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Erasmus+ Key Action 3

GET INVOLVED IN EP4A: EUROPEAN PARTNERSHIPS FOR APPRENTICESHIPS

Country Report – Croatia

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1. Country background and context

1.1. Labour market situation

According to the preliminary data from the Croatian Bureau of Statistics, the number of unemployed people in Croatia in September 2016 (3rd quarter) was 211,827, while the rate of registered unemployment was 13.1%. By gender, the distribution was as follows: 93,353 or 44.1% unemployed men and 118,474 or 55.9% unemployed women.

According to the data by the Croatian Employment Service, the largest number of unemployed people are aged 50 to 59 – 25.6%, followed by people aged 20 to 29 – 22%, people aged 30 to 39 – 19.5%, and people aged 40 to 49 – 19.4% total. The lowest number of unemployed people is recorded in the 15 to 19 age group, given that most people attend school at that age, as well as in the age group of 60 and above because a large number of people of that age meet the requirements for retirement or early retirement.

Table 1:

Age	Unemployed	Share
15 to 19	13,527	6.4%
20 to 29	46,571	22.0%
30 to 39	41,281	19.5%
40 to 49	41,125	19.4%
50 to 59	54,226	25.6%
60 and above	15,097	7.1%
TOTAL UNEMPLOYED	211,827	100.0%

Source: Croatian Employment Service

The largest number of unemployed people in the Republic of Croatia have completed vocational secondary school of up to three years and school for skilled and highly skilled workers – 30.3%, followed by people who have completed vocational secondary school of four or more years and grammar school – 28.6%, and people who have completed primary school – 20.5%, totalling at almost 80% of employed people.

The smallest number of unemployed people have a university or academy degree, followed by those with a first level university degree, college degree or a professional study degree – 6.1% and those who have not attended school or have not completed primary school – 6.1%.

Table 2:

Level of education	Number of unemployed people	Share
Completed vocational secondary school of up to three years and school for skilled and highly skilled workers	64,286	30.3%
Completed vocational secondary school of four or more years and grammar school	60,490	28.6%
Completed primary school	43,451	20.5%
Completed university or academy	17,693	8.4%
First level of university, college and professional study	13,010	6.1%
No school and uncompleted primary school	12,897	6.1%
TOTAL UNEMPLOYED	211,827	100.0%

Source: Croatian Employment Service

1.2. Economic sectors

According to the data by the Croatian Bureau of Statistics (DZS), out of the total number of employed people in the Republic of Croatia, the largest number of those employed are in the processing industry – 16.8% (88% are employed in legal entities and 12% in crafts businesses), and wholesale and retail trade, repair of motor vehicles and motorcycles – 15.5% (the ratio of employees is the same as in the processing industry).

A large number of employees, over 40%, are employed in the general interest services sector, such as people employed in administration, police, army, education, health care and other general interest services.

The number of employees in economic interest services is in the range between 5% and 7%, such as the services of providing accommodation and food service activities – 7.7% (67% employed in legal entities, 33% in crafts businesses), construction – 6.3% (77% employed in legal entities, 23% in crafts businesses); transportation and warehousing – 5.4% (81% employed in legal entities, 19% in crafts businesses).

Under 5% of employees work in the following sectors: agriculture, forestry and fishery – 3.6% (43% employed in legal entities, 39% farmers and 18% employed in crafts businesses); other services – 2.3% (52% employed in legal entities, 46% in crafts businesses and 2% independent professionals).

A total of just under 1.5% of people are employed in real estate, mining and quarrying, in households which conduct employer activities and in the activities of households that produce various goods and perform various services for their own use.

Table 3: Employment by economic sectors

Label	THE EMPLOYED BY ACTIVITY (NKD 2007)	In legal entities	In crafts businesses	Independent professionals	Farmers	TOTAL EMPLOYED	Share
A	AGRICULTURE, FORESTRY AND FISHERY	21,988 43.4%	8,929 17.6%	0 0.0%	19,712 38.9%	50,629 100.0%	3.6%
B	MINING AND QUARRYING	4,182 96.0%	176 4.0%	0 0.0%	0 0.0%	4,358 100.0%	0.3%
C	PROCESSING INDUSTRY	206,698 87.8%	28,650 12.2%	0 0.0%	0 0.0%	235,348 100.0%	16.8%
D	ELECTRICITY, GAS AND STEAM SUPPLY AND AIR CONDITIONING	13,690 100.0%	0 0.0%	0 0.0%	0 0.0%	13,690 100.0%	1.0%
E	WATER SUPPLY, SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES	24,841 99.3%	177 0.7%	0 0.0%	0 0.0%	25,018 100.0%	1.8%
F	CONSTRUCTION	68,771 77.3%	20,218 22.7%	0 0.0%	0 0.0%	88,989 100.0%	6.3%
G	WHOLESALE AND RETAIL TRADE; MOTOR VEHICLE AND MOTORCYCLE REPAIR	191,858 88.1%	25,732 11.8%	292 0.1%	0 0.0%	217,882 100.0%	15.5%
H	TRANSPORTATION AND WAREHOUSING	62,077 81.3%	14,249 18.7%	0 0.0%	0 0.0%	76,326 100.0%	5.4%
I	THE PROVISION OF ACCOMMODATION, FOOD SERVICES	72,933 67.5%	35,069 32.5%	0 0.0%	0 0.0%	108,002 100.0%	7.7%
J	INFORMATION AND COMMUNICATION	32,491 95.5%	1,535 4.5%	0 0.0%	0 0.0%	34,026 100.0%	2.4%
K	FINANCIAL AND INSURANCE ACTIVITIES	38,953 97.2%	1,106 2.8%	0 0.0%	0 0.0%	40,059 100.0%	2.9%
L	REAL ESTATE	8,646	560	0	0	9,206	0.7%

