning in companies. The "Work based learning" component runs for twenty-eight (28) hours per week, which are allocated in at least four (4) days. Between the company and the trainee an Apprenticeship Contract is signed, which is further validated by the School Principal and an Officer of OAED.

The Apprenticeship Contract is associated with the Learning Agreement (an Annex of the Apprenticeship Contract) which is compatible with the Curriculum of each specialty and includes knowledge, skills, tasks and projects which the trainee will undertake (Art. 7, Common Ministerial Decree 20405/373, 17.5.2016). The Curricula of each specialty are developed under the

responsibility of Institute of Educational Policy (IEP) and have the following structure: a) Learning Objectives that follow Blooms taxonomy, b) learning contents, c) teaching instructions.

In Post-Secondary Year - Apprenticeship Class (Law 4610/2019) apprentices are assessed with written or oral exams and by demonstrating skills in laboratory and executing a specific project, depending on the course they attend. It is possible to choose a form of examination or a combination of them. The format of the test is defined by the teacher/s who teach the course. Each trainee is supervised by an EPAL tutor, which visits the workplace for at least on visit per month and submits Monthly Reports (Ministerial Decree F7/98431/D4, 19.6.2019).

Also, at post-secondary level, the work-based learning component (WBL > 60%) is integrated in another educational structure, the Institutes of Vocational Training (IEK). Two-and-a-half-year IVET programmes offered by public and private IEK training providers to upper secondary graduates. The training programme embodies occupation specific courses and it is organized in vocational orientation group courses, each one further divided in vocational specialties. Apprenticeship lasts for nine hundred and sixty (960) hours, while the learning time alternates between 768 learning hours workplace learning in companies and 192 learning hours in school. Occupation specific courses -both theoretical and laboratory- are taught for 4 semesters and 1200 learning hours. In IEK, further to the possibility of apprenticeship, students follow a semester of traineeship which covers 960 work -based learning in companies. Through work-based component IEK trainees strengthen knowledge and skills and gain work experience in the relevant training sectors, in places offered by organizations and enterprises (companies) of public and private sector. For each trainee the employment agency provides internship supervisor in line with the trainees' specialty (General Secretariat for Vocational Education, Training and Lifelong Learning 2020a, 2020b).

The training curricula of IEK are included into training guidelines designed in the approach of learning outcomes according to the Framework of Quality in 2017 (Common Ministerial Decree 60615/D4/2017). They are sorted by the professional orientation group, sector or specialty. The training guides of each specialty includes clear professional profile and learning outcomes analyzed in knowledge, skills and abilities for each teaching module. They also include the timetables with the teaching content for both theoretical and practical modules, the teaching methods, learning resources and the qualifications of the educators. The curricula may connect learning outcomes with Credits, according to the National Qualifications Framework and the European Credit System for Vocational and Education and Training – ECVET, described in European Parliament and Council Recommendation of 18 June 2009 (EE C 155/02 of 8.7.2009).

Assessment -for both theoretical and practical modules in the school unit- is taking place through continuing and final examinations, that means midterms as 'progress assessment' and at the end of each semester of study, as final module exam. The tutor/educator sets the content of the examinations and/or the assignments for both theoretical and practical modules, according to the learning outcomes and objectives of learning described in training guides. The tutor/educator marks the scripts and the grade is completed to the student file. For the theoretical module the total grade is calculated by the following weightings: 60% the final examinations and 40% the progress examination (IEK Regulation 2014, 14-15). Thus, assessment methods of school subjects are examination, assessment setting, task completion and final stages exam and of the work-based (internship) are task completion and outcome achievement in workplace learning.

Students who successfully complete all the prescribed semesters are awarded an attestation of vocational training. This Award of Vocational Training (VEK) entitles the graduates to take part in the (practical and theoretical) vocational training certification examinations conducted under the

jurisdiction of EOPPEP. Upon successful completion of the certification exam, graduates of Institutes of Vocational Training (IEK) are awarded occupational specialisation Diploma of Initial Vocational Education and Training, IEK diplomas at NQF/EQF level 5.

4.6. Qualifications and certification of work-based learning

The certification of individuals' competences and skills is the responsibility of the National Organisation for the certification of Qualifications and Vocational Guidance, named EOPPEP. Also, EOPPEP is the competent body for National Qualification Framework (NQF), for quality assurance of non-formal education, accreditation of providers, and certification of qualifications. Under these authorities EOPPEP conducts certification examination for graduates of IEK and Post-Secondary Year- Apprenticeship Class.

