

WORK-BASED LEARNING IN EU CANDIDATE COUNTRIES

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EXECUTIVE SUMMARY

Work-based learning (WBL) and in particular apprenticeship have been high on the policy agendas of many countries and international organisations for several years. The five EU candidate countries – Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey – are no exception. Together with the EU Member States, they have agreed on a new set of medium-term deliverables that includes WBL. All five countries have also become part of the European Alliance for Apprenticeships (EAfA).

In the candidate countries, vocational education and training (VET) is mainly provided in three- and four-year programmes which are deeply rooted in the formal education system. The four-year programmes usually lead to certificates that allow learners to enter higher education. Very few of these three- and four-year programmes have compulsory WBL components. An exception is Turkey, where all four-year programmes include a small compulsory WBL part. Turkey is also the only country that has established an apprenticeship system.

In most of the candidate countries, the regulatory frameworks provide the policy cover for WBL during formal three- and four-year VET. Curriculum frames usually include general subjects, vocational theory and vocational practice. In theory, a substantial part of the vocational practice – or in some cases even all the practical training – could be implemented in the form of WBL. However, such frameworks have often not been supported by the necessary by-laws that would, for example, stipulate the rights and obligations of the companies, learners and VET schools. For instance, the selection of learners, their contractual situation and their remuneration often remain unclear and may differ from school to school or company to company. Further, common standards for the administration and supervision of learners are often not in place. As a result, WBL is still not widespread. Instead, most of the practical training takes place in the VET schools' workshops.

Wherever WBL takes place, VET schools are usually the main coordinating body. In most of the candidate countries, VET schools are responsible for securing enough places for WBL, regulating the admission of learners and organising the alternation of WBL and school-based learning. VET schools usually also check and validate the suitability of the training environment. In the majority of the countries, companies are still wary of WBL and have not yet appreciated its full potential. Business associations, sector organisations and trade unions usually do not have the human and financial resources to promote and/or coordinate WBL.

In the majority of the candidate countries, robust mechanisms for the financing of WBL are still missing. This includes the remuneration of learners, the assessment of WBL, the ways to fund WBL within a company, and the compensation of employers for the cost of training (for instance for consumables, use of equipment, working time of in-company trainers).

In most candidate countries, the training of in-company trainers is not mandatory and there are no regular funds earmarked for training-the-trainer activities. Only in Turkey are enterprises obliged to provide a training master when there are eight or more apprentices or students doing their vocational practice or internship in the company. However, most countries have developed programmes to train teachers as school–business liaison persons who also coordinate WBL activities.



INTRODUCTION

Work-based learning and the European agenda on vocational education and training

At the Riga summit in June 2015, the ministers responsible for vocational education and training (VET) reaffirmed their efforts towards raising the overall quality and status of VET in the context of the Copenhagen process, in order to meet the Education and Training 2020 (ET 2020) strategic objectives, as well as their support for the wider European growth and jobs agenda.

The EU Member States, the candidate countries, the European social partners – the European Trade Union Confederation (ETUC), the Union of Industrial and Employers' Confederations of Europe (BusinessEurope), the European Association of Craft, Small and Medium-sized Enterprises (UEAPME) and the European Centre of Enterprises with Public Participation (CEEP) – and the European Commission agreed on a new set of medium-term deliverables (MTDs) for the period 2015–2020 (European Commission, 2015a).

The first of the five MTDs focuses on work-based learning (WBL) in VET: 'Promote work-based learning in all its forms, with special attention to apprenticeships, by involving social partners, companies, chambers and VET providers, as well as by stimulating innovation and entrepreneurship.'

All the candidate countries chose WBL as a priority MTD. The Riga conclusions included the following concrete actions and/or policy options:

- mobilising initiatives at national level to boost the share of WBL in VET programmes in schoolbased programmes and those combining learning in schools and enterprises, as appropriate;
- mobilising actions to strengthen, review or introduce apprenticeships in the context of the European Alliance for Apprenticeships (EAfA), and integration of apprenticeships provided under Youth Guarantees in national VET systems;
- creating a clear regulatory framework (for WBL) taking into account existing regulations, industrial relations and education practices;
- setting up/enhancing institutionalised intermediary support structures with the involvement of chamber, business and sector organisations to manage administration related to WBL in companies;
- assisting VET providers in finding training places for trainees and VET teachers and trainers in enterprises, and supporting SMEs in providing apprenticeship places (including incentives), etc.

All five candidate countries are part of the EAfA. The Alliance is a platform managed by the European Commission in close cooperation with EU social partners. It brings together governments and other key stakeholders, for instance business associations, individual companies, social partners, chambers, VET providers, regions, youth representatives and think tanks. The common goal is to strengthen the quality, supply, image and mobility of apprenticeships in Europe.

As part of its New Skills Agenda for Europe, the European Commission proposed that business and social partners should be involved in designing and delivering VET at all levels and that VET should include a strong work-based dimension (European Commission, 2016a, p. 5). To inspire and support the various stakeholders to make WBL happen, the Commission identified 20 guiding principles for high-performance apprenticeships and WBL (European Commission, 2016b). Furthermore, the European Pact for Youth supports the employability of young people through partnerships between relevant public and private stakeholders (European Commission, 2015b).



Why this paper?

Among the five Riga MTDs, all five candidate countries have chosen WBL in VET as the top priority. The European Training Foundation (ETF) started to support each country in the development of policy options for WBL through an ex-ante impact assessment in 2016. This paper builds on the results of the ex-ante analysis and aims to shed further light on the status of WBL in the five countries.

The main goal of this paper is therefore to provide a brief and clearly structured snapshot of WBL. The document will contribute to the international debate and support mutual learning among the candidate countries. The paper addresses the following questions:

- Which national institutions and stakeholders are involved in WBL?
- To what extent is practical training, and in particular WBL, anchored in formal (upper) secondary VET programmes?
- Are there cooperation mechanisms for WBL in place?
- How is WBL financed?
- Are there systems in place to prepare teachers and trainers for WBL?

The analysis also covers the following two aspects of WBL:

- Are learning outcomes or learning objectives specified for the WBL components of the VET programmes?
- Are there assessment procedures or tools for WBL in place?

Further, the annexes provide detailed information for each candidate country on the following issues:

- How many and what kind of VET programmes (occupation, sector) are offered in the country?
- How many students are enrolled in those VET programmes?
- How many schools offer those VET programmes?
- When were those VET programmes last reformed, and are there plans for future reforms?



1. WORK-BASED LEARNING IN VOCATIONAL EDUCATION AND TRAINING

The term 'work-based learning' refers to learning that occurs when people do real work in a real work environment. This is paid or unpaid work that leads to the production of real goods and services. Practical learning that takes place in an educational institution – for instance in a vocational college's workshop – and classroom-based learning that happens to take place in an enterprise are not WBL. Virtual firms, practice firms and simulation tools are used by some educational institutions. These are not a substitute for the participation of learners in work practice and process, as they cannot create all of the features of a real workplace, but they can be useful when the alternative is difficult to access (ETF, 2014, pp. 3–4).

There are different approaches to WBL in VET. The Inter-Agency Work Group on WBL (Cedefop, ETF, European Commission, ILO, OECD, UNESCO) has identified three main types of WBL.

- Apprenticeships provide occupational skills and typically lead to a recognised qualification. They combine learning in the workplace with school-based learning in a structured way. In most cases, apprenticeships last several years. Most often the apprentice is considered an employee, and has a work contract and a salary.
- Traineeships and internships are workplace training periods that complement formal or nonformal education and training programmes. They may last from a few days or weeks to months. They may or may not include a work contract and payment. (The EU has established a Quality Framework for Traineeships that recommends written agreements.)
- On-the-job training is training which takes place in the normal work environment. It is the most common type of WBL throughout an individual's working life.

These most common types of WBL usually – but not always – combine elements of learning in the workplace with classroom-based learning.

The benefits of WBL for learners, employers and society are well established. WBL provides learners with the opportunity to develop specific skills and knowledge in the workplace, and also to learn generic employability skills. It offers opportunities not only for professional but also for personal development, not least for less advantaged groups. WBL can also facilitate the establishment of occupational or industry networks. VET programmes that combine WBL and learning in the classroom can lead to improved employability, faster school-to-work transition and better access to jobs (Atkinson, 2016, p. 8).

Employers may benefit directly from better technical and job-specific skills among learners, graduates and employees. This can lead to higher productivity and growth. The recruitment potential of learners and graduates is another major benefit for enterprises.

For the society as a whole, WBL can lead to better and more relevant skills and thus to stronger economic development. It can help to strengthen the link between the world of education and training and business.

The design and successful implementation of apprenticeship and advanced internship schemes require well-developed institutional arrangements and effective education–business partnerships at many levels. Among the major challenges in middle- and low-income countries are low membership of employers' or business associations, a large informal sector and economies dominated by micro and small enterprises, a lack of tradition of cooperation between VET schools and companies and limited public funds to support WBL (ETF, 2014, p. 11).



2. THE REGIONAL CONTEXT: KEY ISSUES

The economies of the candidate countries are dominated by micro enterprises (those with fewer than 10 employees). These account for more than 90% of all enterprises, ranging from 90.9% in the former Yugoslav Republic of Macedonia to 97.0% in Turkey. Micro enterprises generate most of the employment in all five countries (between 45.2% in Turkey and 42.4% in Serbia), followed by large companies in Serbia (29.6%), Turkey (24.5%) and the former Yugoslav Republic of Macedonia (23.4%). In Albania, medium enterprises create slightly more employment than large enterprises.

	Albania		Montenegro		М	MK		Serbia		Turkey	
	Number	Share (%)	Number	Share (%)	Number	Share (%)	Number	Share (%)	Number	Share (%)	
Enterpris	ses										
Micro	73,916	95.11	20,364	92.91	48,394	90.86	269,931	95.95	2,362,995	97.01	
Small	3,026	3.89	1,278	5.83	4,041	7.59	8,903	3.16	48,229	1.98	
Medium	678	0.87	238	1.09	702	1.32	2,011	0.71	20,692	0.85	
Large	99	0.13	37	0.17	123	0.23	489	0.17	3,858	0.16	
Total	77,719		21,917		53,260		281,334		2,431,916		
Employn	nent										
Micro	139,120	43.42	n.a.	n.a.	113,536	33.26	589,686	42.41	5,312,800	45.19	
Small	58,067	18.12	n.a.	n.a.	75,758	22.19	179,178	12.89	1,491,995	12.69	
Medium	62,362	19.47	n.a.	n.a.	72,234	21.16	210,609	15.15	2,072,448	17.63	
Large	60,823	18.99	n.a.	n.a.	79,838	23.39	411,030	29.56	2,879,712	24.49	
Total	320,373				341,365		1,390,503		11,756,955		

TABLE 2.1 ENTERPRISES AND EMPLOYMENT IN THE CANDIDATE COUNTRIES, 2013 OR LATEST YEAR AVAILABLE

Source: OECD et al., 2016.

High unemployment remains a common problem in Albania (17.1%), the former Yugoslav Republic of Macedonia (26.1%), Montenegro (17.5%) and Serbia (17.7%), with rates above the EU-28 average (9.4%; all data for 2015 and age 15+). Unemployment in Turkey (10.3% in 2015; ages 15–75) is significantly lower than in the other candidate countries and close to the EU-28 average.

Youth unemployment is a serious concern, with rates ranging from 48.2% in the former Yugoslav Republic of Macedonia, 35.9% in Montenegro, 34.9% in Serbia, 28.9% in Albania to 19.5% in Turkey, compared to 19.4% in the EU 28.

According to figures from Eurostat and the countries' national statistical offices, the percentages in 2015 of young people (15–24; Albania 15–29) who are not in employment, education or training (NEET) are 32.8% in Albania, 24.7% in the former Yugoslav Republic of Macedonia, 23.9% in Turkey, 19.9% in Serbia and 19.1% in Montenegro. In Turkey, the difference between the rates for young women and young men is substantial: while only 14.1% of young men are NEET, the rate for young women is 33.7%.





FIGURE 2.1 UNEMPLOYMENT AS PERCENTAGE OF TOTAL POPULATION (15+), WOMEN (15+), MEN (15+) AND YOUTH (15–24), 2016

Note: Total unemployment ME, MK, TR: 15–74. Youth unemployment AL: 15–29. Sources: National statistical offices; Eurostat; ETF, 2017.

Recent school-to-work transition surveys by the International Labour Organisation in Montenegro, the former Yugoslav Republic of Macedonia and Serbia show that the average length of transition from school to a first stable or satisfactory job is ranging from 20.8 months in Montenegro to 31.2 months in the former Yugoslav Republic of Macedonia (young people aged 15–29). In Montenegro and the former Yugoslav Republic of Macedonia, it takes young men significantly longer than young women to make the transition from school to work.

TABLE 2.2AVERAGE LENGTH OF TRANSITION FROM SCHOOL TO FIRST STABLE OR
SATISFACTORY JOB (YOUNG PEOPLE AGED 15–29), 2016 (MONTHS)

	Total	Male	Female
Montenegro	20.8	22.5	18.5
Former Yugoslav Republic of Macedonia	31.2	37.1	22.8
Serbia	23.4	22.4	24.7

Sources: ILO, 2016a; 2016b; and 2016c.

Recent data from the Turkish Statistical Institute (Turkstat, 2016, p. 2) shows that it took 19% of the 15–34 age group longer than three years to transit from education to their first job (more than three months of employment); 5.8% of the age group needed two to three years, 8.6% one to two years, 7.4% six to twelve months and 14.1% less than six months for their education-to-work transition. Some 16.3% were able to find a first job during education.

FIGURE 2.2 shows the share of VET enrolment in upper secondary education for the latest available year. The share was highest in Serbia, at 75.1%, followed by Montenegro and the former Yugoslav Republic of Macedonia. At 19.5%, the share is considerably smaller in Albania.





FIGURE 2.2 SHARE OF VET ENROLMENT IN UPPER SECONDARY EDUCATION, LATEST AVAILABLE YEAR (%)

Sources: UNESCO Institute for Statistics; MK: National Statistical Office; TR: Eurostat. ETF, 2017.

OECD PISA 2015 results confirm serious concerns regarding the quality of education and training in the five candidate countries. In all five, the underperformance in each of the three PISA domains (science, reading and mathematics) was higher than the EU average and far greater than the Europe 2020 benchmark (15%). The situation is particularly worrying in the former Yugoslav Republic of Macedonia.