		93.9%	6.1%	0.0%	0.0%	100.0%	
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	53,010 77.2%	11,304 16.5%	4,396 6.4%	0 0.0%	68,710 100.0%	4.9%
N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	45,819 90.1%	5,044 9.9%	0 0.0%	0 0.0%	50,863 100.0%	3.6%
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	108,233 92.9%	88 0.1%	8,203 7.0%	0 0.0%	116,524 100.0%	8.3%
P	EDUCATION	101,985 99.4%	640 0.6%	0 0.0%	0 0.0%	102,625 100.0%	7.3%
Q	HEALTH CARE AND SOCIAL WELFARE ACTIVITIES	86,307 87.7%	6,914 7.0%	5,203 5.3%	0 0.0%	98,424 100.0%	7.0%
R	ARTS, ENTERTAINMENT AND RECREATION	23,512 89.8%	671 2.6%	2,000 7.6%	0 0.0%	26,183 100.0%	1.9%
S	OTHER SERVICE ACTIVITIES	16,540 52.0%	14,727 46.3%	532 1.7%	0 0.0%	31,799 100.0%	2.3%
T	HOUSEHOLD WHICH CONDUCT EMPLOYER ACTIVITIES AND ACTIVITIES OF HOUSEHOLDS WHICH PRODUCE VARIOUS GOODS AND PERFORM VARIOUS SERVICES FOR THEIR OWN USE	0 0.0%	2,660 100.0%	1 0.0%	0 0.0%	2,661 100.0%	0.2%
	UNCLASSIFIED ACCORDING TO ACTIVITIES	0 0.0%	460 99.8%	1 0.2%	0 0.0%	461 100.0%	0.0%
	TOTAL EMPLOYED	1,182,534 84.4%	178,909 12.8%	20,628 1.5%	19,712 1.4%	1,401,783 100.0%	100.0%

Source: Croatian Bureau of Statistics

1.3. ECONOMIC OPERATORS

According to the Croatian Bureau of Statistics (companies) and the Ministry of the Economy, Entrepreneurship and Crafts (crafts businesses), there were a total of 193,908 economic operators in the Republic of Croatia on 30 September 2016.

Table 4: Active economic operators according to legal organizational form – 30 September 2016 – 3rd quarter

ORGANIZATIONAL FORM	Active operators	Share
Joint stock company	976	0.5%
Limited liability company	92,368	47.6%
Simple limited liability company	23,281	12.0%
Unlimited partnership	207	0.1%
Subsidiaries of foreign companies or individuals	399	0.2%
Other legal organizational forms	157	0.1%
<i>Crafts business*</i>	76,520	39.5%
TOTAL	193,908	100.0%

Source: The Croatian Bureau of Statistics and the Crafts Register of the Ministry of the Economy, Entrepreneurship and Crafts (crafts businesses)

The largest number of operators are limited liability companies (d.o.o.) – 47.6%, followed by crafts businesses – 39.5% and simple limited liability companies (j.d.o.o.) – 12%, while the least common forms are joint stock companies – 0.5%, subsidiaries of foreign companies or individuals – 0.2%, and unlimited partnerships and other legal organizational forms – 0.1% each.

According to the Croatian Bureau of Statistics, the largest number of people are employed in legal entities – 84.4%, a significant number are employed in crafts businesses – 12.8%, and the smallest number of people are independent professionals and employed insured farmers.

Table 5: Employees in business entities in the Republic of Croatia:

No.	Employed in Croatia	Total	Share
1.	Employed in legal entities	1,182,534	84.4%
2.	Employed in crafts	178,909	12.8%
3.	Independent professionals	20,628	1.5%
4.	Employed insured farmers	19,712	1.4%
	TOTAL EMPLOYED	1,401,783	100.0%

Source: Croatian Bureau of Statistics

1.4. Vocational education and training system

Vocational education and training in the Republic of Croatia is currently regulated by a number of strategic documents and legal frameworks, the most important being the Act on Education in Primary and Secondary Schools (Official Gazette no. 126/12), the Vocational Education and Training Act (Official Gazette no. 30/09) and the Crafts Act (Official Gazette no. 143/13).