Currently, four qualifications are listed in the National (Hellenic) Qualifications Framework (NQF) for which the typical learning routes include an element of work-based learning and are the following (EOPPEP 2020 b):

- a) Vocational School EPAS Certificate as Level 4 qualification NQF/EQF.
- b) Vocational upper secondary School Degree EPAL + Diploma in Post-Secondary Year - Apprenticeship Class as Level 5 qualification NQF/EQF.
- c) Institute of Vocational Training IEK Diploma as Level 5 qualification NQF/EQF.

EOPPEP conducts certification examinations for Post-Secondary Year - Apprenticeship Class graduates in 20 specialties, which cover different industries such as pharmaceutical, business administration, beauty and aesthetics, technology, computing etc. and also conducts certification examinations for graduates of IEK institutions. The IEK certification examinations are conducted in 72 specialties for which there is an accredited education programme from General Secretariat for Vocational Education, Training and Lifelong Learning (EOPPEP 2020a).

More concretely, the Common Ministerial Decree 2944/30.4.2014/FEK 1098 sets out the institutional Framework for Certification of Graduates from IEK. According to this Decree the Ministry of Education determines the Certification system of IEK graduates in collaboration with National Organization for the Certification of Qualification and Vocational Guidance, EOPPEP. The conduction of examinations is a collaborative effort between different administrative levels. At the central-national level the designation of a "Central Examination Board for the Certification of Vocational Training", (KEEPEK), is a prerequisite of the system, mainly responsible for quality assuring the processes and procedures involved in the certification process. KEEPEK consists of members of EOPPEP, representatives of Ministry of Education and the Ministry of Labour as well as the Confederation of Greek Employers' (S.E.B.) and Employees' associations (G.S.E.E.) and the Greek Chamber of Finance and Commerce.

The KEEPEK also recommends, to the Board of E.O.P.P.E.P. the definition of the Examination Centers for theoretical and practical part, the definition of the examination centers for each examination period, the definition of the Head of the Administration, the Secretaries, the Coordinators of practical examinations, the examiners, the supervisors (Common Ministerial Decree 28960/7.6.2016/1601).

The IEK Certification Examinations, run by EOPPEP, is common to both public and private IEKs and is based on theoretical and practical tests-examinations. For the preparation of the examinees and the consistency of the topics of the exams, EOPPEP has developed a depository of examination topics for theoretical and practical part. The duration of examination lasts for maximum 3 hours for theoretical part and maximum 2 hours for practical part. KEEPEK chooses the examination

topics by electronic ballot- the same day that the tests are conducted- provided that they cover the subject knowledge and skills of the specialty and the occupational profile. The scripts of the theoretical part are blindly graded in 20 points scale by two assessors, or even of a third one in the case of more than three grades discrepancy. The practical part is assessed by three assessors on a nominal scale: fail/pass.

In order to achieve the certification, one must successfully pass both parts of the examination. Successful completion of the examination leads to the Certification Diploma, that is named Diploma of Initial Vocational Education and Training, IEK diplomas at NQF/EQF level 5.

For the graduates of 'Post-Secondary Year - apprenticeship class, upon completion of the class, a Certificate of Attendance is issued to graduates, in order to enable them to participate in certification exams (EOPPEP 2020c).

Certification of graduates of apprenticeship class has been designed and initiated by EOPPEP (Ministerial Decree 90050/Y2/2018) following the procedures of IEK certification for NQF/EQF level 5, presented below. The accreditation of the first phase's graduates took place in July 2018 with 400 graduates participating. The second cycle of the Certification of apprenticeship has been conducted in 17th February 2019. In these examinations participated 1,700 graduates from the 16 specialties that operated in the school year 2017-18 and the 3 pilot programmes of the post-secondary year - apprenticeship class of EPAL. The certification exams of the graduates of the Post-Secondary Year - Apprenticeship Class of Vocational High Schools (EPAL), are divided into Theoretical and Practical Examinations exams and are conducted at national or regional level with topics derived from the current List of Certification Exam Subjects of the respective specialty (EPAL) (Ministry of Education 2019).

5. Discussion

Greece has an educational culture that favors general education and IVET is largely based in upper secondary VET, EPAL schools. The work-based learning component is integrated in the educational types/structures of EPAS, Secondary Year Apprenticeship class and IEK. Last decade reforms endorse apprenticeship and traineeship, terms which are used in regulatory framework to indicate the work -based learning component in IVET, to enable smooth education to work transition and contribute to low youth unemployment and percentage of NEETs. National standards, training regulations and the quality assurance framework ensure the quality of IVET programmes. Companies provide apprenticeships in accordance with the training regulations, developed by Ministry of Education with the contribution of Social Partners. In order to increase the permeability of IVET, recent policies open the access to Higher Education for IVET graduates. These changes in VET follow the Riga Conclusions fostering the role of work-based learning and apprenticeship schemes in VET and improving access for all to VET and to professional qualifications through more flexible and permeable systems. The Ministry of Education expands for the first time the possibility of access to Higher Education for graduates of the evening EPAL and broadens the admission quota for graduates of EPAL.