TABLE 2.3	PISA 2015 AND 2012 (SERBIA, EU-28): SHARE OF 15-YEAR-OLDS WITH
	UNDERACHIEVEMENT IN READING, MATHEMATICS AND SCIENCE (%)

	Reading	Maths	Science
Albania	50.3	53.3	41.7
Montenegro	41.9	51.9	51
Former Yugoslav Republic of Macedonia	70.7	70.2	62.9
Serbia	33.1	38.9	35.0
Turkey	40.0	51.4	44.5
EU-28	17.8	22.1	16.6

Note: Underachievement means failing Level 2 on the PISA scale for reading, mathematics or science. Sources: PISA 2015 (OECD, 2016a); PISA 2012 (OECD, 2013).

A recent OECD report on low-performing students (OECD, 2016b, pp. 88–97) took a closer look at the causal relationship between programme orientation (general or vocational) and performance (based on PISA 2012 data). In Montenegro and Serbia, there is a significant difference between the general and vocational tracks. In general, the share of low performers is twice as large among students enrolled in a vocational track than among those enrolled in a general track.



3. ALBANIA

3.1 VET system and programmes

The main regulatory and supervisory institution of the VET system in Albania is the Ministry of Social Welfare and Youth (MoSWY). The National Agency for VET and Qualifications (NAVETQ) is a subordinate agency, which supports VET development. NAVETQ is responsible for preparing the national list of occupations, qualification descriptions and framework curricula. The agency also draws up standards for the initial and continuing professional development of VET teachers and trainers, while also establishing guidelines for skills assessment and certification.

A Decision of the Council of Ministers from 2015 provides for the establishment of a National VET Council, which includes representatives from business associations and trade unions. However, the VET Council has not held a meeting in the past three years. It has been replaced by an Integrated Policy Management Group (IPMG), subgroup on employment and skills policies, which takes a wider sector perspective. The IPMG has met to discuss, among other things, progress made against the objectives and targets of the National Employment and Skills Strategy and its Action Plan 2014–2020.

NAVETQ co-operates with interested employers in the development of occupational standards, qualification descriptions and framework curricula. A structured and systematic dialogue with social partners – for instance through sector committees – is not in place. There are plans to establish sector skills committees in the near future. In 2010, a law on the Albanian Qualifications Framework (AQF) was adopted. In 2015, a task force was established which has drafted amendments to this law and is discussing implementing regulations. The AQF task force has also prepared a handbook for AQF implementation and is undertaking a process to review the criteria for European Qualifications Framework (EQF) referencing¹.

Key figures

- 27 267 students were enrolled in (upper) secondary VET programmes in the year 2015/16.
- As a result of a deliberate government policy and wider publicity campaigns, enrolment in secondary VET programmes has constantly increased since 2014.
- The percentage of students in vocational programmes compared to total enrolments in (upper) secondary education (ISCED 3) has increased from 14.2% in 2010 to 19.2% in 2015.
- Women made up 21% of the total number of VET students.
- VET programmes are currently delivered in 39 VET schools, mostly small and offering only a few profiles.

In Albania, WBL mainly takes place during formal secondary VET. For each occupational profile, NAVETQ has developed a curriculum framework (2+1+1, 2+2 or 4 years) that consists of vocational theory and practice. The national law allows for the provision of internships in companies and in theory all practical training could be implemented in the form of WBL. However, the legal framework has not

¹ According to the Recommendation of the European Parliament and of the Council on the establishment of the European Qualifications Framework (EQF) for lifelong learning in the *Official Journal of the European Union* (2008/C 111/01), when a National Qualifications Framework (NQF) is referenced to the EQF it needs to show evidence that it complies with criterion 5. This requires that a national quality assurance system is in place and procedures for defining the content of qualifications, the nature of curricula, assessment practices, awarding procedures and certification requirements are defined and used. A strong involvement of stakeholders from the 'world of work' is one of the requirements. See ETF, 2016g.



been supplemented by the necessary by-laws that would, for example, ensure the funding of WBL and stipulate the rights and obligations of the companies and learners. There are also issues concerning resources in schools and companies to organise cooperation and the lack of a sufficient number of companies willing and able to cooperate. As a result, WBL is not common practice. It is organised as part of donor-funded projects in a few pilot institutions and programmes. In addition, practical training takes place in VET schools' workshops, where they exist. During 2014–2017 NAVETQ piloted a VET student internships programme for two profiles in the framework of the Erasmus+ 'Apprenticeship Schemes for Youth Employment in Albania' project. Curricula were adjusted and materials developed, 30 companies were identified, and teachers and trainers were trained. The project provided valuable insights into what does and does not work, and the next steps to be taken.

As a parallel initiative, the MoSWY drafted a new law on craftsmanship in Albania, which was adopted in June 2016. It envisages the setting up of a Chamber of Crafts, for which first efforts have been undertaken, as well as the eventual establishment of a dual training system for craft-related trades.

Type of programme	Number of programmes	With compulsory practical training	With compulsory WBL component	With learning outcomes for WBL	With assessment instruments for WBL
2+1+1-year	31	31	1	0	0
2+2-year	9	9	1	0	0
4-year	4	4	2	0	0

TABLE 3.1	SECONDARY	VET PROGRAMMES	AND WBL	IN ALBANIA.	2015/16
					2010/10

The vast majority of Albanian VET programmes is offered in the form of 2+1+1-year programmes. These programmes include around 30% of practical training. The 2+1+1-year pilot programme in thermo-plumbing is the only one that has a compulsory WBL component (480 hours or around 10% of the total programme duration). The share of practical training in 2+2-year and 4-year programmes is slightly less than 30%, with the exception of ICT database networks (2+2-year programme; 42% practical training), vehicle mechanics and electro-mechanics (4-year programmes; 39% practical training). Those three programmes also include compulsory WBL modules.

Type of programme	Programme duration (hours)	Share of practical training (hours)	Share of compulsory WBL component (hours)
2+1+1-year	4 210–4 350	1 326	0
2+1+1-year (pilot)*	4 625	2 317	480
2+2-year	4 344–4 380	1 110–1 242	0
2+2-year (pilot)**	4 324	1 802	120
4 years	4 218–4 548	1 192–1 650	408

	TABLE 3.2	WORKLOAD	OF VET	PROGRAMMES	IN ALBANIA	. 2015/16
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Notes: * Thermo-plumbing/sanitary installations. ** ICT database networks.



3.2 Cooperation between schools, companies and learners

Selection of learners	 The selection and distribution of learners is done by the VET schools, sometimes together with the company. Practical training can be implemented in the schools' workshops and/or in companies. Individual applications by learners for an internship at a specific company are possible but not common. It is mainly left to the VET schools to secure sufficient places for WBL. It is not possible to place all learners in companies. It is common practice for the selection of learners to be based on their school grades.
Contract	 Usually, the VET school and interested companies sign a contract at the beginning of each academic year. These contracts are of a rather generic nature. Bilateral contracts between companies, schools and individual learners, which would regulate the rights and duties of all three parties with regard to training delivery and learning assessment, are not common practice. There are no common standards for the implementation of practical training in the companies.
Learners' remuneration	 The Labour Code allows for the remuneration of VET students during their company internships for an amount lower than the minimum salary (currently ALL 24 000 = EUR 174). Occasionally, companies pay learners for evening/night and weekend work (e.g. in hotels). Social contributions and health insurance costs (ALL 66 per head) are covered by the companies or by the schools and/or donor projects. Companies, with help from the schools, have to register VET student interns with pension and health funds and the insurance company.
Coordination, administration and supervision	 VET schools are usually the main initiators and coordinating bodies, although during the Erasmus+ project it was the highest-level apex employers' organisations (BiznisAlbania and Albanian Tourism Association – ATA) who mobilised their members. During previous donor projects school–business liaison persons (PASOs) were trained. Nine of them are still active in different VET schools. There are no common standards for the administration and supervision of learners. In the context of the pilot projects, the school–business liaison person appointed by VET schools or the donor checks and validates the suitability of the training environment and in-company trainers. Companies supervise learners during their internships, sometimes in close collaboration with the school. In some pilot projects the learners use diaries to document their practical training in the companies. Some VET schools use standardised templates to evaluate internships in close cooperation with the companies.

3.3 In-company trainers and VET teachers

There are no requirements regarding the qualification and competences of in-company trainers or mentors. A formal training programme for in-company trainers or mentors is not in place. There are also no public sector agencies that have a responsibility for supporting the training of in-company trainers (ETF, 2016a, p. 34), although in-company trainers were trained together with VET teachers in 2017 as part of the Erasmus+ project.



The position of a school–business liaison person (PASO) was established in several vocational schools in Albania. PASOs are responsible for establishing and maintaining connections with businesses; coordinating meetings in enterprises for learners along with site visits; establishing connections and internship contracts for VET students; organising meetings and discussions with businesses at local level to support curriculum development. There are currently nine active PASOs in the vocational school system. The MoSWY plans to install a PASO in each of the 19 major VET institutions in the near future (ETF, 2016f, p. 12).

3.4 Financing of work-based learning

Consumables, use of equipment (in companies)	• All costs are covered by the companies that offer WBL.
Working time of in-company trainers	All expenses are borne by the companies offering WBL.There are no public funds.
Transport of learners to and from company	• As a rule covered by the individual learner, occasionally by donor projects.
Learners' remuneration during WBL	 Companies are allowed to pay learners less than the minimum wage. Interns would have to be registered for this purpose. In some cases learners are paid, but this is not a formal relationship.
Assessment of learners (material, assessors, etc.)	 There are no public funds for the assessment of WBL. In some cases, in-company trainers participate in the assessment of learners.
Incentives for companies (subsidies, tax deductions)	• There are no incentives provided by the state or other public institutions or entities.
Learners' health insurance during WBL	 At the beginning of the school year the students pay the health insurance fee individually. Companies are obliged to pay a contribution of ALL 66 per month per internee².
Financing of VET schools	 VET teachers and instructors are funded by the public budget. VET school facilities are funded by the state budget. Teaching and learning materials are funded from the state budget.

² DCM No 77 dated 28 January 2015, 'On mandatory contributions and benefits from the social and health insurance system'.



4. THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

4.1 VET system and programmes

In the former Yugoslav Republic of Macedonia, vocational education is under the remit of the Ministry of Education and Science (MoES). The Centre for Vocational Education and Training (VET Centre) provides professional support to the development and continuous innovation of the VET system. It is the key institution for the analysis of and research into the vocational education system. Among other things, the VET Centre is responsible for the development of occupational standards, the national framework for vocational qualifications, and vocational curricula. It is also in charge of teachers' training and supervises the implementation of vocational education programmes. The Centre also supports social partnership at all levels.

Representatives of the chambers and the Independent Trade Union for Education, Science and Culture are members of the National Board for the NQF. Among other tasks, the National Board discusses evaluations of policies on education, sustainable employment, and regional development, and recommends actions for linking the education system more effectively with labour market needs.

The development, adoption, approval and classification of qualifications are the responsibility of the National Board for the NQF. The NQF was adopted and referenced to the EQF in 2015. The National Board was established in 2015 and works in close cooperation with Sectoral Qualifications Councils, which are in the process of establishment. The Sectoral Qualifications Councils include representatives from employers' associations, trade unions and relevant competent bodies for regulated professions.

Key figures

- In the academic year 2014/15, there were 48 192 students enrolled in upper secondary VET programmes.
- VET students represented nearly 56% of the total enrolment in upper secondary education.
- 93.5% of the VET students followed four-year programmes. Some 51 programmes were offered;
 45% of the students in these programmes were women.
- 6.5% of the VET students followed three-year programmes. Some 16 programmes were offered, in which 22% of the students were women.
- VET programmes are currently offered in 78 VET schools.

WBL mainly takes place during formal upper secondary VET (see Annex 2 for a detailed list of formal initial VET programmes). Secondary VET programmes are provided by municipal secondary VET schools. The Law on Vocational Education and Training regulates WBL for VET students in companies. Companies are permitted to conduct practical training if they meet specific requirements with regard to training space, equipment and staff. These requirements are established by the VET Centre and approved by the respective chambers.

Four-year programmes account for approximately 94% of all VET students, while three-year programmes remain marginal. There are currently no students enrolled in two-year programmes.



TABLE 4.1 VET PROGRAMMES AND WBL IN THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA, 2015/16

Type of programme	Number of programmes	With compulsory practical training	With compulsory WBL component	With learning outcomes for WBL	With assessment instruments for WBL
2-year	1	1	0	0	0
3-year	31	31	29	0	0
4-year	51	51	0	0	0

Several three-year programmes have been recently revised or newly developed. These programmes are based on occupational standards and learning outcomes and the share of practical training is around 40%. One-third of the practical training is expected to be conducted at the workplace. In most of the three-year programmes, practical training and WBL take place in all three years. However, the share of practical training and WBL is higher in the last two years. Some of the older three-year programmes offer a considerably lower share of practical training.

TABLE 4.2WORKLOAD OF VET PROGRAMMES IN THE FORMER YUGOSLAV REPUBLIC
OF MACEDONIA, 2015/16

Type of programme	Programme duration (hours)	Share of practical training (hours)	Share of compulsory WBL component (hours)
2-year	1 893	966	0
3-year	3 291–3 672	576–1 836	0–459
4-year	4 122–4 518	276–984	0

The practical training in the four-year programmes varies between 6% and 22% and WBL is not compulsory. In fact, most of the practice takes place at VET school workshops. A World Bank project is currently addressing the reform of the four-year programmes.

4.2 Cooperation between schools, companies and learners

Selection of learners	 The selection and distribution of learners is done by the VET school. Individual applications by learners for an internship at a specific company are possible. In such cases, a contract between the VET school, the company and the learner or her/his parents needs to be signed. It is basically left to the VET schools to secure sufficient places for WBL.
Contract	 Contracts are signed between the VET school, the company and the learner or her/his parents. No bilateral contracts are signed between companies and individual learners.
Learners' remuneration	The VET law allows for the remuneration of learners.Some employers offer scholarships to learners.
Coordination, administration and supervision	 The VET school is usually the main coordinating body for WBL. VET school teachers of vocational subjects usually check and validate the suitability of the training environment in the companies. VET school teachers and in-company mentors supervise learners during WBL.
	 Some VET schools use standardised templates to evaluate WBL. The VET Centre provides standards for the administration and supervision of learners, but these standards are not applied in all VET schools or companies.



4.3 In-company trainers and VET teachers

Standards for in-company trainers are developed by the VET Centre and are approved by the respective chambers. However, the training of in-company trainers is not mandatory and there are no regular funds earmarked for training-the-trainer activities (ETF, 2016b, p. 44).