Vocational training and education (VET) in Croatia is carried out in VET institutions and partly by employers. VET programs may last for five, four, three, two or one year(s). In 2014, 70.7% of regular secondary school students (ISCED – P 344, 354, 353, 351), approximately 140,000 students, were enrolled in one of the 279 vocational curricula in Croatia, of which:

- 66.25% of students were enrolled in four-year (and one five-year) VET programs;
- 32.17% of students were enrolled in three-year educational programs (for associated trades and crafts (unified model of education) and the so-called “classic model” of education for crafts and industry);
- 1.58% of students were enrolled in two-year and one-year programs, and education programs for students with disabilities. (Source: Ministry of Science, Education and Sports, 2014)

The implementation of vocational education and training is under the jurisdiction of the ministry responsible for education, with the support of the educational agencies (Agency for Vocational Education and Training and Adult Learning (ASOO), Education and Teacher Training Agency (AZOO), National Center for External Evaluation of Education (NCVVO), Agency for Mobility and EU Programmes (AMPEU)), while the implementation of education for occupations in crafts is partly under the jurisdiction of the ministry responsible for crafts.

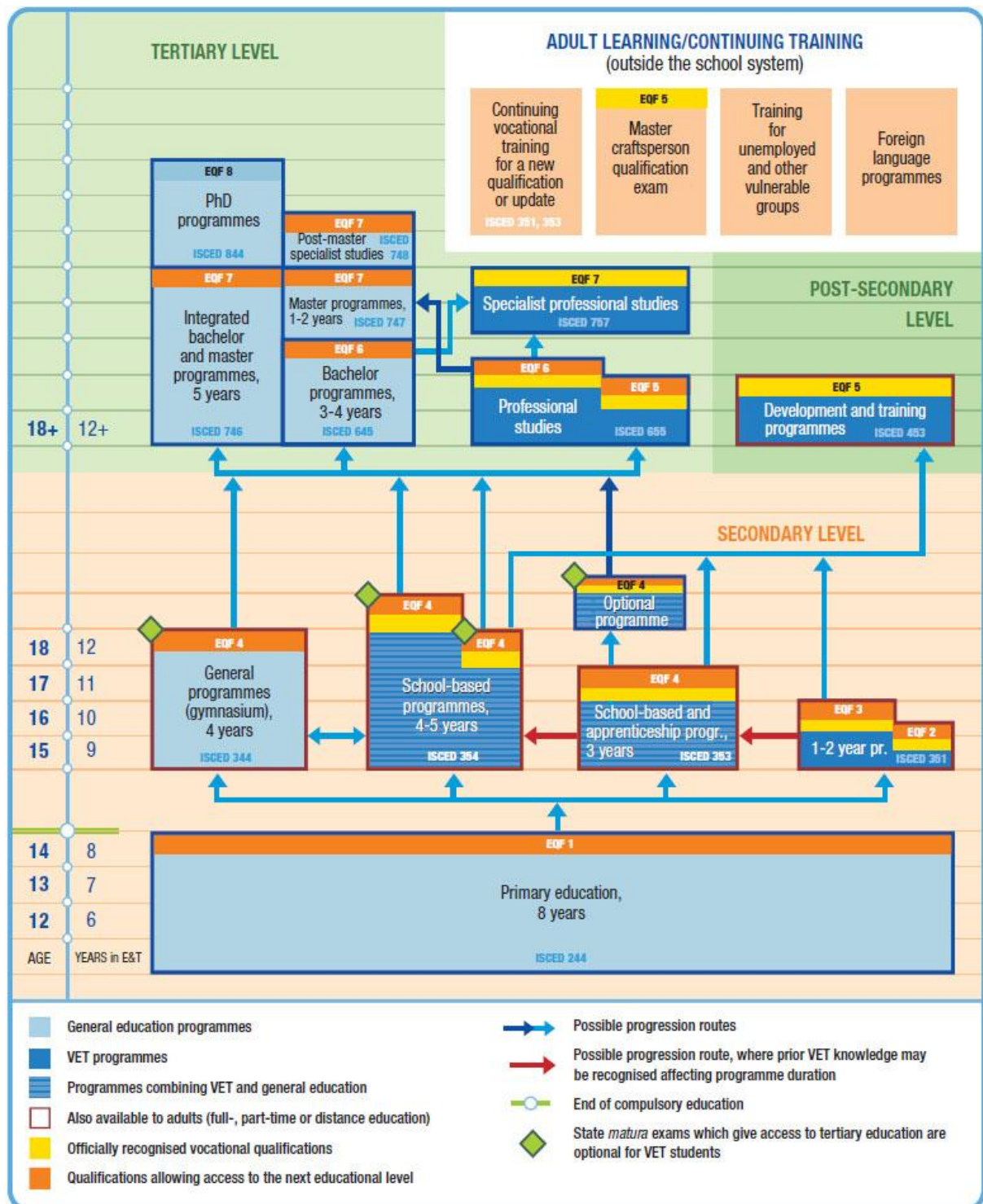


Table 6. VET in Croatian education and training system (Source: Cedefop, Letica et al. (2014a))

2. Apprenticeships in Croatia

2.1. Apprenticeships in Croatia – specific characteristics

Croatia has a long-lasting economic and craft tradition dating back to the Middle Ages (Lui, 2009). From the 12th and 13th century guilds through the establishment of the first crafts chambers and chambers of commerce in 1852 and the establishment of the first crafts schools from the 19th century to the 1960s, crafts education has included apprenticeships. Although apprenticeships were an integral part of the education system for the crafts sector since the 12th century, between the 1960s and 1994, when Croatia was part of the Socialist Federal Republic of Yugoslavia, vocational education did not include apprenticeships. They were reintroduced with the Crafts Act of 1994, after Croatia gained independence.