The overall picture emerging from this description of the certification processes observed in the non-formal education sector in Greece is that it is a system in transition. New programmes and new qualifications are being introduced, affording an opportunity to develop new certification processes more appropriate to qualifications based on learning outcomes rather than on programme inputs. These certification processes include measures for the assessment of learning outcomes achieved, for the validation and grading of these assessments, and for the awarding of

certificates. It is also timely to consider what quality assurance arrangements should underpin and guarantee the reliability and consistency of the certification processes.

The mapping of the existing certification processes indicates a reliance on examinations (typically both theoretical and practical) as the main assessment instrument. There are exceptions: the IEK programme allows for a variety of assessment methodologies as 'progress assessment', although the EOPPEP certification assessment that leads to the IEK qualification is entirely examination-based. The real outlier is the emerging EPAL plus Post-Secondary Year -Apprenticeship Class, for which a wide range of assessment methodologies are proposed. Looking at the quality assurance arrangements associated with these programmes and qualifications, it is clear that they are (as would be expected) designed to match the prevailing assessment and certification processes: they are mainly focused on monitoring and improving the quality of input and provision, and a key instrument is the rigorous and efficient organisation of final examinations.

The situation in relation to the work-based learning elements of programmes in the Greek non-formal education sector is that the outcomes of this learning, in general, are not assessed except in the context of the overall assessment of the programme – e.g. in the final examination. Quality assurance arrangements are focused in the main on ensuring adherence to the conditions of the apprenticeship/traineeship and maintenance of adequate standards in the programme provision. It is anticipated that emerging new qualifications will introduce changes in relation to assessment practices and create the need for new approaches to quality assurance of the certification process. The education ministry, with the significant contribution of the social partners, is currently initiating a VET reform with its view being directly linked to increasing productivity and economic growth and reducing the unemployment rate. It will also aim to raise VET attractiveness, increase VET graduates' employability and further improve VET responsiveness to labour market needs. The main pillars of this reform for VET and LLL include: a) linking VET and LLL with the labour market, using labour market diagnosis and tracking of VET graduates; b) redesign of programmes and teacher training for IVET, c) endorsing career counselling and internships in VET programmes and d) creating pilot vocational schools which will support innovation.

In the light of this reform, the EPAL -called Pilot-Experimental EPAL- will operate as pairs with Pilot-Experimental IEK. Also, the National System of Vocational Education and Training (ESEEK) is established, which is developed at levels 3, 4 and 5 of the National Qualifications Framework, corresponding to those of the European Qualifications Framework. The new policy agenda endorses Joint Strategic Planning of VET and Lifelong Learning and enforces the direct connection of VET, Lifelong Learning and labor market, while foreseeing the substantial participation of the social partners in the design of the policy.

5. Conclusion

Work-based learning is mostly annotated as apprenticeship in the legislative-regulatory framework and it provided in upper secondary and post -secondary level. Learning outcomes achieved both in school unit and work-place unit are certified for Level 5 NQF/EQF qualifications, except EPAS graduates for Level 4 NQF/EQF qualifications. Recent reforms in EPAL increase the permeability of IVET and offer the opportunity of double qualifications to the graduates, that is to access Higher Education and Secondary Year Apprenticeship class.

In this context the positive scenario on the role of VET is foreseen. VET expands to higher level and form a backbone of lifelong learning. Also, the skills provided by VET are essential for continuous economic growth and upholding welfare. The increasing participation in work-based learning

confirms the awareness on the crossing boundaries between school and workplace learning and its importance for skills acquisition. Adjusting to labour market needs and avoiding skill mismatches requires flexible education and training opportunities that combine different types and levels of learning and work-based learning throughout life, and thus connecting initial to continuous VET. Thus the future of VET in Greece, especially regarding its work-based learning component shall face the following challenges: connecting learning outcomes to competences in work place in order to provide consistent type for training curricula and certification syllabuses; adopting assessment methods especially in certification procedures that can evidence technical as well as methodological and social skills; cooperating with primary and lower secondary education to ensure that the basic skills learners acquire become a bridge to VET and work-based learning; making use of skills data on transition and labour market outcomes to inform VET provision reinforcing structured dialogue between education authorities and social partners.

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