The Chamber of Commerce is actively involved in the design and provision of training for in-company trainers or mentors, under the guidance and in close cooperation with the VET Centre. Training techniques are also an element of the Master Craftsman programme of the Chamber of Crafts and only Master Craftsmen are allowed to accept VET students for practical training.

4.4 Financing of work-based learning

Consumables, use of equipment (in companies)	• All costs are covered by the company that offers WBL.
Working time of in-company trainers	• All expenses for the mentors are covered by the company that offers WBL.
Transport of learners to and from company	• The transport of learners from VET schools to companies is not regulated.
Learners' remuneration during WBL	The VET law allows for the remuneration of learners.Some employers offer scholarships to learners.
Assessment of learners (material, assessors, etc.)	There are no public funds provided for the assessment of WBL.Company mentors participate in the assessment of learners.
Incentives for companies (subsidies, tax deductions)	 There are no incentives provided by the state or other public institutions/entities. Article 15 of the VET law allows for the provision of company incentives for WBL. Some companies which participated in pilot projects benefited from incentive schemes.
Learners' health insurance during WBL	 Learners are not covered by health insurance but they are insured against injuries through the VET school.
Financing of VET schools	 VET teachers are funded by the MoES. VET school facilities and equipment are mainly funded by the municipalities. Only a small part of the equipment in the VET schools is funded by the MoES. Teaching and learning materials are mainly funded by the MoES.



5. MONTENEGRO

5.1 VET system and programmes

In Montenegro, the Ministry of Education is responsible for shaping policies in the field of vocational education. In 2003, the Ministry of Education, the Employment Agency of Montenegro, the Chamber of Commerce of Montenegro and the Association of Trade Unions of Montenegro founded the Centre for Vocational Education and Training (VET Centre). The VET Centre is a developmental, advisory and research institution. It is responsible for the development and reform of occupational standards and curricula, adult education and quality assurance.

Key figures

- Around 82 different VET programmes are provided in the country.
- In the academic year 2015/16, 1 654 students were enrolled in three-year programmes and 16 946 students in four-year programmes. There are currently no students in two-year programmes. Some 142 students were enrolled in post-secondary programmes.
- VET represented 67% of total enrolment in upper secondary education.
- Women made up 44% of the VET students enrolled in three- and four-year programmes.
- VET programmes are currently offered in 36 VET schools.

The VET system in Montenegro offers three different types of programme: lower VET (2 years), secondary VET (3 and 4 years) and post-secondary VET (2 years, following secondary VET). The Law on Vocational Education was amended in 2010 and now more specifically defines practical training (as part of a VET programme) as a combination of training at a VET school and in the workplace. The law also provides the legal basis for an apprenticeship or dual education and training system. Each curriculum allows for practical training in schools and in businesses. Where employers have adequate resources, the practical training may be implemented entirely in the company.

Type of programme	Number of programmes	With compulsory practical training	With compulsory WBL component	With learning outcomes for WBL	With assessment instruments for WBL
2 -year	1	1	0	1	0
3 -year	32	32	0	32	0
4 -year regular	47	47	0	47	0
4 -year reformed	2	2	2	0	0

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The curriculum specifies the amount of time to be allocated to practical training – up to 40% in the three-year programmes and a minimum of 12% in the four-year programmes – but no differentiation is made between practical training that takes place in VET school workshops and WBL in companies, except for two competency-based four-year programmes that have been developed recently. All curricula include learning outcomes or learning objectives for the practical training/WBL component. However, assessment instruments for the WBL component of the curricula have not yet been developed.



TABLE 5.2 WORKLOAD OF VET PROGRAMMES IN MONTENEGRO, 2015/16

Type of programme	Programme duration (hours)	Share of practical training (hours)	Share of compulsory WBL component (hours)
2 -year	2 139	1 101	0
3 -year	3 225–3 255	1 383–1 872	0
4 -year regular	4 299–4 407	282–1 290	0
4 -year reformed	4 512	483–761	128–132

5.2 Cooperation between schools, companies and learners

Selection of learners	 The selection and distribution of learners is usually done by the VET school. In some cases, the selection of learners is done by companies, based on previous experiences with learners. Individual applications by learners at a specific company are possible but not common. It is basically left to the VET schools to secure sufficient places for WBL. It is often the case that not all learners can be placed in a company. It is common for the practical training to take place in groups of learners.
Contract	 With regard to practical training during the academic year, the VET school and interested companies usually sign a contract at the beginning of the year. Contracts for summer internships can be signed between the VET school and the employer or between the learner and the employer. Bilateral contracts between companies and individual learners are not common. The obligations of schools/learners and employers are generally described by the law.
Learners' remuneration	 Companies are allowed to pay learners only when they are registered as normal employees. In general, very few learners are registered as normal employees. Learners are entitled to remuneration during summer internships. The salary depends on the economic sector. Paid internships are most common in the tourism sector. In some cases, companies pay directly to the VET school, which then pays the learners.
Coordination, administration and supervision	 The VET school is usually the main coordinating body, represented by the organiser of the practical learning process. All VET schools with more than 70 learners in WBL are entitled for this position. During WBL, the learners are asked to keep a diary. The VET schools usually check and validate the suitability of the training environment and in-company trainers. The VET schools usually supervise learners during their WBL. Some VET schools use standardised templates to evaluate WBL in close cooperation with the companies.

5.3 In-company trainers and VET teachers

There are no requirements regarding the qualification and competences of in-company trainers or mentors. A formal training programme for in-company trainers or mentors is not in place.

However, the VET Centre has developed the 'Programme for improvement of andragogic skills of trainers working with adults'. The programme was accredited by the National Council for Education in



2006 and it is open to all adult education providers. The programme has seven modules and 250 trainers have completed it (ETF, 2016c, p. 28).

5.4 Financing of work-based learning

Consumables, use of equipment (in companies)	• All costs are covered by the companies that offer WBL.
Working time of in- company trainers	All expenses are borne by the companies offering WBL.There are no public funds.
Transport of learners to and from company	 Some companies pay transport allowances to their learners who undergo WBL during the summer break. Some schools pay transport allowances to learners who undergo WBL during the academic year.
Learners' remuneration during internship	• The revised VET law provides that the Ministry of Education covers learners' remuneration in year 1 (10% of minimum net wage) and year 2 (15%) while employers have to cover year 3 (at least 20%). This regulation is based on an agreement between the Chamber of Commerce and the Ministry of Education from June 2017.
Assessment of learners (material, assessors, etc.)	 There are no public funds for the assessment of WBL. In some cases, in-company trainers participate in the assessment of learners. WBL that takes place during the summer break is not formally assessed and learners receive only a certificate of attendance.
Incentives for companies (subsidies, tax deductions)	• There are no incentives provided by the state or other public institutions or entities.
Learners' health insurance during WBL	All learners are covered by the national basic health insurance.Some companies pay for a mandatory sanitary check.
Financing of VET schools	 VET teachers are funded mainly by the state education budget. VET school facilities are mainly funded by the state budget. VET schools have the opportunity to generate additional funds (e.g. rent of space, income of VET school restaurants and laboratories). Teaching and learning materials are funded by the national education budget.



6. SERBIA

6.1 VET system and programmes

The Ministry of Education, Science and Technological Development is the key institution for education, including VET, in Serbia. It works on issues including educational planning, research and quality assurance.

The Council for Vocational Education and Adult Education includes representatives of the Chamber of Commerce, craftspeople, employers' associations, VET experts, representatives of employment and social policy institutions, vocational school teachers and representatives of trade unions. The Council ensures the involvement of all stakeholders in the development of vocational education but it has no decision-making power.

The National Education Council (NEC) is in charge of the development of the pre-primary, primary and secondary general education system. The NEC monitors and analyses the state of education and its conformity with European values, participates in the creation of the education strategy, establishes standards prescribed by Law, adopts curricula as well as the final exam programme, recommends the approval of textbooks, determines the need for new textbooks and gives its opinion concerning Laws and regulations governing education. Regarding VET, the NEC approves general subjects within VET profile curricula.

The Institute for the Improvement of Education (IIE) and the Institute for Education Quality and Evaluation (IEQE) also contribute to the definition of educational standards, the review of curricula and the evaluation of learning outcomes and final examinations.

Key figures

- In the academic year 2015/16, 189 084 students were enrolled in upper secondary VET programmes. Approximately 80% of the VET students followed four-year programmes.
- VET students represented nearly 75% of the total enrolment in upper secondary education.
- The share of females in upper-secondary VET was 46.5%.
- VET programmes are offered in 327 upper-secondary schools.

Social partners – the Chamber of Commerce and the Employers' Union – participate in the development of job descriptions, qualification standards and curricula. The working groups usually operate on an *ad hoc* basis and are coordinated by the Institute for the Improvement of Education. After piloting of certain number of sector skills councils, their final establishment is planned for the near future. Employers' representatives are also involved in assessment commissions for the recently developed qualifications that are based on learning outcomes. Several occupational standards have been recently developed, but they have not been adopted. Even developed, Serbia has not yet adopted a unified NQF.

The initial VET system in Serbia offers three- and four-year upper secondary programmes. In the last decade, there has been a significant shift towards the four-year programmes. In the academic year 2015/16, some 327 VET providers in Serbia offered 74 programmes with a duration of three years and 112 programmes with a duration of four years.



TABLE 6.1 VET PROGRAMMES AND WBL IN SERBIA, 2015/16

Type of programme	Number of programmes	With compulsory practical training	With compulsory WBL component	With learning outcomes for WBL	With assessment instruments for WBL
3-year	74	74	3	0	22
4-year	112	112	1	2	37

Twenty-two of the three-year programmes and 37 of the four-year programmes have recently been reformed. These programmes are based on qualification standards. Assessment procedures, tools and criteria have been developed and are used during final examinations.

Type of programme	Programme duration (hours)	Share of practical training (hours)	Share of compulsory WBL component (hours)
3-year	2 915–3 508	472–1 780	776–1 200
4-year	3 331–4 983	60-1 270	120

TABLE 6.2 WORKLOAD OF VET PROGRAMMES IN SERBIA, 2015/16

Practical training is an integral part of all VET programmes, but only three of the three-year programmes have a compulsory WBL component, with a workload ranging from 776 to 1 200 hours. Students enrolled in these programmes usually learn two or three days per week at the workplace in their second and third years. In four-year VET, only the pilot programme in winemaking includes a compulsory component for WBL (120 hours). However, WBL is common in a substantial number of programmes, but there are currently no data available on the extent of non-compulsory WBL.

A formal apprenticeship system does not exist in Serbia. However, some pilot apprenticeships are in place in a few international companies, where students learn while working and receive a financial contribution (usually in the form of a scholarship). Simulated WBL is popular in Serbia, in particular virtual enterprises in economic schools. Some VET schools have real companies attached to the school (in catering and tourism), and also agricultural schools are obliged to have a so-called school economy (school farm and land) for the purpose of training.



6.2 Cooperation between schools, companies and learners

Selection of learners	 The selection of learners is done by the VET schools. Individual applications by learners for an internship at a company are not regulated. Sometimes, not all learners can be placed in a company.
Contract	 Usually, the VET school and interested companies sign a contract. Bilateral contracts between a company and an individual learner are not common and are usually signed only when a company provides a scholarship.
Learners' remuneration	 Generally, learners do not receive any kind of financial remuneration when involved in WBL. In a small number of cases learners are provided a scholarship. Some companies provide a daily allowance or pay for the learner's transportation.
Coordination, administration and supervision	 The relevant legislation regarding WBL is very general. The coordination between the two learning venues is mainly left to VET schools. There is no structured monitoring of the quality of WBL. A quality assurance system is not in place. Each student keeps a practice diary. The VET schools usually use the diary to monitor the learners' WBL activities. Companies are not obliged to provide a trained mentor or supervisor. There are no minimum requirements for mentors. Usually learners are supervised temporarily by VET school teachers. There are no standards defined which companies have to meet when willing to offer internships.

6.3 In-company trainers and VET teachers

The training of in-company trainers is not mandatory and no regular public funds are earmarked for training-the-trainer activities. The Chamber of Commerce organises training-the trainer activities independently from the state in cooperation with established training centres or within companies. Several employers run their own training programmes, both for employees and trainers, independently from public institutions and schools, and they have established their own criteria and standards (ETF, 2016d, p. 37).



6.4 Financing of WBL

Consumables, use of equipment (in companies)	• All costs are covered by the companies that offer WBL.
Working time of in- company trainers	All expenses are borne by the companies offering WBL.There are no public funds.
Transport of learners to and from company	 The transport of learners is not regulated. Some companies provide transport allowances and/or organise transport of learners.
Learners' remuneration during WBL	 The vast majority of learners does not receive any remuneration. Some companies that have introduced pilot profiles offer their learners a scholarship.
Assessment of learners (material, assessors, etc.)	 There are no public funds for the assessment of WBL. In some cases, in-company trainers cooperate with VET school teachers in the assessment of learners. For a number of reformed profiles, the examination procedures were changed. There is a stronger emphasis on vocational competences and practical knowledge, and employers are included in the examination commissions. The costs for the assessment are covered by the companies.
Incentives for companies (subsidies, tax deductions)	No incentives provided by the state or other public institutions or entities.
Learners' health insurance during WBL	 VET schools have to sign a contract with an insurance company in order to cover health and safety insurance for all learners during WBL. The insurance costs are paid by the local governments.
Financing of VET schools	 VET teachers are funded by the state. Running expenses, equipment and maintenance are funded by the state and municipal budgets. Teaching and learning materials as well as teachers' professional development are funded by the municipalities. VET schools have the opportunity to generate additional income (such as food preparation, winemaking, textile, renting premises etc.). These additional funds are used for immediate occurring expenses and may also cover shortages in the school budget provided by the state/municipality.



7. TURKEY

7.1 VET system and programmes

Vocational education policies and activities in Turkey are the responsibility of the Ministry of National Education (MoNE). Within the MoNE, the Directorate General for Technical and Vocational Education (DG for TVET) is in charge of implementing formal TVET initiatives. The DG for TVET oversees four key tasks. The first is the development, implementation and coordination of policies and strategies to enhance vocational and technical education and strengthen the education–employment relationship. The second is to help in the creation and implementation of policies regarding the management of VET schools and institutions. The third relates to the preparation or outsourcing of education and training programmes, textbooks, educational tools and equipment for vocational/technical schools, and submitting them to the Board of Education. Lastly, the DG for TVET is responsible for providing general and vocational training to candidate apprentices, apprentices, journeymen and masters. Apart from these areas, all non-formal and informal education and training initiatives are managed by the Directorate General for Lifelong Learning, which is also housed within the MoNE.