In 1994, Croatian craftsmen decided to actively participate in the education process and developing the skills of young people who are educated for crafts because they became aware of discrepancies between the education system on the one hand and the knowledge and skills needed in the modern labour market on the other – as well as of the fact that vocational training for a particular occupation constitutes a direct path to employment and emergence on the labour market for most young people, which in turn shapes the quality and direction of their lives.

Since 1994, the Chamber of Crafts and Trades has taken a number of actions to develop an education system that would meet the needs of crafts. Because of their specific characteristics, crafts require a high level of acquired and developed skills. Croatian craftsmen recognised apprenticeships as the best way to acquire crafts skills. The Crafts Act adopted in 1994 created the legal framework for the implementation of part of VET for associated trades and crafts so apprenticeships were implemented within the dual model of education from 1995/1996 to 2003. The development of the new so-called unified model of education started in 2003. The main difference between dual education and the unified model of education is that the unified model has a slightly lower number of practical training hours (the dual model had 1,080 hours in the first and second year of education and 960 hours in the third year, while the unified model of education has 900 hours in the first and second year and 800 hours in the third year). In addition, the dual model of education

allowed students to enrol in a higher grade (year) with a bad (negative) mark in professional theory, which is not possible in the unified model of education.

Currently, in addition to the unified model of education in the vocational education system of the Republic of Croatia, there is also the “classic” or “school” model of education. The main difference between these two models is that there is twice the number of practical training hours in the unified model of education. The number of practical training hours in the “school” model is 1,180 and training is mostly carried out in schools, while the unified model of education has 2,600 hours. Unlike the “school” model, the unified model of education is characterised by the insistence that the larger part of practical training (around 70%) is carried out in business, i.e. licensed crafts workshops and legal entities. The difference between the two models is also evident in the area of professional theory, as explained below.

Currently, apprenticeships in Croatia are only carried out in the crafts sector within the unified model of education.

Young people in Croatia have the opportunity to start an apprenticeship after they have completed primary education, at the age of 14. Their apprenticeship application is assessed based on their academic performance, as well as their health and ability to work in the chosen occupation.

Apprenticeships last for three years. The total number hours of required lessons vary depending on the occupation, but all apprenticeships must include 2,600 hours of practical training. Furthermore, at least 70% of practical training has to be carried out in the workplace (the rest in school workshops). The alteration between the time spent in school and in the workplace is regulated by the implemented curriculum; but in an ideal scenario, students¹ should spend one week in theory classes in school followed by one week of practical training in the workplace (or a school workshop).

The key benefit of participating in apprenticeships is the participation in activities in a real work environment. Apprenticeships allow young people to improve their practical

¹ This text contains the terms student and apprentice since the term apprentice was used until 2013 in the education system for crafts. After 2013, the term was removed from the legislation.

knowledge and skills, especially their soft skills. This is the main difference between education in school and in a crafts workshop.

The new Crafts Act was adopted in 2013. In accordance with this Act, education to acquire vocational qualifications for associated trades and crafts shall be carried out according to the vocational curriculum, which consists of general education and apprenticeship. The apprenticeship consists of a professional theoretical part, and practical training and exercises. The general education and the professional theoretical part of apprenticeship are carried out in secondary school, while apprenticeship practical training and exercises are carried out in school and with licensed economic operators (crafts, legal entities, institutions and cooperatives). The new Act introduced exercises in apprenticeship. In contrast to the above, until 2013 the Crafts Act expressly stipulated that the major portion of the practical part of apprenticeship should be carried out by economic operators.

In apprenticeship programs, the professional theoretical and the practical part of the apprenticeship are related in terms of content and organisation. Professional theory is integrated into the practice, and the professional theory courses were created by integrative programming, which means that a large number of courses were reduced to a small number of areas that include necessary and useful content for the practical application of theoretical knowledge. Such programming serves to achieve the consistent realisation of content with the maximum correlation. For this reason, apprenticeship provides an alternative way of learning compared to the “school” model of education, and young people choose it because they are attracted by the opportunity to find employment more easily after completing education or because they think it will allow them to earn enough for a good life (Herceg, 2010). Apprentices receive compensation for their work during practical training in a craft workshop. Allowance is provided by the employer. It is deemed that allowance constitutes a significant motivating factor for students (Herceg, 2010).

Apprenticeship is available for 61 craft occupations:

1. Toolmaker (Official Gazette nos. 136/03 and 167/04)
2. Car electrician (Official Gazette no. 112/04)
3. Car painter (Official Gazette no. 136/03)
4. Car bodyworker (Official Gazette no. 112/04)
5. Car mechanic (Official Gazette no. 112/04)

6. Car mechatronic (Official Gazette no. 96/11)
7. Locksmith (Official Gazette no. 112/04)
8. Boat mechanic (Official Gazette no. 112/04)
9. Chimney sweep (Official Gazette no. 112/04)
10. Electrician (Official Gazette no. 136/03)
11. Electro-mechanic (Official Gazette no. 136/03)
12. Electronics mechanic (Official Gazette no. 136/03)
13. Plasterer (Official Gazette no. 86/07)
14. Photographer (Official Gazette no. 136/03)
15. Hairdresser (Official Gazette no. 136/03)
16. Leather craftsman (Official Gazette no. 112/04)
17. Musical instrument manufacturer/repairer for plucked string instruments (Official Gazette no. 112/04)
18. Musical instrument manufacturer/repairer for string instruments (Official Gazette no. 112/04)
19. Wooden boat builder (Official Gazette no. 112/04)
20. Metal boat builder (Official Gazette no. 112/04)
21. Organ builder (Official Gazette no. 112/04)
22. Plastic boat builder (Official Gazette no. 112/04)
23. Air conditioning and heating mechanic (Official Gazette nos. 136/03 and 167/04)
24. Home installations mechanic (Official Gazette no. 96/11)
25. Dry cleaner (Official Gazette no. 112/04)
26. Stonemason (Official Gazette no. 112/04)
27. Hatter (Official Gazette no. 112/04)
28. Waiter (Official Gazette nos. 112/04 and 178/04)
29. Boilermaker (Official Gazette no. 112/04)
30. Blacksmith (Official Gazette no. 112/04)
31. Beautician (Official Gazette no. 112/04)
32. Tailor (Official Gazette no. 112/04)
33. Roofer (Official Gazette no. 68/05)
34. Furrier (Official Gazette no. 112/04)
35. Cook (Official Gazette nos. 112/04 and 178/04)
36. Tinsmith (Official Gazette no. 112/04)
37. Founder (Official Gazette no. 112/04)
38. Mechanic for agricultural machinery (Official Gazette no. 112/04)
39. Butcher (Official Gazette no. 112/04)
40. Dairyman (Official Gazette no. 112/04)
41. Shoemaker (Official Gazette no. 112/04)
42. Stovemaker (Official Gazette no. 112/04)
43. Pedicurist (Official Gazette no. 136/03)
44. Baker (Official Gazette no. 112/04)
45. Sign painter (Official Gazette no. 136/03)

46. Gas mechanic (Official Gazette nos. 136/03 and 167/04)
47. Precision mechanic (Official Gazette no. 112/04)
48. Salesman (Official Gazette no. 80/07)
49. Gunsmith (Official Gazette no. 112/04)
50. Confectioner (Official Gazette nos. 112/04 and 178/04)
51. Painter-decorator (Official Gazette no. 136/03)
52. Glazier (Official Gazette no. 68/05)
53. Joiner (Official Gazette no. 136/03)
54. Machinist (Official Gazette nos. 136/03 and 167/04)
55. Upholsterer (Official Gazette no. 112/04)
56. Carpenter (Official Gazette no. 68/05)
57. Turner (Official Gazette nos. 136/03 and 167/04)
58. Watchmaker (Official Gazette no. 112/04)
59. Plumber (Official Gazette nos. 136/03 and 167/04)
60. Mason (Official Gazette no. 68/05)
61. Goldsmith (Official Gazette no. 112/04)

The assessment of students/apprentices during apprenticeship is carried out through the continuous monitoring of achievements (e.g. all assignments, both those in the workshop and those in the school, are assessed and evaluated). The assessment and evaluation of apprentices' work are carried out with a control, journeyman's and final exam.

The control exam is carried out in the second half of the second year of apprenticeship in order to check whether the apprentice is gaining all the necessary knowledge and developing all the necessary skills. In the event of unsatisfactory results, help is provided by the school (for theoretical knowledge) or the Master Craftsman – vocational teacher (for practical skills). The journeyman's exam is carried out after the successful completion of secondary education (until 2013, the journeyman's exam was taken prior to the completion of secondary education and was a prerequisite for the successful completion of education).

Both the control and the journeyman's exam include a theoretical and practical part:

- The theoretical part assesses the knowledge acquired during the learning process or through informal learning;
- The practical part assesses the professional competencies necessary for the performance of a particular profession.

Both exams were carried out by commissions that were appointed by the Croatian Chamber of Trades and Crafts until 2013. Since then, the journeyman's exam has been carried out by the Agency for VET and Adult Education, while the control exam is carried out by a Board appointed by the secondary school headmaster, with the content of the exam determined by the Agency for VET and Adult Education based on the prescribed VET curriculum.

Until 2013, there was also an option of an extraordinary control exam for those students who were negatively assessed for the practical part of the apprenticeship at the end of the first, second or third grade. The extraordinary control exam included a practical task and professional theoretical content important for the successful execution of the part of the program for which the apprentice received a negative mark. A third-grade apprentice who failed the extraordinary control exam would receive an extension of the practical part of the apprenticeship, up to a year, in which period the apprentice had all the rights and obligations of a regular apprentice. After the adoption of the new Crafts Act and the by-laws, the extraordinary control exam was discontinued.

A student who completes the apprenticeship acquires qualifications at level 4.1 of the Croatian Qualification Framework or at level 4 of the European Qualifications Framework.

2.2. Legal framework

The Crafts Act of 1994 established a framework for apprenticeship in the crafts sector. The Act has been amended several times since its introduction. In the area of education, the Act was amended to provide more places for apprenticeships and to adjust the requirements for the issuance of a permit (a license) to carry out apprenticeship.

Before students begin their apprenticeships, the Apprenticeship Contract has to be signed by the employer and the minor's parent/guardian. The provisions of the Apprenticeship Contract are prescribed by a by-law. The Contract defines the obligations and responsibilities of the employer and the student, as well as the manner of contract termination.