Key figures

- In the academic year 2015/16, 2 082 935 students were enrolled in vocational and technical high schools.
- This accounted for 44% of the total enrolment in upper secondary education (10 years ago the ratio was around 38%).
- The share of female students in vocational and technical high schools was 43.6%.
- VET programmes are offered in 4 090 vocational and technical high schools.
- The number of apprentices was 209 236 in 2016. Enrolment in apprenticeship programmes has steadily decreased over the last 10 years.
- The share of females in apprenticeship programmes was 19.5% in 2016.
- Theoretical instruction for apprenticeship programmes is provided in 318 vocational training centres and some vocational and technical high schools (vocational and technical high schools, multi programmed schools and vocational and technical education centres). They offer one or two days of theoretical lessons per week and four or five days per week in the workplace.
- The initial VET system in Turkey offers two main forms of VET: vocational and technical high schools provide qualifications for specialised workers and technicians; and vocational training centres, in cooperation with enterprises, offer apprenticeship schemes.

Vocational and technical high schools

In four-year VET, practical training is compulsory in all programmes, with its duration ranging from 1 224 hours (e.g. Office Management) to 1 620 hours (e.g. Maritime Education).



Type of programme	Number of programmes	With compulsory practical training	With compulsory WBL component	With learning outcomes for WBL	With assessment instruments for WBL
4-year	54	54	54	54	54

Internships form an integral part of the four-year high school programmes. In Anatolian Technical Programmes, students are expected to complete 320 hours of WBL. In Anatolian Vocational Programmes, students are expected to complete 864 hours of WBL in their last year (grade 12). In these programmes, students spend two days a week in the high school and three days in the company.

TABLE 7.2	WORKLOAD OF VET PROGRAMMES IN TURKEY, 2015/16 (HOURS)
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Type of programme	Programme duration	Elective courses*	Share of practical training**	Share of compulsory WBL component		
4-year Anatolian Technical Programme	6 224–6 512	360–504	1 224–1 620	320		
4-year Anatolian Vocational Programme	5 868–6 084	396–576	1 224–1 620	864		

Notes: * Elective courses may include theory and/or practice. ** Numbers do not include practical elective courses.

Programmes for vocational training centres

Vocational training centres operate under the Directorate General for Vocational and Technical Education. For the 2016–17 period, programmes in vocational training centres were implemented in relation to 152 apprenticeship profiles in 31 occupational fields, and these have been updated to be applied in 141 branches and 27 fields over the next education and training period.

These programmes consist of theoretical training delivered through vocational training centres or vocational and technical secondary schools applying vocational education centre programmes, as well as through practical training stages at workplaces. In 2012, Turkey introduced a 12-year compulsory education system. Subsequently, in 2016, apprenticeship was officially included as part of compulsory education.

Students usually receive practical training in the workplace for 4 or 5 days a week plus 1 or 2 days of theoretical training. Students who are successful in these programmes will receive a journeyman's certificate (level 3) at the end of the 11th grade and a mastership certificate (level 4) at the end of the 12th grade.

Furthermore, students undertaking the vocational education centres' general culture and field/branch courses can also register for open secondary education institutions and receive secondary education diplomas.

The Confederation of Turkish Tradesmen and Craftsmen (TESK) awards vocational qualifications in some occupational fields in which no formal vocational training programmes are offered. Candidates over 16 years old receive a journeyman's certificate when they have finished lower secondary education, have at least two years' work experience in a relevant occupation and have passed an assessment held by the relevant chamber. The MoNE supports the provision of training and assessments.



7.2 Cooperation between schools, companies and learners

Selection of learners	• The placement of students is usually carried out by a commission held in the VET school.
	• Companies with at least 10 employees have to provide WBL opportunities for students.
	 Where the number of students exceeds the number of available places, a school commission will place students according to their achievements. Students who are not placed for WBL complete their practical training in the VET schools.
Contract	 The school management and the student/the student's parents sign a contract with the respective company. Contracts are based on standards defined by the MoNE.
Learners' remuneration	 Students are paid at least 30% of the net minimum wage. Social security payments (covering occupational accidents, occupational diseases and health insurance) for the students are met by the school/institution's management from the budget of the DG VET.
Coordination, administration and supervision	 Coordination of WBL is carried out by VET schools/institutions. The VET schools/institutions usually check and validate the suitability of the training environment and in-company trainers. VET schools' coordinating teachers supervise students during WBL. Students are asked to keep a work file related to their training in the companies. This file should include all the relevant photographs, projects and assessment tables associated with the work, practical projects, experiments and services they have undertaken in the companies. The file will also include the contract, social security entrance declaration, annual plan and vocational development table. A standard template for the work files is held in the schools. The work files need to be kept in the companies and will be signed by the coordinating teacher at each visit. Students enrolled in a WBL scheme take a skills exam. This exam will be based on what they have learnt during their internship in a company and can be taken as a written and/or applied assessment.

7.3 In-company trainers and VET teachers

The training of in-company trainers or training masters is regulated by law.

Masters may be awarded a training master's certificate if they successfully complete a 40-hour business pedagogy course provided by the MoNE. Enterprises are obliged to provide a training master when there are students engaged in work experience or internships in the company (ETF, 2016e, p. 36).



7.4 Financing of WBL

Consumables, use of equipment (in companies)	All costs are covered by the companies that offer WBL.
Working time of in- company trainers	 All costs are borne by the companies that offer WBL. A coordinator teacher for the students is appointed by the VET school. The fee for the coordinator teacher is paid by the MoNE.
Transport of learners (to/from company)	• There is no general regulation for the transport of learners. In some cases students are allowed to use the companies' transport services.
Learners' remuneration (during WBL)	Students are paid by companies.The remuneration for students is at least 30% of the net minimum wage.
Assessment of learners (material, assessors, etc.)	• The assessment of the students is carried out by the VET school teachers and in-company trainers.
Incentives for companies (subsidies, tax deductions)	 Social security payments (covering occupational accidents, occupational diseases and health insurance) for the students are paid by the MoNE. This acts as an incentive for the companies. In order to promote VET throughout the country, for a certain period of time, the minimum amount that the students will receive – two-thirds for enterprises employing fewer than 20 employees and one-third for enterprises employing over 20 employees – shall be paid in the form of Government contributions.
Learners' health insurance (during WBL)	• Social security payments (covering occupational accidents, occupational diseases and health insurance) for the students are paid by the MoNE.
Financing of VET schools	 VET teachers and instructors are funded by the MoNE. There are 419 private VET schools in Turkey. For these schools, the students pay a tuition fee. Teachers and instructors are paid by the schools' top management (founders). All public VET school facilities are funded out of the state budget. In the case of private VET schools, funding for their facilities is undertaken by the schools' top management. In some public VET schools, companies have established workshops/laboratories/simulation centres. Public VET schools can sign a protocol with companies in order to ensure the establishment of such workshops and/or the refurbishment of their classrooms. In public VET schools teaching and learning materials are paid for by the MoNE. In private VET schools, the textbooks are provided through the state budget and the laboratory/workshop materials are provided by the school.



CONCLUSIONS

Policies and institutional arrangements

In the five candidate countries, key stakeholders are usually involved in the development of broader national policy documents on VET, such as VET strategies. Stakeholder involvement is less evident when it comes to the elaboration of more concrete policies, for instance in areas that are directly related to WBL, such as the development of educational and occupational standards, curriculum development, assessment and certification, quality assurance, or financing.

With the exception of Turkey, social partner organisations that could support the design and implementation of WBL policies are either not in place or are too weak in terms of human and financial resources.

In some cases, existing institutions, such as the Chamber of Commerce and Industry in Serbia, already play an important intermediary role. In other instances, their potential is not yet fully exploited. For example, the sectoral association boards at the Chamber of Commerce in Montenegro could be more actively involved in policy design and implementation in the country.

Recommendations

- Exploit better the potential of business organisations, chambers, trade unions, sector councils and regional councils.
- Strengthen the capacities of such organisations further.

Legal and regulatory framework

In some countries, a comprehensive legislative and regulatory framework that supports policies on WBL is either not in place or incomplete. For example, in Albania the necessary by-laws to support WBL policies are still missing.

Recommendation

 Develop a legislative and regulatory framework that clearly defines the roles and responsibilities of all stakeholders.

Coordination and cooperation

Coordination and cooperation between schools and companies is crucial for successful WBL and perhaps the most important challenge. In the currently predominant internship model, VET schools, not employers, are the main coordinating bodies in all five countries. The schools usually select and distribute learners, arrange contracts, organise the sequencing of on-the-job and classroom-based learning, supervise and administer learners and arrange for assessments. However, the schools very often lack the resources and capacities to fulfil their responsibilities.

Many companies involved in WBL activities are not able to offer the full range of services and products needed to ensure broader learning. Learners are usually not provided with individual in-company training plans which outline what, when and how they learn and detail the assessment of the WBL.

Recommendations

- Strengthen the capacities of VET schools so that they are more able to plan and implement WBL in close cooperation with employers.
- Establish cooperation mechanisms and networks between the two learning venues in order to ensure high-quality training.



Set up support structures, such as the virtual platform used in Montenegro, that help to match the supply and demand of training places better.

Teachers and trainers in work-based learning

Training programmes for school–business liaison persons and in-company trainers are common in most of the candidate countries, for example Albania. However, these types of programme are usually not mandatory and in some cases depend on donor support.

Recommendations

- Ensure that training programmes for school-business liaison persons and in-company trainers are anchored in national institutions and funded in a sustainable manner.
- Ensure that the roles and responsibilities of teachers, school-business liaison persons and incompany trainers are complementary and that support structures are in place to facilitate synergies between them.

Financing of work-based learning

In all of the five countries there are financing policies in place that provide arrangements for the social security and insurance of learners. Montenegro and Turkey also regulate the remuneration of learners. Provisions that compensate employers for the cost of training are not common. Further, sustainable mechanisms to finance the assessment of WBL are still lacking.

Recommendations

- Check the suitability of financial and non-financial incentives to stimulate company participation in WBL.
- Ensure sustainable funding of WBL assessment.

Quality of work-based learning

Not much is known about the quality of WBL in the candidate countries. Very few VET programmes include specific learning outcomes/objectives and/or assessment tools/procedures for WBL. In some countries, there are concerns that unregulated WBL could further damage the already low quality of some of the VET programmes. Quality assurance systems for WBL are crucial for its success, but are usually not yet in place.

Recommendations

- Analyse quality challenges and quality deficits of the provision of WBL.
- Review current practices and mechanisms of quality assurance of WBL.
- Develop a quality improvement plan and quality assurance framework for WBL.



ANNEXES



Programme	National level/ EQF level	Hours total	Gener al theory (hours)	Vocation al theory (hours)	Practic e total ³ (hours)	Practice WBL ⁴ obligato ry (hours)	Learning outcomes/ objectives for WBL part specified ⁵	Formal assessment instruments for WBL ⁶ in place (based on learning outcomes /objectives)	Year of last reform of programm e	Year of next reform of programm e (planned)	Number of students enrolled in 2015/16	Number of VET schools offering the programme		
2+1+1-year programmes														
Hotels and tourism (2 years)	2/2	2 098	982	492	624				2016		1 015	9		
Reception (1 year)	3/3	1 088	340	238	510				2011		62	2		
Cooking and pastry (1 year)	3/3	1 088	340	238	510				2011		253	4		
Bar and restaurant (1 year)	3/3	1 088	340	238	510				2011		87	6		
Hotels and tourism (1 year)	4 / 4	1 024	544	288	192				2012		418	9		
Transport vehicle services (2 years)	2/2	2 238	982	632	624				2011		1 697	12		
Motor services (1 year)	3/3	1 088	340	238	510				2011		261	8		
Generic part services (1 year)	3/3	1 088	340	238	510				2011		125	4		
Electro-auto services (1 year)	3/3	1 088	340	238	510				2012		244	5		
Vehicle body services (1 year)	3/3	1 088	340	238	510				2013		20	1		
Transport vehicle services (1 year)	4 / 4	1 024	544	288	192				2012		438	12		
Mechanics (2 years)	2/2	2 238	982	632	624				2011		714	10		
Metalworking machines (1 year)	3/3	1 088	340	238	510				2011		92	3		
Metallic construction (1 year)	3/3	1 088	340	238	510				2011		63	4		
Mechanical maintenance and repair (1 year)	3/3	1 088	340	238	510				2012		48	2		

Annex 1: Albania – Programmes in formal initial VET

³ 'Practice total' includes all practice, for instance in VET schools' workshops/labs, virtual firms, firms run by VET schools, work familiarisation, and work-based learning (apprenticeship, internship/traineeship, sandwich courses).

⁴ 'WBL' (narrow definition) includes learning that takes place in a real working environment (in a company) through participation in the work process (producing real goods or real services): apprenticeship, internship/traineeship, sandwich courses.

⁶ E.g. assessment procedures, tools, criteria. Formal assessment instruments and criteria are not developed specifically for work-based learning, but for both practice in the school and in the company.



⁵ Curriculum frameworks specify learning outcomes/objectives not specifically for the work-based learning part, but for both practice in the school and in the company.