In accordance with the Crafts Act of 1994, the Record of Apprenticeship Contracts was kept by the Croatian Chamber of Trades and Crafts, while the Crafts Act of 2013 transferred the jurisdiction for keeping records on contracts to the ministry responsible for crafts.

Relevant by-laws also regulated the assessment and evaluation methods.

The procedures for the journeyman's exam are regulated by the Rules of Procedure and Manner of Taking a Journeyman's Exam.

The new Crafts Act of 2013 stipulates that vocational education for trades and crafts is subject to regulations in the field of education. The effect of these legal provisions is a far smaller number of students in apprenticeship and a much smaller number of students taking the journeyman's exams.

As for the future, the Croatian Parliament adopted the Strategy of Education, Science and Technology in October 2014 and the Program of Vocational Education Development in December 2016. The Program of VET Development foresees the development, adoption and implementation of a National Curriculum for Vocational Education with an emphasis on the importance of vocational education and on the easier transition from education into work. The foregoing imposes the development of a work-based learning model tailored to the national/regional context.

2.3. Management structure

Until 2013, the responsibility for supervising apprenticeship in the crafts sector was divided between the ministry responsible for education, the ministry responsible for crafts and the Croatian Chamber of Trades and Crafts (HOK). The new Crafts Act of 2013 stipulates that vocational education for trades and crafts is subject to regulations in the field of education. The differences in jurisdiction are as follows:

The Crafts Act prior to 2013	The Crafts Act since 2013
The general educational part of the program for secondary vocational education for crafts occupations is adopted by the minister of education after obtaining the opinion of the HOK and with the consent of the minister of the economy.	Special regulations in the field of education apply to the vocational education for trades and crafts. The vocational curriculum for acquiring vocational qualifications for associated trades and crafts is adopted by the minister of education with the prior consent of the minister responsible for crafts.
The professional-theoretical and practical part of the program for secondary vocational education for crafts occupations is adopted by the minister of the economy after obtaining the opinion of the HOK and with the consent of the minister of education.	
The general-education and professional-theoretical parts of the apprenticeship	The general-education and professional-theoretical parts of the apprenticeship are

program are carried out in a crafts secondary school or another vocational secondary school.	carried out at secondary school.
The practical part of the apprenticeship program is carried at a crafts business or another legal entity. Crafts secondary schools or other vocational secondary schools may carry out the practical part of the apprenticeship program provided that the major part of the program is carried out at a crafts business or another legal entity.	Practical classes and apprenticeship exercises are carried out in secondary school, at a crafts business or another legal entity.
The method of implementing the apprenticeship and vocational education program for associated trades and crafts, as well as the rights, obligations, monitoring, assessing and evaluating of the apprentices, is prescribed by the ministry of the economy, after obtaining the opinion of the HOK and with the consent of the ministry of education.	
The craftsman and the legal entity need to have a permit (license) for the practical part of the apprenticeship. The permit (license) for executing the practical part of apprenticeship is issued by the HOK.	The craftsman and the legal entity need to have a permit (license) for the practical part of the apprenticeship. The permit (license) for executing the practical part of apprenticeship is issued by the HOK.
The Ministry of the Economy is responsible for control over the issuance of permits (licenses) to craftsmen and legal entities for executing the practical part of the apprenticeship, as well as for supervision over the legality of organising and implementing the practical part of the apprenticeship carried out at a crafts business or a legal entity.	The ministry responsible for crafts is responsible for control over the issuance of permits (licenses) to craftsmen and legal entities for executing practical lessons and apprenticeship exercises, as well as supervision over the legality of organising and implementing practical lessons and apprenticeship exercises carried out at a crafts business or a legal entity.
The exam used to prove basic knowledge about teaching apprentices is taken before the commission of the Croatian Chamber of Trades and Crafts.	The minister of education adopts a special program for acquiring basic knowledge about teaching students and for acquired pedagogical competencies in accordance with the special regulations governing vocational education.
The HOK keeps the Record of Apprenticeship Contracts.	The ministry responsible for crafts keeps the Record of Apprenticeship Contracts.
The apprentice takes the journeyman's exam after completing the professional-theoretical	The journeyman's exam is taken after successfully completing secondary education

<p>and practical part of the program. The Ministry of the Economy adopts the journeyman's exam program after obtaining the opinion of the HOK. The exam is taken before a commission established by the HOK. The procedure and manner of taking the journeyman's exam is prescribed by the minister of the economy after obtaining the opinion of the HOK and with the consent of the minister of education. After successfully passing the exam, the HOK issues a journeyman's certificate while the crafts school issues a final exam certificate. The form and content of the journeyman's certificate is prescribed by the minister of the economy after obtaining the opinion of the HOK and with the consent of the minister of education.</p>	<p>in vocational programs for associated trades and crafts. The journeyman's exam program is adopted by the minister responsible for crafts with the prior consent of the minister responsible for education. The journeyman's exam is organised by the Agency for VET and Adult Education and the National Centre for the External Evaluation of Education. The journeyman's exam is taken before a Board established by the Agency for VET and Adult Education. The procedure and manner of taking the journeyman's exam and the form and content of the certificate of passing the journeyman's exam is prescribed by the Rules of the minister responsible for crafts after obtaining the opinion of the minister responsible for education. The certificate of passing the journeyman's exam is issued by the ministry responsible for crafts.</p>
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The last education programs for associated trades and crafts were adopted in 2011.