Metallurgy and foundry (1 year)	3/3	1 088	340	238	510	2015	20	1
Mechanics (1 year)	4 / 4	1 024	544	288	192	2012	172	10
Electrotechnology (2 years)	2/2	2 238	982	632	624	2011	963	10
Electrical installation in industry and buildings (1 year)	3/3	1 088	340	238	510	2012	239	9
Installation and maintenance of HT and LT lines (1 year)	3/3	1 088	340	238	510	2011	20	1
Electro-domestic repair (1 year)	3/3	1 088	340	238	510	2011	48	2
Electro-mechanics (1 year)	3/3	1 088	340	238	510	2014	20	1
Automation technology (1 year)	3/3	1 088	340	238	510	2013	43	2
Electrotechnology (1 year)	4 / 4	1 024	544	288	192	2012	295	10
Electronics (2 years)	2/2	2 238	982	632	624	2011	167	1
Telecommunications (1 year)	3/3	1 088	340	238	510	2011	31	1
Electronic equipment repair (1 year)	3/3	1 088	340	238	510	2011	49	2
Electronics (1 year)	4 / 4	1 024	544	288	192	2012	86	2
Woodworking (2 years)	2/2	2 238	982	632	624	2015	167	4
Joinery and tapestry (1 year)	3/3	1 088	340	238	510	2011	14	2
Woodworking (1 year)	4 / 4	1 024	544	288	192	2012	48	3
Construction (2 years)	2/2	2 238	982	632	624	2015	144	4
Carpentry, bar bending and concreting (1 year)	3/3	1 088	340	238	510	2011	19	2
Construction (1 year)	4 / 4	1 024	544	288	192	2012	29	2
Fishing (2 years)	2/2	2 238	982	632	624	2010	88	1
Textiles and garment-making (2 years)	2/2	2 238	982	632	624	2011	150	4
Tailoring (1 year)	3/3	1 088	340	238	510	2011	10	1
Leather products (1 year)	3/3	1 088	340	238	510	2016	18	2
Textile and garment-making (1 year)	4/4	1 024	544	288	192	2012	22	2
Garment-making (pilot) (2 years)	2/2	2 238	982	632	624	2015	81	1
Food technology (2 years)	2/2	2 238	982	632	624	2016	915	4
Milk processing technology (1 year)	3/3	1 088	340	238	510	2012	27	1



Pasta processing technology (1 year)	3/3	1 088	340	238	510		2016	97	3
Alcoholic drinks technology (1 year)	3/3	1 088	340	238	510		2012	27	1
Food technology (1 year)	4/4	1 024	544	288	192		2012	151	4
Agriculture (2 years)	2/2	2 238	982	632	624		2015	508	6
Agriculture and livestock farming (1 year)	3/3	1 088	340	238	510		2012	56	3
Horticulture (1 year)	3/3	1 088	340	238	510		2012	19	1
Agriculture (1 year)	4/4	1 024	544	288	192		2012	245	6
Chemical technology (2 years)	2/2	2 238	982	632	624		2010	62	1
Petroleum processing technology (1 year)	3/3	1 088	340	238	510		2015	30	1
Social and health services (2 years)	2/2	2 238	982	632	624		2011	202	2
Elderly care services (1 yeas)	3/3	1 088	340	238	510		2012	38	2
Childcare services (1 year)	3/3	1 088	340	238	510		2013	25	1
Social and health services (1 year)	4/4	1 024	544	288	192		2012	98	2
Geology and mining (2 years)	2/2	2 238	982	632	624		2010	66	1
Mining (1 year)	3/3	1 088	340	238	510		2016	0	0
Thermo-plumbing installation (2 years)	2/2	2 520	965	210	1 345		2011	639	9
Thermo-plumbing installation (1 year)	3/3	1 105	374	119	612	480	2011	236	9
Solar panels / Complex sanitary installation (1 year)	4 / 4	1 000	544	96	360		2011	220	9
2+2-year programmes									
Information and communications technology (ICT) (2 years)	2/2	2 168	1 014	632	522		2016	954	14
Database networks (2 years)	4 / 4	2 176	876	580	720		2012	203	5
Support to ICT users (2 years)	4/4	2 176	876	580	720		2012	557	14
Website design (2 years)	4/4	2 176	876	580	720		2012	40	1
Database networks (pilot) (2 years)	4 / 4	2 156	876	Integrat ed	1 280	120	2016	105	1
Forestry (2 years)	2/2	2 204	1 050	632	522		2016	25	1
Silviculture (2 years)	4/4	2 176	944	644	588		2012	24	1



Economy and business (2 years)	2/2	2 204	1 050	632	522				2011		850	12		
Accounting (2 years)	4 / 4	2 176	944	608	624				2012		527	12		
Banking services (2 years)	4/4	2 176	944	608	624				2012		206	4		
Tourist bureau services (2 years)	4 / 4	2 176	944	608	624				2014		72	1		
Insurance (2 years)	4 / 4	2 176	944	608	624				2015		36	1		
4-year block programmes	4-year block programmes													
Veterinary services (4 years)	4 / 4	4 548	2 060	1 296	1 192				2016		256	3		
Geodesy (4 years)	4 / 4	4 548	2 060	1 264	1 224				2013		115	1		
Vehicle mechanics (4 years)	4 / 4	4 218	1 656	912	1 650	408			2013		780	1		
Electro-mechanics (4 years)	4 / 4	4 218	1 656	912	1 650	408			2013		422	1		



Programme	National level/ EQF level	Hours total	Theory (hours)	Practice total (hours)	Practice WBL obligatory (hours)	Learning outcomes/ objectives for WBL part specified	Formal assessment instruments for WBL in place (based on learning outcomes/ objectives)	Year of last reform of programme	Year of next reform of program- me (planned)	Number of students enrolled in 2015/16	Number of VET schools offering the programme			
2-year programmes	2-year programmes													
Economics, legal and														
Health services														
Textiles and leather														
Graphic design														
Electrotechnology														
Personal services														
Catering and tourism														
Forestry and wood processing														
Construction and geodesy														
Gypsum / plaster worker and mounter	1/3 2/3	936 957	432 495	504 462				2013, decision No 11– 5298/1			1			
Agriculture and veterinary services														
Traffic and transport														
Geology, mining and metallurgy														
Chemical technology														
Mechanics														
3-year programmes														
Economics, legal and commerce											4			
Sales worker	1/3 2/3 3/3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a	2013	2016	87	4 2 VET + 2 mixed schools			
Health services						n/a								

Annex 2: The former Yugoslav Republic of Macedonia – Programmes in formal initial VET



Textiles and leather												
Shoemaker (reformed programme)	1 / 3 2 / 3 3 / 3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a	2013	2016		1 VET school	
Garment maker, ready-made garments	1 / 3 2 / 3 3 / 3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a	2013	2016	24	10 (3 VET + 7 mixed schools)	
Graphic design												
Typographer	1 / 3 2 / 3 3 / 3	1 080 1 188 1 023	792 684 561	288 504 462	96 168 154	n/a	n/a	2013	2016	18	2 (1 VET + 1 mixed school)	
Electrotechnician												
Electrician and fitter	1 / 3 2 / 3 3 / 3	1 152 1 152 1 023	900 684 528	252 468 495	63 117 165	n/a	n/a	2013			16 (12 VET + 4 mixed schools)	
Electro-mechanic	1 / 3 2 / 3 3 / 3	1 152 1 152 1 023	900 684 528	252 468 495	63 117 165	n/a	n/a		2016	332	7 VET schools	
Vehicle electrician (old programme)	1 / 3 2 / 3 3 / 3	1 080 1 116 1 080	1 080 900 648	/ 216 432	/	n/a	n/a				2 VET schools	
Personal services												
Hairdresser	1 / 3 2 / 3 3 / 3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a	/	2016	528	6 (4 VET + 2 mixed schools)	
Cosmetic manicure / pedicure	1 / 3 2 / 3 3 / 3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a				1 VET school	
Catering and tourism												
Waiter	1 / 3 2 / 3 3 / 3	1 224 1 188 1 023	936 684 561	288 504 462	96 168 154	n/a	n/a	2013	2016	1 022	9 (5 VET + 4 mixed schools)	
Chef	1 / 3 2 / 3 3 / 3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a	2013	2010	1 022	8 (5 VET + 3 mixed schools)	



Pastrycook	1 / 3 2 / 3 3 / 3	1 188 1 188 1 023	900 684 561	288 504 462	96 168 154	n/a	n/a	2013			2 (1 VET + 1 mixed school)
Forestry and wood processing											
Carpenter	1 / 3 2 / 3 3 / 3	1 152 1 188 1 023	900 684 561	252 504 462	84 168 154	n/a	n/a	2013	2016	25	1 VET + 2 mixed schools
Construction and geodesy											
Mounter for dry construction (old programme)	1/3 2/3 3/3	31 180 426		10 20 14	3 7 5	n/a	n/a		2016	128	1 VET school
Agriculture and veterinary services	S										
Gardener	1 / 3 2 / 3 3 / 3	1 188 1 188 1 089	900 684 627	252 504 462	84 168 154	n/a	n/a	2013	2016	6	10 (6 VET + 4 mixed schools)
Traffic and transport											
Operator of machines for transport of materials	1/3 2/3 3/3	1 116 1 152 1 023	900 648 495	216 504 528	72 168 176	n/a	n/a	2013	2016	/	3 VET schools
Geology, mining and metallurgy											
Operator of mining machinery	1/3 2/3 3/3	1 188 1 188 990	900 684 528	288 504 462	96 168 154	n/a	n/a	2013	2016	16	4 mixed schools
Chemical technology											
Butcher	1/3 2/3 3/3	1 080 1 188 1 023	864 684 495	216 504 528	72 168 176	n/a	n/a	2013	2016		4 VET schools
Baker (old programme)	1/3 2/3 3/3	1 116 1 116 1 116	684 648 540	423 504 576		n/a	n/a			115	1 VET school
Producer of chemical and cosmetic products (old programme)	1 / 3 2 / 3 3 / 3	1 008 1 152 1 152	1 008 936 720	216 432	15 /	n/a	n/a				1 VET school
Food											
Meat and milk processor (old programme)	1/3 2/3 3/3	1 008 1 152 1 116	1 008 936 756	/ 216 360	/ 15 /	n/a	n/a			05	2 VET schools
Wheat, flour and sugar processor (old programme)	1 / 3 2 / 3 3 / 3	1 008 1 152 1 116	1 008 756 684	/ 216 432	/ 15 /	n/a	n/a			50	1 VET school



Mechanics											
Vehicle mechanic	1/3 2/3 3/3	1 116 1 188 1 023	900 694 495	216 504 528	54 126 132	n/a	n/a	2013	2016		12 VET + 4 mixed schools
Metal processor	1/3 2/3 3/3	1 116 1 116 1 056	900 612 528	216 504 528	54 126 132	n/a	n/a	2015			1 VET school
Mechanical mechanic	1/3 2/3 3/3	1 224 1 224 1 224	612 612 612	612 612 612	153 153 153	n/a	n/a			000	1 VET school
Plumbing installer (pipe fitter)	1/3 2/3 3/3	1 080 1 116 1 080	1 080 864 576	/ 252 504	/ 63 126	n/a	n/a			603	2 VET schools
Welder	1 / 3 2 / 3 3 / 3	1 080 1 116 1 080	1 080 864 576	/ 252 504	/ 63 126	n/a	n/a				2 VET schools
Lathe operator	1 / 3 2 / 3 3 / 3	1 080 1 044 1 080	1 080 864 576	/ 180 504	/ 45 126	n/a	n/a				1 VET school
Construction millwright	1/3 2/3 3/3	1 080 1 116 1 080	1 080 684 576	/ 525 504	/ 131 126	n/a	n/a				1 VET school
Automotive technicians											
Vehicle body repair technician	1/3 2/3 3/3	1 224 1 224 1 224	612 612 612	612 612 612	153 153 153	n/a	n/a			00	1 VET school
Auto electrician	1 / 3 2 / 3 3 / 3	1 080 1 116 1 080	1 080 900 648	/ 216 432	/ 54 108	n/a	n/a			83	1 VET school
4-year programmes											
Economic, legal and commerce											
Business secretary	1/ 4 2 / 4 3 / 4 4 / 4	1 044 1 152 1 116 990	1 044 1 008 972 858	/ 144 144 132		n/a	n/a	2007		10 760	16 VET +
Economic technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 188 1 116 1 023	1 044 1 044 972 891	/ 144 144 132		n/a	n/a	2007		10760	schools



Legal technician	1 / 4 2 / 4 3 / 4 4 / 4	1 053 1 116 1 080 1 023	1 053 1 008 936 891	/ 108 144 132	n/a	n/a	2007		
Trade and marketing technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 152 1 152 990	1 044 972 936 792	/ 180 216 198	n/a	n/a	2007		
Banking technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 118 1 118 1 056	1 080 1 118 1 044 924	/ / 144 132	n/a	n/a	2013		
Health services									
Dental technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 116 1 044 990	1 080 936 720 660	/ 180 324 330	n/a	n/a	2007		
Medical nurse	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 080 1 152 1 023	1 080 891 756 726	/ 189 396 297	n/a	n/a	2007		
Lab technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 116 1 152 990	1 080 900 828 726	/ 216 324 264	n/a	n/a	2007	10 538	15 VET + 1 mixed school
Pharmacy technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 116 1 116 1 023	1 080 972 828 759	/ 144 288 264	n/a	n/a	2007		
Physical therapist	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 080 1 152 891	1 080 900 900 624	/ 180 252 264	n/a	n/a	2007		
Textiles and leather									
Garment-making technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 224 1 056	1 080 936 1 008 858	/ 216 216 198	n/a	n/a	2007	1 050	6 VET +
Textile technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 224 1 056	/ 936 1 008 858	/ 216 216 198	n/a	n/a	2007	1 203	schools



Shoemaking technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 224 1 056	1 080 936 1 008 858	/ 216 216 198	n/a	n/a	2007		
Computer operator (garment- making)	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 224 1 056	1 080 936 1 008 858	/ 216 216 198	n/a	n/a	2012		
Graphic design									
Graphics technician	1/ 4 2 / 4 3 / 4 4 / 4	1 080 1 224 1 152 1 056	1 080 864 792 792	/ 360 360 264	n/a	n/a	2007	203	2 VET + 1 mixed school
Electrotechnology									
Electrotechnician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 152 1 152 990	1 044 972 972 825	/ 180 180 165	n/a	n/a	2007		
Electrotechnician, electronics and telecommunications	1 / 4 2 / 4 3 / 4 4 /4	1 044 1 152 1 152 990	1 044 1 008 936 825	/ 144 216 165	n/a	n/a	2007	5 889	17 VET + 2 mixed schools
Electrotechnician, computer technics and automatics	1 / 4 2 / 4 3 / 4 4 /4	1 044 1 152 1 152 990	1 044 972 936 858	/ 180 216 132	n/a	n/a	2007		
Personal services									
Cosmetics technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 152 1 152 957	1 044 936 936 759	/ 216 216 198	n/a	n/a	2007	1 244	12 VET +
Technician, optometry	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 152 1 080 957	1 008 926 864 759	/ 216 216 198	n/a	n/a	2007	1 244	school
Catering and tourism									
Hotel and tourism technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 008 1 116 1 023	1 044 900 936 858	/ 108 180 165	n/a	n/a	2007	1 054	7 VET + 7 mixed schools



Catering technician, rural tourism	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 008 1 116 1 023	1 044 900 936 858	/ 108 180 165	n/a	n/a	2013		
Catering technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 152 1 152 1 156	1 044 936 936 958	/ 216 216 198	n/a	n/a	2013		
Forestry and wood processing									
Technician, furniture and interior design	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 116 990	1 080 972 900 792	/ 180 216 198	n/a	n/a	2007		
Technician, wood processing	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 116 957	1 080 1 080 900 759	/ 72 216 198	n/a	n/a	2007	572	4 VET + 3 mixed schools
Technician, forestry and landscape architecture	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 152 990	1 080 1 044 936 792	/ 108 216 198	n/a	n/a	2007		
Construction and geodesy									
Architectural technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 152 1 152 990	/ / 1 008 858	/ / 144 132	n/a	n/a	2007		
Geodetic technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 152 1 152 990	/ / 1 008 858	/ / 144 132	n/a	n/a	2007		6 VET +
Construction technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 152 1 152 990	/ / 1 008 858	/ / 144 132	n/a	n/a	2007	1 395	3 mixed schools
Technical designer, interior architecture	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 044 1 080 990	/ / 936 858	/ / 144 132	n/a	n/a	2007		



Agriculture and veterinary service	S								
Veterinary technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 152 990	1 080 1 152 1 008 858	/ / 144 132	n/a	n/a	2007		
Wine-making technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 080 990	1 080 1 008 864 792	/ 144 216 198	n/a	n/a	2007		
Farm production technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 116 1 116 990	1 080 972 900 735	/ 144 216 165	n/a	n/a	2007	1 732	6 VET + 4 mixed
Horticultural technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 152 1 152 990	1 080 1 008 972 792	/ 144 180 198	n/a	n/a	2007		schools
Water supply systems technician	1 / 4 2 / 4 3 / 4 4 / 4	1 080 1 080 1 116 990	1 080 972 900 792	/ 108 216 198	n/a	n/a	2007		
Agro-management technician	1/ 4 2 / 4 3 / 4 4 / 4	1 080 1 080 1 116 1 023	1 080 936 900 858	/ 144 216 165	n/a	n/a	2010		
Traffic									
Road safety technician	1 / 4 2 / 4 3 / 4 4 / 4	1 152 1 008 1 152 1 023	1 152 864 972 891	/ 144 180 132	n/a	n/a	2007		
Transport and forwarding technician	1 / 4 2 / 4 3 / 4 4 / 4	1 152 1 116 1 080 957	1 152 1 008 936 792	/ 108 144 165	n/a	n/a	2007	2 338	8 VET + 3 mixed schools
Rail transport technician	1 / 4 2 / 4 3 / 4 4 / 4	1 152 1 188 1 188 990	1 152 1 080 936 825	/ 108 144 165	n/a	n/a	2007		



Machine driver for diesel and towing vehicles	1 / 4 2 / 4 3 / 4 4 / 4	1 118 1 118 1 152 1 056	1 118 974 972 924	/ 144 180 132	n/a	n/a	2011		
Geology, mining and metallurgy									
Geology and mining technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 080 1 152 1 056	/ 900 972 891	/ 180 180 165	n/a	n/a	2007	254	1 VET +
Metallurgy technician	1/ 4 2 / 4 3 / 4 4 / 4	1 044 1 008 1 152 1 056	/ / 1 008 924	/ / 144 132	n/a	n/a	2007	234	schools
Chemistry and technology									
Food technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 188 1 188 1 056	1 008 972 972 858	/ 216 216 198	n/a	n/a	2007		
Food production technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 188 1 152 990	1 008 972 936 792	/ 216 216 198	n/a	n/a	2007	1 654	9 VET +
Chemical and technological technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 188 1 118 1 023	1 008 974 974 759	/ 144 144 264	n/a	n/a	2007	1 054	schools
Nutrition technician	1 / 4 2 / 4 3 / 4 4 / 4	1 008 1 118 1 118 1 089	1 008 902 902 891	/ 216 216 198	n/a	n/a	2007		
Mechanics									
Automotive technician, mechatronics	1 / 4 2 / 4 3 / 4 4 / 4	1 040 1 040 1 080 1 054	1 040 824 824 858	/ 216 216 196	n/a	n/a	2007		
Aviation mechanics technician	1/ 4 2 / 4 3 / 4 4 / 4	1 044 1 044 1 152 990	1 044 864 936 891	/ 180 216 99	n/a	n/a	2007	3 643	15 VET + 7 mixed schools
Mechanics technician	1 / 4 2 / 4 3 / 4 4 / 4	1 044 1 116 1 152 990	1 044 900 1 044 891	/ 216 108 99	n/a	n/a	2007		





Annex 3: Montenegro – Programmes in formal initial VET

Programme	National level/ EQF level	Hours total	Theory (hours)	Practice total (hours)	Practice WBL obligatory (days)	Learning outcomes/ objectives for WBL part specified	Formal assessment instruments for WBL in place (based on learning outcomes/ objectives)	Year of last reform of programme	Year of next reform of programme (planned)	Number of students enrolled in 2 015/16	Number of VET schools offering the progra- mme
2-year programmes											
Wood processor	2/2	2 139	1 038	1 101	15	yes	no	2006	2016-2020	0	0
3-year programmes											
Motor vehicle driver	3/3	3 225	1 842	1 383	20	yes	no	2010	2016-2020	72	2
Joiner	3/3	3 255	1 584	1 671	20	yes	no	2003	2016-2020	0	0
Florist	3/3	3 255	1 614	1 641	20	yes	no	2005	2016-2020	0	0
First-stage wood-processing operator	3/3	3 255	1 584	1 671	20	yes	no	2006	2016–2020	0	0
Vehicle mechanic	3/3	3 255	1 905	1 350	35	yes	no	2004	2016-2020	165	7
Sanitary equipment, heating and air-conditioning installer	3/3	3 255	1 803	1 452	20	yes	no	2004	2016–2020	77	4
Panel beater	3/3	3 255	1 731	1 524	20	yes	no	2007	2016-2020	0	0
Tool-maker	3/3	3 255	1 731	1 524	35	yes	no	2007	2016-2020	0	0
Blacksmith	3/3	3 255	1 731	1 524	25	yes	no	2007	2016-2020	7	1
Welder	3/3	3 255	1 803	1 452	25	yes	no	2008	2016-2020	22	2
Telecommunications system installer	3/3	3 255	1 620	1 635	20	yes	no	2007	2016–2020	0	0
Electrical installer	3/3	3 255	1 872	1 383	20	yes	no	2008	2016-2020	20	2
Vehicle electrician	3/3	3 255	1 872	1 383	20	yes	no	2010	2016-2020	42	3
Waiter	3/3	3 255	1 830	1 425	60	yes	no	2007	2016-2020	201	7
Cook	3/3	3 255	1 761	1 494	60	yes	no	2007	2016-2020	455	10
Pastry cook	3/3	3 255	1 584	1 671	25	yes	no	2006	2016-2020	56	1
Sales assistant	3/3	3 255	1 872	1 383	20	yes	no	2005–2010	2016-2020	123	3
Administrative assistant	3/3	3 255	1 872	1 383	20	yes	no	2008	2016-2020	35	1
Hairdresser	3/3	3 255	1 590	1 665	30	yes	no	2004	2016-2020	288	5
Carpenter	3/3	3 255	1 590	1 665	30	yes	no	2004	2016-2020	0	0
Drywall installer	3/3	3 255	1 590	1 665	25	yes	no	2004	2016-2020	0	0
Reinforcing ironworker	3/3	3 255	1 590	1 665	25	yes	no	2006	2016-2020	0	0
Painter/colourer	3/3	3 255	1 590	1 665	25	yes	no	2006	2016-2020	0	0
Construction labourer	3/3	3 255	1 590	1 665	25	yes	no	2006	2016-2020	29	1
Mason	3/3	3 255	1 872	1 383	25	yes	no	2008	2016-2020	0	0
Tiler	3/3	3 255	1 872	1 383	25	yes	no	2009	2016-2020	12	1



5/5	3 200	1764	1 491	20	yes	no	2007	2016-2020	0	0
3/3	3 255	1 764	1 491	20	yes	no	2007	2016-2020	31	1
3/3	3 255	1 581	1 674	20	yes	no	2004	2016-2020	0	0
3/3	3 255	1 584	1 671	30	yes	no	2006	2016-2020	19	1
3/3	3 219	1 587	1 632	30	yes	no	2006	2016-2020	0	0
3/3	3 255	1 620	1 635	30	yes	no	2006	2016–2020	0	0
4.1/4	4 381	3 748	633	35	yes	no	2009	2016-2020	708	6
4.1/4	4 299	3 807	492	30	yes	no	2009	2016-2020	359	2
4.1/4	4 335	3 807	528	30	yes	no	2009	2016-2020	349	2
4.1 / 4	4 302	3 882	420	30	yes	no	2009	2016–2020	439	4
4.1/4	4 336	3 810	526	30	yes	no	2009	2016-2020	57	1
4.1/4	4 371	3 882	489	30	yes	no	2010	2016-2020	0	0
4.1/4	4 371	3 882	489	30	yes	no	2010	2016-2020	26	1
4.1 / 4	4 371	3 882	489	30	yes	no	2010	2016–2020	61	1
4.1/4	4 371	3 774	597	30	yes	no	2009	2016-2020	23	1
4.1/4	4 371	3 951	420	40	yes	no	2008	2016-2020	37	1
4.1 / 4	4 371	3 081	1 290	55	yes	no	2008	2016–2020	299	5
4.1 / 4	4 368	3 735	633	30	yes	no	2009	2016–2020	316	4
4.1 / 4	4 371	3 705	666	30	yes	no	2010	2016–2020	192	4
4.1 / 4	4 371	3 669	702	30	yes	no	2009	2016–2020	496	6
4.1 / 4	4 371	3 669	702	30	yes	no	2009	2016–2020	107	3
4.1 / 4	4 371	3 669	702	30	yes	no	2009	2016-2020	826	7
4.1/4	4 371	3 669	702	30	yes	no	2009	2016-2020	297	4
4.1 / 4	4 371	3 669	702	30	yes	no	2009	2016–2020	183	2
4.1/4	4 371	3 807	564	30	yes	no	2010	2016-2020	613	4
4.1 / 4	4 371	3 951	420	40	yes	no	2009	2016–2020	503	12
4.1/4	4 371	3 669	702	90	yes	no	2009	2016-2020	661	10
4.1/4	4 371	3 741	630	90	yes	no	2009	2016-2020	338	8
4.1/4	4 371	3 528	843	90	yes	no	2009	2016-2020	794	11
4.1 / 4	4 371	3 951	420	30	yes	no	2009	2016–2020	986	7
4.1/4	4 371	3 915	456	30	yes	no	2009	2016-2020	2 373	14
	3/3 3/3 3/3 3/3 3/3 3/3 3/3 3/3 4.1/4	3/3 $3 255$ $3/3$ $3 255$ $3/3$ $3 255$ $3/3$ $3 255$ $3/3$ $3 255$ $3/3$ $3 255$ $4.1/4$ $4 381$ $4.1/4$ $4 381$ $4.1/4$ $4 381$ $4.1/4$ $4 381$ $4.1/4$ $4 371$ $4.1/4$ <td>3/3$3 255$$1764$$3/3$$3 255$$1581$$3/3$$3 255$$1581$$3/3$$3 255$$1584$$3/3$$3 255$$1620$</td> 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Technician, law and administration	4.1 / 4	4 308	3 852	456	30	yes	no	2009	2016–2020	750	5
Sewing technician	4.1/4	4 371	3 774	597	40	ves	no	2009	2016-2020	34	1
Architecture technician	4.1/4	4 371	4 089	282	30	ves	no	2010	2016-2020	123	1
Geodesy technician	4.1/4	4 371	4 371	0	45	yes	no	2009	2016-2020	83	1
Technician, high-rise construction	4.1 / 4	4 371	4 089	282	30	yes	no	2009	2016–2020	176	5
Construction technician	4.1/4	4 371	4 017	354	30	yes	no	2009	2016-2020	151	3
Interior designer	4.1/4	4 371	3 951	420	30	yes	no	2009	2016-2020	204	2
Chemistry lab technician	4.1/4	4 371	3 843	528	30	yes	no	2007	2016-2020	39	1
Chemical technology technician	4.1 / 4	4 371	3 843	528	30	yes	no	2007	2016–2020	20	1
Graphics technician	4.1/4	4 371	3 600	771	30	yes	no	2010	2016-2020	81	1
Aluminium industry technician	4.1/4	4 371	3 774	597	30	yes	no	2007	2016-2020	12	1
Food technologist	4.1/4	4 371	3 843	528	40	yes	no	2007	2016-2020	318	5
Veterinary technician	4.1/4	4 371	3 636	735	30	yes	no	2009	2016-2020	108	3
Agricultural technician (up to 2013)	4.1 / 4	4 371	3 600	771	30	yes	no	2009	2016–2020	37	4
Horticultural technician	4.1/4	4 371	3 669	702	30	yes	no	2010	2016-2020	0	0
Medical lab technician	4.1/4	4 338	3 570	768	30	yes	no	2009	2016-2020	177	2
Medical cosmetics	4.1/4	4 407	3 573	834	45	yes	no	2009	2016-2020	133	1
Pharmacy technician	4.1/4	4 371	3 879	492	40	yes	no	2009	2016-2020	439	3
Health technician	4.1/4	4 335	3 600	735	45	yes	no	2009	2016-2020	1 192	5
Gynaecology and obstetrics technician	4.1 / 4	4 335	3 603	732	45	yes	no	2009	2016–2020		
Physiotherapy technician	4.1/4	4 371	3 648	723	45	yes	no	2009	2016-2020	290	3
Dental technician, stomatology	4.1 / 4	4 371	3 462	909	45	yes	no	2010	2016–2020	184	5
Competency-based curricula											
Agricultural technician (since 2013)	4.1 / 4	4 512	4 029	483 (351 SBL + 132 WBL (obligato ry)	132 (ob- ligatory) or 45	no	no	2013	2018	186	6
Tourism technician (since 2013)	4.1 / 4	4 512	3 751	761 (623 SB L+128 WBL)	128 WBL + 0	no	no	2013	2018	1 072	10



Programme	National level/ EQF level	Hours total	Theory (hours)	Exer- cises ⁷	Practice total (hours)	Practice WBL obligatory (hours)	Learning outcomes/ objectives for WBL part specified	Formal assessment instruments for WBL in place (based on learning outcomes / objectives)	Year of last reform of programme	Year of next reform of programme (planned)	Number of students enrolled in 2 015/16	Number of VET schools offering the programme
3-year programmes												
Agriculture, food produc	tion and proces	ssing										
Florist and gardener	3	3 275	2 046	70	979	n/a	n/a	no	2013	n/a	562	10
Butcher	3	3 502	1 857	269	1 106	n/a	n/a	P ⁸	2012	n/a	1 134	27
Baker	3	3 502	1 097	269	1 106	n/a	n/a	Р	2012	n/a	1 349	33
Agricultural producer (farm produce/vegetable producer)	3	3 412	2 148	70	1 014	n/a	n/a	no	2012	n/a	107	2
Dairy processor	3	3 502	1 857	269	1 106	n/a	n/a	Р	2012	n/a	87	3
Food-processing producer (fruit and vegetable processor)	3	3 342	2 215	9	47	n/a	n/a	no	2012	n/a	539	9
Operator/mechanic, agricultural machinery	3	3 496	2 888	416	832	n/a	n/a	Р	2012	n/a	578	10
Breeder of sports horses	3	3 173	1 571	70	1 352	n/a	n/a	no	2013	n/a	45	1
Forestry and wood proc	essing											
Operator, furniture production	3	3 573	1 364	256	1 548	n/a	n/a	Р	2016	n/a	168	2
Carpenter	3	3 440	1 546	664	990	n/a	n/a	Р	2014	n/a	346	6
Woodsman (forester)	3	3 377	2 1 1 3	612	472	n/a	n/a	no	2014	n/a	72	1
Upholsterer and decorator	3	3 505	1 405	528	1 232	n/a	n/a	Ρ	2014	n/a	132	4
Geology, mining and me	etallurgy											
Smelter	3	3 307	2 049	140	938	n/a	n/a	no	2010	n/a	36	1
Machinery operator in surface exploitation	3	3 205	2 145	148	792	n/a	n/a	no	2013	n/a	185	2

Annex 4: Serbia – Programmes in formal initial VET

 7 Even based on practical work, exercises are a separate part of a programme curriculum.

⁸ P = partially. Assessment procedures, tools and criteria are developed and used in the final exam.