After that, no new education programs for associated trades and crafts, or for apprenticeships, were created.

The prerequisite for creating new programs is the methodology for creating curricula, which has to be based on methodologies for developing occupational standards and qualification standards, as prescribed by the Croatian Qualification Framework Act adopted in 2013.

2.4. Training content and learning outcomes

In the *unified model of education*, program content was developed by joint working groups comprising representatives from the education sector (VET teachers) and business representatives (Master Craftsmen in certain professions). The curriculum was developed as a catalogue of knowledge, skills and abilities according to the subjects of each qualification. Each school subject contained the objective and the tasks. The content of the school subject was divided into teaching units with specified expected results (knowledge and skills) and the content required to acquire that knowledge and skills. Methodological instructions for teaching and the students' basic obligations were also specified. Each curriculum includes an exam catalogue that contains, by school subject, the objective, the basic exam tasks

assessed in the exams, the manner of assessment and a tabular overview of content that forms the basis of examining the knowledge and skills the student needs to show and the teaching and working resources the student may use and that are used to assess knowledge.

2.5. Cooperation between places of education

Until 2013, in order to monitor the implementation of the program for the practical part of apprenticeship carried out at the crafts business, the HOK nominated an expert associate for education and the vocational school nominates one or more teachers in that profession.

The expert associate and the teacher had the following tasks: to organize the implementation of control exams, to provide educational and methodological assistance to Master Craftsmen teaching at economic operators and to participate in boards granting permits (licenses) for executing the practical part of the apprenticeships, while the teachers also helped the craftsmen create the curriculum for the practical part of apprenticeships for each year and organized and conducted classes for the part of the apprenticeship, the vocational school took responsibility for the practical part of the apprenticeship based on the curriculum.

After 2013, the mutual responsibility is not defined.

In most cases, the quality of cooperation depends on the individuals, the people from schools and the crafts workshops.

The main challenges are the reluctance of schools to cooperate and the lack of licensed apprenticeship places in the economy. For example, there are cases of schools unwilling to respect the one week of practice / one week of theory principle because this makes it difficult for them to adjust the work schedule in the school. In the case of an insufficient number of licenced apprenticeship places in the economy, the schools have the obligation of organising practical training themselves, which limits their execution of the curriculum.

2.6. Company participation and support

Currently, the Croatian apprenticeship system has at its disposal 10,262 permits (licences) for executing the practical part of apprenticeship, or 59,902 apprenticeship places at 8,237 licenced workshops for all three years of education.

Employers are expected to cover the costs of training incurred during apprentice training. Since 2001, the ministry responsible for crafts provides grants for craftsmen and SMEs that implement apprenticeships. To obtain the grant, the entity needs to respond to the call for proposals. The ministry provides financial support for crafts businesses and SMEs that covers compensations for apprentices and co-finances approximately 70-80% of the costs of issuing a permit (licence) to carry out practical training and exercises for apprenticeship. From 2015, compensation for mentors is also covered. Financial support for apprenticeships that employers may apply for does not constitute a systemic solution because it does not cover all occupations, but only those for which there is a need (in accordance with the provisions of the ministry for each year, starting from 2013 since support was granted for any occupation up to that point).

Likewise, there is the possibility of tax exemption based on the Act on State Aid for Education and Training.

More specifically, in accordance with the provisions of the Act on State Aid for Education and Training, according to which the base for calculating income tax from self-employment may be lowered if the employer submits proof of wage payment to the apprentice:

- The entrepreneur ensuring practical training and exercises for one to three students may reduce its tax base or self-employment income referred to in paragraph 1 of this Article by 5%;
- The entrepreneur ensuring practical training and exercises for more than three students may increase the percentage of the reduction of the tax base or self-employment income by one percentage point per student, up to 15% of the tax base or self-employment income; the amount of reduction to the tax base of profit tax or self-employment income may not be greater than the annual non-taxable amount of rewards to students during apprenticeship practical training and exercises for each student.

Requests for state aid for education and training shall be submitted together with the tax refund application for the previous calendar year.

The HOK spent several years promoting Master Craftsmen who are expert teachers actively involved in apprenticeships with the TV show *Obrtnik i partner* (Craftsman and Partner) and the HOK's public newsletter *Obrtničkih novina* (Crafts Newspapers). The HOK continues to promote crafts occupations, within their means.

In the last few years, the Croatian Chamber of Economy (HGK) has also been actively involved in promoting apprenticeships.

2.7. Requirements and support for expert teachers and mentors in companies

In order to implement apprenticeships, a craftsman or a legal entity needs to have a permit (license) to carry out practical training and exercises for apprenticeship. The permit (license) is issued by the HOK and it can be obtained by people who have passed the Master Craftsman's exam, people who have the same rights as those with a Master Craftsman's exam, people with an appropriate higher or university education, or people who had a registered crafts business by December 2013, appropriate vocational secondary education and at least 10 years of experience in the occupation for which they are implementing apprenticeships. All of the above persons who have not passed the Master Craftsman's exam must pass another exam to prove they possess the basic knowledge on teaching students and the acquired pedagogical competencies. In addition, a craftsman or a legal entity must have an adequately equipped workshop to carry out practical training and exercises for apprenticeship in accordance with the vocational curriculum for a given occupation. Until 2013, the exam on basic knowledge for teaching apprentices was applied by the HOK, according to the program for taking the Master Craftsman's exam.