Gas and oil plant	3	3 173	2 404	148	501	n/a	n/a	no	2013	n/a	79	1
	0	0.007	0.040	4.40	000				0040	- 1-	40	4
Rolling miller	3	3 307	2 049	140	938	n/a	n/a	no	2013	n/a	42	1
Goldsmith	3	3 444	1 405	1 157	702	n/a	n/a	Р	2016	n/a	71	1
Mechanical engineering	and metal pro	cessing			1 0 1 0	,	,		0010	,	0 / /	_
Vehicle whitesmith	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	211	5
Vehicle mechanic	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	3 212	69
Locksmith	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	443	11
Locksmith / welder	3	3 811	1 768	645	1 188	yes ⁹	n/a	Р	2014	n/a	701	8
Ship mechanic	3	3 184	2 016	180	928	n/a	n/a	no	2016	n/a	41	1
Industrial machinery mechanic	3	3 369	1 318	148	776	yes ⁹	n/a	Р	2014	n/a	398	5
Installer	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	327	8
Machine locksmith	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	192	5
Gas and pneumo-												
energetic plant mechanic	3	3 360	2 320	185	855	n/a	n/a	no	2016	n/a	41	1
Heating and cooling device mechanic	3	3 477	2 320	185	855	n/a	n/a	no	2016	n/a	1 029	22
Hydraulics and pneumatics mechanic	3	3 360	2 320	185	855	n/a	n/a	no	2016	n/a	43	1
Medical and lab equipment mechanic	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	45	1
Optics mechanic	3	3 372	1 960	344	988	n/a	n/a	no	2016	n/a	79	1
Economy machinery mechanic	3	3 228	2 103	185	1 040	n/a	n/a	no	2016	n/a	268	6
Working machinery mechanic	3	3 228	2 103	185	1 040	n/a	n/a	no	2016	n/a	44	1
Metal miller of numerically-controlled machines	3	3 450	2 147	358	855	n/a	n/a	no	2016	n/a	48	1
Metal scraper	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	83	2
Operator, mechanical processing	3	3 508	1 539	571	1 188	n/a	n/a	Р	2016	n/a	856	10
Welder	3	3 388	2 103	185	1 040	n/a	n/a	no	2016	n/a	669	16
Electrical engineering												
Vehicle electrician	3	3 446	2 000	245	1 051	n/a	n/a	Р	2014	n/a	1 012	11
Electrician	3	3 446	1 882	214	1 200	ves ⁹	n/a	Р	2014	n/a	265	3
Electro-installer	3	3 384	2 113	107	940	n/a	n/a	no	2014	n/a	977	19

⁹ Programme with compulsory work-based learning. Organisation and number of hours in company depend on agreement between school and company.



Electro-mechanic, machines and equipment	3	3 353	2 082	181	940	n/a	n/a	no	2014	n/a	252	6
Electro-mechanic, cooling and heating devices	3	3 384	2 113	181	940	n/a	n/a	no	2014	n/a	843	19
Electro-fitter of networks and plants	3	3 384	2 113	181	940	n/a	n/a	no	2014	n/a	829	18
Telecommunications network fitter	3	3 261	2 078	247	796	n/a	n/a	no	2014	n/a	276	3
Chemistry, non-metals a	and graphic des	sign										
Cellulose and paper producer	3	3 307	2 151	507	469	n/a	n/a	no	2015	n/a	45	1
Producer of chemical products	3	3 307	2 151	507	469	n/a	n/a	no	2015	n/a	81	1
Lacquer dyer	3	3 307	2 282	411	834	n/a	n/a	no	2015	n/a	88	1
Plastic-maker (plastic processor)	3	3 307	2 151	507	469	n/a	n/a	no	2015	n/a	45	1
Screen printer	3	3 375	2 155	70	910	n/a	n/a	no	2015	n/a	79	1
Textiles and leather												
Leather and fur garment maker	3	3 305	1 780	70	1 215	n/a	n/a	no	2015	n/a	45	1
Textile machinery mechanic	3	2 915	1 255	700	750	n/a	n/a	no	2015	n/a	86	1
Fashion clothes maker	3	3 385	1 395	700	1 780	n/a	n/a	Р	2015	n/a	492	18
Shoemaker	3	3 305	1 780	70	1 215	n/a	n/a	no	2015	n/a	224	3
Textile worker	3	3 415	1 395	1 125	655	n/a	n/a	Р	2015	n/a	87	1
Geodesy and construction	on											
Reinforced concrete maker	3	3 278	1 985	209	804	n/a	n/a	no	2015	n/a	44	1
Decorator of wall surfaces (painter)	3	3 278	1 985	209	804	n/a	n/a	no	2014	n/a	169	5
Ceramicist / terrazzo layer / furnace worker	3	3 278	1 985	209	804	n/a	n/a	no	2015	n/a	141	4
Fitter	3	3 512	1 792	606	904	n/a	n/a	no	2014	n/a	82	1
Construction machinery operator	3	3 278	1 985	209	804	n/a	n/a	no	2015	n/a	215	4
Boarding plasterer	3	3 278	1 985	209	804	n/a	n/a	Р	2015	n/a	43	1
Bricklayer and plasterer	3	3 278	1 985	209	804	n/a	n/a	no	2015	n/a	87	2
Traffic and transport												
Shipmaster	3	3 416	2 595	138	563	n/a	n/a	no	2016	n/a	44	1



Conductor, railway traffic	3	3 414	2 826	4	78	n/a	n/a	no	2016	n/a	45	1
Operator, internal transport resources	3	3 414	2 836	4	78	n/a	n/a	no	2016	n/a	90	1
Motor vehicle driver	3	3 322	3 081	1	11	n/a	n/a	no	2016	n/a	3302	31
Train master	3	3 414	2 820	4	08	n/a	n/a	no	2016	n/a	45	1
Trade, catering and tour	ism											
Waiter	3	3 422	1 670	670	576	n/a	n/a	Р	2014	n/a	2 508	52
Cook	3	3 432	1 420	1 280	372	n/a	n/a	P	2014	n/a	3 196	60
Confectioner/pastry	3	3 432	1 518	1 212	342	n/a	n/a	P	2014	n/a	964	20
Trader (seller)	3	3 476	1 942	408	947	n/a	n/a	Р	2016	n/a	3 067	40
Health and social care	Ŭ	0 110	1012	100	011	11/ 04	ni ca	·	2010	11/04	0 001	10
Masseur	3	3 480	2 2 1 6	7	34	n/a	n/a	Р	2015	n/a	203	2
Health carer	3	3 823	2 236	7	59	n/a	n/a	P	2015	n/a	479	6
Personal services	U	0 020	2 200	1	00	TI/ Cl	n/ a		2010	11/ C4	470	0
Men's hairdresser	3	3 4 1 0	2 090	70	1 110	n/a	n/a	no	2013	n/a	1 211	19
Pedicure / manicure	3	3 410	2 000	70	1 110	n/a	n/a	no	2013	n/a	463	9
Women's bairdresser	3	3 410	2 000	70	1 110	n/a	n/a	no	2013	n/a	2 067	30
A-year programmes	U	0 410	2 000	10	1110	TI/ Cl	n/ a	110	2010	11/ C4	2 001	00
Agriculture food produce	tion and proces	ooing										
Agriculturel technician		4 700	2 169	640	490	n/o	D	D	2016	n/o	4 260	20
Food processing	4	4 7 90	5 100	040	400	n/a	Г	Г	2010	II/a	4 209	39
technician	4	4 628	3 131	1 \$	317	n/a	n/a	Р	2016	n/a	3207	31
Horticultural technician	4	4 315	3 192	408	545	n/a	n/a	no	2016	n/a	615	8
Agricultural engineering technician	4	4 624	3 530	483	545	n/a	n/a	no	2016	n/a	233	2
Biotechnology technician	4	4 557	3 289	344	510	n/a	n/a	no	2016	n/a	359	4
Veterinary technician	4	4 798	2 408	736	544	n/a	n/a	Р	2016	n/a	3 062	30
Winegrower / winemaker (pilot	4	4 581	2 786	823	582	120	n/a	Р	2016	n/a	231	3
	4	4 400	2 262	175	E10	2/2	2/0	20	2016	n/o	40	2
Zoo technician	4	4 490	3 202	475	515	II/d	II/d	ΠΟ	2010	II/d	40	2
Forestry technician		1 557	3 3 2 6	001	n/2	n/a	n/o	no	2016	n/o	521	5
Final wood processing	4	4 337	5 520	991	n/a	n/a	II/a	ПО	2010	II/a	551	5
technician	4	4 891	3 574	237	780	n/a	n/a	no	2016	n/a	204	2
Primary wood- processing technician	4	4 891	3 574	237	780	n/a	n/a	Р	2016	n/a	237	1
Hunting and fishing technician (pilot programme)	4	4 597	4 ()57	540	n/a	n/a	no	2016	n/a	30	3



Furniture and interior design technician	4	4 774	2 328	1 668	480	n/a	Р	Р	2016	n/a	714	7
Landscape architecture technician	4	4 487	3 390	857	240	n/a	n/a	no	2016	n/a	658	5
Geology, mining and me	etallurav											
Geology technician.												
geo-technology and hydrogeology	4	4 557	3 530	7	87	n/a	n/a	no	2016	n/a	118	1
Geology technician,												
exploration of minerals	4	4 557	3 565	7	52	n/a	n/a	no	2016	n/a	236	2
Mining technician	4	4 489	3 724	148	437	n/a	n/a	no	2016	n/a	231	3
Recycling technician	4	4 181	3 049	8	92	n/a	n/a	Р	2015	n/a	346	3
Mechanical engineering	and metal proc	essina										
Aircraft technician	4	4 898	3 151	1 032	475	n/a	n/a	Р	2016	n/a	218	1
Aircraft technician.			0.01			1.7 64	11/04		2010	TH/ CK	2.0	
electrical aircraft equipment (pilot	4	4 624	2 603	1 239	542	n/a	n/a	no	2016	n/a	30	1
Aircraft technician												
electronic aircraft												
equipment (pilot	4	4 624	2 603	1 239	542	n/a	n/a	no	2014	n/a	31	1
programme)												
Aircraft technician.												
aircraft and engine	4	4 624	2 603	1 239	542	n/a	n/a	no	2014	n/a	30	1
(pilot programme)												
Ship machinery		4 400	0.044	0.4.4	100	,	1		0040	,	440	
technician	4	4 408	3 644	344	420	n/a	n/a	no	2016	n/a	113	1
Mechanical technician	4	4 651	3 584	8	27	n/a	n/a	no	2016	n/a	104	1
Mechanical												
technician,	4	4 500	2 5 0 0	204	500	-			0040	n la	440	4
measurement and	4	4 508	3 528	381	299	n/a	n/a	no	2016	n/a	116	1
control technology												
Motor vehicle	4	4 574	0.740	4.40		n la			2040	a la	0.470	20
mechanical technician	4	4 57 1	3719	148	514	n/a	n/a	no	2016	n/a	3 479	32
Mechanical												
technician, computer	4	4 364	3 474	779	111	n/a	n/a	no	2016	n/a	7 624	61
construction												
Mechanical	4	1 75 1	2.024	C AE	770	2/2	2/2	D	2016	2/2	240	0
technician, repairs	4	4 / 54	2 934	645	113	n/a	n/a	P	2016	n/a	240	2
Mechatronic												
technician, radar	4	4 604	0.670	1.045	105	2/2	2/2	20	2014	2/2	20	4
systems (pilot	4	4 024	2070	1 245	400	n/a	n/a	no	2014	n/a	39	1
programme)												



Mechatronic technician, missile systems (pilot programme)	4	4 624	2 606	1 309	469	n/a	n/a	no	2014	n/a	41	1
Mechatronic technician, air transport systems	4	4 898	3 329	1 032	297	n/a	n/a	Ρ	2016	n/a	119	1
Plant technician, mechanical processing	4	4 507	3 208	185	1 114	n/a	n/a	no	2016	n/a	120	1
Machinery technician, energetics	4	4 507	3 543	235	729	n/a	n/a	no	2016	n/a	238	2
Optics technician	4	4 512	2 926	542	1 044	n/a	n/a	no	2016	n/a	232	2
Computer control technician	4	4 512	3 104	1 156	252	n/a	n/a	no	2016	n/a	5 028	38
Robotics technician	4	4 251	3 508	653	90	n/a	n/a	no	2016	n/a	816	7
Electrical engineering												
Administrator of IT networks	4	4 758	2 819	1 629	70	n/a	n/a	Р	2014	n/a	1 463	14
Electrotechnician, automation	4	4 552	3 546	698	148	n/a	n/a	no	2016	n/a	596	5
Electrotechnician, electromotor plants	4	4 521	3 643	500	218	n/a	n/a	no	2016	n/a	241	2
Electrotechnician, electronics	4	4 517	3 573	636	148	n/a	n/a	no	2016	n/a	936	7
Electrotechnician, energetics	4	4 554	3 564	622	218	n/a	n/a	no	2016	n/a	3 197	26
Electrotechnician, information technologies (pilot programme)	4	4 626	2 908	1 364	144	n/a	n/a	no	2014	n/a	2 452	25
Electrotechnician, multimedia	4	4 552	3 577	667	148	n/a	n/a	Р	2016	n/a	1 412	10
Electrotechnician, process control	4	4 552	3 511	663	218	n/a	n/a	no	2016	n/a	1 179	9
Electrotechnician, computers	4	4 583	3 509	766	148	n/a	n/a	no	2012	n/a	6 086	59
Electrotechnician, telecommunications	4	4 552	3 480	764	148	n/a	n/a	Р	2014	n/a	2 102	12
Electrotechnician, electronics in vehicles	4	4 736	3 365	834	148	n/a	n/a	Р	2014	n/a	1 548	11
Electro-mechanic, cooling and heating devices	4	4 521	3 546	597	218	n/a	n/a	no	2016	n/a	823	19



Mechatronics technician	4	4 756	3 192	1 213	111	n/a	n/a	Р	2016	n/a	2 118	6
Chemistry, non-metals a	and graphic des	ign										
Photographer	4	4 555	2 915	70	1 270	n/a	n/a	no	2015	n/a	309	2
Chemistry lab worker	4	4 557	3 291	1 (026	n/a	n/a	no	2015	n/a	1006	8
Chemical engineering technician	4	4 557	3 297	1 (020	n/a	n/a	no	2015	n/a	715	7
Graphics processing technician	4	4 555	2 915	70	1 270	n/a	n/a	no	2015	n/a	234	1
Technician for graphics production preparation	4	4 614	2 720	396	1 108	n/a	n/a	Р	2015	n/a	118	1
Printing technician	4	4 555	2 915	70	1 270	n/a	n/a	no	2015	n/a	421	4
Graphics preparation technician	4	4 612	2 893	299	1 000	n/a	n/a	no	2015	n/a	807	4
Industrial pharmaceutical technology technician	4	4 455	3 090	1	125	n/a	n/a	no	2015	n/a	2 105	25
Graphic design technician	4	4 628	3 224	1 -	1 404		n/a	Р	2015	n/a	438	4
Polymer technician	4	4 557	3 364	9	953		n/a	no	2015	n/a	120	1
Environmental protection technician	4	4 522	3 259	1 (953 1 023		n/a	no	2015	n/a	3 108	27
Textiles and leather												
Garment maker / tailor (women's and men's clothing)	4	4 720	2 329	998	961	n/a	n/a	Ρ	2016	n/a	220	7
Clothes designer technician	4	4 734	2 345	1 497	572	n/a	n/a	Р	2016	n/a	1 413	6
Clothing maker technician	4	4 774	2 597	1 011	754	n/a	n/a	no	2016	n/a	612	1
Leather product designer technician	4	4 650	2 376	2	004	n/a	n/a	Р	2016	n/a	120	1
Textile design technician	4	4 650	2 376	2	004	n/a	n/a	Р	2016	n/a	118	1
Leather-making technician	4	4 618	2 307	1 344	747	n/a	n/a	no	2016	n/a	136	2
Textile technician	4	4 490	2 350	1 315	555	n/a	n/a	no	2016	n/a	118	1
Geodesy and constructi	on											
Architecture technician	4	4 355	2 507	1 603	245	n/a	n/a	Р	2015	n/a	3 217	24
Geodesy technician / geometer	4	4 624	3 011	1 :	373	n/a	n/a	Р	2014	n/a	1 107	6



Construction technician, hydro- construction	4	4 624	3 498	826	60	n/a	n/a	no	2015	n/a	236	2
Construction technician, lab testing	4	4 628	3 407	9	72	n/a	n/a	no	2015	n/a	58	1
Construction technician, civil engineering	4	4 624	3 428	9	56	n/a	n/a	no	2015	n/a	1 029	6
Installation and final construction worker	4	4 557	3 160	347	810	n/a	n/a	no	2016	n/a	171	2
Facilities maintenance technician (pilot programme)	4	4 592	3 093	583	676	n/a	n/a	no	2015	n/a	182	2
Traffic and transport												
Nautical technician, river department	4	4 631	3 840	136	445	n/a	n/a	no	2016	n/a	319	3
Traffic and transport technician	4	4 559	3 971	3	48	n/a	n/a	no	2016	n/a	328	2
Road traffic technician	4	4 571	3 7 1 9	148	514	n/a	n/a	no	2016	n/a	6 369	42
Port traffic technician	4	4 628	3 612	656	180	n/a	n/a	no	2016	n/a	332	2
Internal transport technician	4	4 561	3 691	74	616	n/a	n/a	no	2016	n/a	769	7
Air traffic technician	4	4 898	3 355	1 003	300	n/a	n/a	Р	2012	n/a	240	1
Air traffic safety technician	4	4 898	3 215	1 309	134	n/a	n/a	Р	2012	n/a	103	1
Air traffic technician, rescue	4	4 898	3 250	1 140	204	n/a	n/a	Р	2012	n/a	120	1
Towage technician	4	4 559	3 950	194	175	n/a	n/a	no	2016	n/a	351	3
Transport business administrator	4	4 380	3 762	74	274	n/a	n/a	no	2016	n/a	208	2
Trade, catering and tour	ism											
Decorator in trade	4	4 545	2 877	1 3	376	n/a	n/a	no	2014	n/a	211	2
Culinary technician	4	4 549	2 872	138	1 089	n/a	n/a	no	2014	n/a	2 217	20
Trade technician	4	4 4 4 9	3 297	444	408	n/a	n/a	no	2014	n/a	1 799	12
Tourism technician	4	4 788	3 122	724	372	n/a	n/a	Р	2014	n/a	6 390	51
Catering technician	4	4 579	3 262	138	728	n/a	n/a	no	2014	n/a	1 423	11
Economy, law and admi	nistration											
Economic technician	4	4 983	3 1 3 2	6	42	n/a	n/a	no	2015	n/a	13 610	25
Financial administrator	4	4 665	3 351	1	134	n/a	n/a	Р	2015	n/a	5 291	25
Finance technician	4	4 949	3 500	5	39	n/a	n/a	no	2015	n/a	2 165	17



Commercialist	4	3 331	2 349	716	236	236 ¹⁰	n/a	Р	2015	n/a	3 127	26
Business administrator	4	4 602	3 373	1 1	139	n/a	n/a	Р	2015	n/a	3 208	25
Legal technician	4	4 458	3 789	48	39	n/a	n/a	no	2015	n/a	3 150	22
Banking and insurance officer	4	4 766	3 401	1 2	245	n/a	n/a	Р	2015	n/a	1 185	11
Security technician	4	4 415	4 150	14	40	n/a	n/a	no	2015	n/a	956	8
Fire protection technician	4	4 5390	3 943	208	752	n/a	n/a	no	2015	n/a	354	3
Hydrometeorology												
Hydrology technician	4	4 560	3 619	83	31	n/a	n/a	no	2015	n/a	120	1
Meteorology technician	4	4 560	3 856	49	494		n/a	no	2015	n/a	120	1
Health and social care					761							
Pharmacy technician	4	4 794	3 553	761		n/a	n/a	P	2015	n/a	2 806	23
Physiotherapy technician	4	4 734	3 302	98	83	n/a	n/a	Р	2015	n/a	2 055	15
Gynaecology and obstetrics nurse	4	4 620	3 655	66	65	n/a	n/a	no	2015	n/a	1 262	11
Cosmetic technician	4	4 736	3 1 4 4	1 1	40	n/a	n/a	Р	2015	n/a	816	5
Lab technician	4	4 736	3 1 4 4	1 1	140	n/a	n/a	P	2015	n/a	1 007	8
Nurse, technician	4	4 802	3 266	95	54	n/a	n/a	P	2015	n/a	7 205	2
Nurse, educator	4	4 620	3 530	79	90	n/a	n/a	no	2015	n/a	1 041	39
Paediatric nurse, technician	4	4 620	3 565	75	55	n/a	n/a	no	2015	n/a	1 482	9
Sanitary and environmental technician	4	4 620	3 625	69	95	n/a	n/a	no	2015	n/a	541	13
Dental nurse, technician	4	4 620	3 460	86	60	n/a	n/a	Р	2015	n/a	519	4
Dental technician	4	4 620	3 260	1 (060	n/a	n/a	no	2015	n/a	1 106	8
Personal services												
Stage make-up artist / wigmaker	4	4 555	3 420	1 1	135	n/a	n/a	no	2014	n/a	116	1

¹⁰ Virtual company



Programme	National level/ EQF level	Hours total (Anatolian Technical High School Programme)	Hours total (Anatolian Vocational High School Program- me)	Theory hours (Anatol-ian Technical High School Program- me)	Theory hours (Anatolian Vocational High School Program-me)	Practice in school hours (Anatolian Technical High School Program- me)	Practice in school hours (Anatolian Vocational High School Program-me)	Practice WBL for Anatolian Techni-cal High Schools: obligatory (hours)	Practice WBL for Anatolian Vocati- onal High Schools: obligatory (hours)	Learning outcomes/ objectives for WBL part specified	Formal assessment instruments for WBL in place (based on learning outcomes/ objectives)	Year of last reform of program- me	Year of next reform of progr- amme (plan-ed)	Number of stude- nts enrolled in 2015/16	Number of VET schools offering the programme
Vocational and Technical														2 082 935	4 109
Anatolian High School															
Justice	4/4	6 512	6 084	4 248	3 492	1 440	1 440	320	864	yes	yes	2017	n/a	12 819	173
Furniture and interior design	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	20 930	413
Family and consumer sciences	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	3 571	66
Shoe and shoemaking technology	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	1 994	17
Information technolo- gies	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	155 235	1 632
Biomedical devices technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	3 614	34
Office manage- ment	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	31 329	335
Child develop- ment and education	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	109 960	1 193
Maritime education	4 / 4	6 512	6 084	3 892	3 204	1 620	1 620	320	864	yes	yes	2017	n/a	6 897	49

Annex 5: Turkey – Programmes in formal initial VET



Entertain- ment services	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	95	6
Handicraft technolo- gies	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	5 055	194
Electrical and electronic technolo- gies	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	138 953	922
Industrial automation technolo- gies	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	7 683	62
Journalism	4/4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	1 489	30
Ship construction (maritime vehicles construct-ion)	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	2 185	31
Food technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	9 469	119
Garment production technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	22 797	455
Graphic design and photo- graphy	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	21 705	261
Beautician and hairdress-ing services	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	12 148	316
Public relations and organisatio nal services	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	7 748	98



Mapping land registry and cadastre	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	8 288	73
Patient and elderly care	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	16 441	254
Animal husbandry	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	1 872	35
Construct- ion technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	19 487	167
Firefighting and fire safety	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	731	12
Chemical technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	16 186	136
Hotel and travel services	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	10 589	187
Jewellery making technology	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	1 293	20
Laboratory services	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	1 886	14
Mining technolog-ies	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	N/A	-
Mechanical technology	4 / 4	6 512 h	6 084 h	4 248 h	3 204 h	1 512 h	1 440 h	320	864	yes	yes	2017	n/a	59 475	373
Printing technology	4 / 4	6 512 h	6 084 h	4 248 h	3 204 h	1 512 h	1 440 h	320	864	yes	yes	2017	n/a	2 638	25
Metal technology	4 / 4	6 512 h	6 084 h	4 248 h	3 204 h	1 512 h	1 440 h	320	864	yes	yes	2017	n/a	26 640	465
Metallurgy	4 / 4	6 512 h	6 084 h	4 248 h	3 204 h	1 512 h	1 440 h	320	864	yes	yes	2017	n/a	767	25
Motor vehicles technology	4 / 4	6 512 h	6 084 h	4 248 h	3 204 h	1 512 h	1 440 h	320	864	yes	yes	2017	n/a	23 774	209
Accounting and financing	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	120 444	834
Production of musical instruments	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	67	4



Marketing and retail	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	15 615	236
Plastic technology	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	1 528	19
Radio and television	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	3 720	49
Rail systems technology	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	1 682	19
Health services	4 / 4	-	6 084	-	3 204	-	1 440	-	864	yes	yes	2017	n/a	181 349	411
Art and design	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	2 461	42
Ceramic and glass technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	824	25
Civil aviation	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	N/A	54
Agricultural technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	2 258	54
Textile technology	4 / 4	6 512	6 084	4 248	3 204	1 512	1 440	320	864	yes	yes	2017	n/a	6 798	74
Installation technology and acclimatisa- tion	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	16 698	276
Aircraft mainten- ance	4 / 4	6 512	6 084	3 892	3 204	1 620	1 620	320 h	864	yes	yes	2017	n/a	2 089	12
Transportat ion services	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	11 343	117
Food and beverages services	4 / 4	6 224	5 868	3 928	3 204	1 224	1 224	320	864	yes	yes	2017	n/a	52 829	566
Renewable energy technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	1 381	40
Design technology	4 / 4	6 512	6 084	4 248	3 204	1 440	1 440	320	864	yes	yes	2017	n/a	166	7



ACRONYMS

AL	Albania
EAfA	European Alliance for Apprenticeships
EBRD	European Bank for Reconstruction and Development
EQF	European Qualifications Framework
ETF	European Training Foundation
EU	European Union
EUR	Euro
MK	Former Yugoslav Republic of Macedonia
MN	Montenegro
MoES	Ministry of Education and Science (MK, MN)
MoNE	Ministry of National Education (TR)
MoSWY	Ministry of Social Welfare and Youth (AL)
MTDs	Medium-term deliverables
NAVETQ	National Agency for VET and Qualifications (AL)
NEC	National Education Council
NEET	(Young people) not in employment, education or training
NQF	National Qualifications Framework
OECD	Organisation for Economic Cooperation and Development
PISA	Programme for International Student Assessment
RS	Serbia
SEECEL	South East European Centre for Entrepreneurial Learning
SME	Small and medium-sized enterprise
TR	Turkey
TVET	Technical and vocational education and training
VET	Vocational education and training
WBL	Work-based learning



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