After the new Crafts Act was adopted, the responsibility for preparing a special program for acquiring a basic knowledge on teaching students and pedagogical competencies was transferred to the ministry responsible for education. The program was adopted in January 2016, but is not adequate for mentors in the business community because it requires ten months of studying at a higher education institution. This situation has contributed to the reduction in the number of licensed places for the practical part of apprenticeship because, since the Crafts Act of 2013 entered into force, the permit (license) to carry out practical training and exercises for apprenticeship may only be obtained by those who have passed

the Master Craftsman's exam for the occupation for which they wish to carry out apprenticeships.

Requirements for expert teachers in schools are regulated by the Vocational Education and Training Act.

The activities of teachers of vocational subjects are performed by teachers of professional-theoretical content, teachers of practical work and exercises, vocational teachers and teaching assistants.

The activities of teachers of practical work and exercises may be performed by a teacher with a undergraduate university degree or an undergraduate professional degree of the appropriate kind with a minimum of 180 ECTS credits who has pedagogical competencies and previously acquired appropriate qualifications.

The activities of vocational teachers may be performed by a person with the level of education prescribed in the curriculum, who has completed at least vocational secondary education of the appropriate kind, has pedagogical competencies and at least five years of work experience in the profession.

The Agency for VET and Adult Education organises and implements the professional training of expert teachers for vocational secondary schools.

2.8. Financing and cost-saving mechanisms

The costs of carrying out apprenticeships are divided between the state and the business sector, leading to savings in the Government budget necessary to carry out VET.

Part of the apprenticeships carried out in the business sector is financed by the employers themselves. Employers are required to provide allowances the students. Allowances should be at least 10% of the average net salary in the business sector in Croatia in the previous year for the first year of apprenticeship, 20% for the second year of apprenticeship and 25% for the third year. The award is paid for the realised hours of practical training and exercises for apprenticeship. A craftsman or a legal entity may award the student with an award higher than the prescribed award.

By signing the Apprenticeship Contract, the craftsman or legal entity is obliged to ensure the necessary material, machines, devices and tools, as well as appropriate hygiene and

technical protection measures for the contracted part of the practical training and exercises for apprenticeship, or for the control examination, the creation and presentation of the final assignment and the journeyman's examination, if any of it is conducted at their premises or worksites. Students themselves finance the costs of insurance against accidents. Aid for apprentice compensation that is available to the employer has been mentioned earlier, but it does not constitute a systemic solution because it does not cover all occupations, only a scattering of them (in accordance with the Ministry's decision for each year).

Individual employers, the HOK and certain county chambers of trades and crafts equip school workshops, but there is no systemic support.

The HOK has continuously co-financed state competitions of students in occupations of associated trades and crafts.

2.9. Quality assurance

In accordance with the relevant legislation, the HOK issues permits (licenses) for the implementation of apprenticeships for the purposes of checking the personnel and material conditions in crafts business and SMEs that wish to implement apprenticeships (conditions are described in more detail in chapter 2.7).

The procedures for implementing apprenticeships are prescribed in by-laws, while the obligations and responsibilities of apprentices and business sector mentors are prescribed by the Apprenticeship Contract. The ministry responsible for crafts is responsible for control over the issuance of permits (licenses) to craftsmen and legal entities for executing practical lessons and apprenticeship exercises, as well as supervision over the legality of organising and implementing practical lessons and apprenticeship exercises carried out at a crafts business or a legal entity.

If a craftsman or the legal entity stop fulfilling the conditions for obtaining the permit (license) prescribed by the Crafts Act, e.g. if the craftsman or legal entity violates its contractual obligations towards the student or prevents the student from attending classes regularly, the HOK's Court of Honour may impose a measure of written warning, or temporarily (up to three years) or permanently take away their right to receive students for practical training and exercises for apprenticeship.

The following are the obligations of the craftsman or legal entity entering into the Apprenticeship Contract:

- Provide the student with the conditions necessary to acquire the prescribed competencies,
- Ensure and implement the prescribed occupational safety measures and safety measures during practical training and exercises for apprenticeship,
- Continuously monitor, evaluate and assess the results achieved by the students for the contracted part of the program,
- Enable the assigned school teacher to monitor, both directly and from the prescribed documentation, the implementation and quality of implementation of the practical training and exercises for apprenticeship,
- Maintain student records on attending practical training and exercises for apprenticeship.

Until 2013, the Rules on the Manner of Realizing VET Programs for Associated Trades and Crafts and on the Rights, Obligations, Monitoring, Evaluating and Assessing Apprentices regulated the monitoring, evaluation and assessment of students, as well as the rights and obligations of students being educated for crafts. The achievements of apprentices in the theoretical and practical part of the curriculum are assessed continuously by annual examinations and a control examination carried out in the second half of the second year of apprenticeship. Within the practical part of the apprenticeship, the students' achievements are monitored and each work assignments in the crafts workshop or vocational school is evaluated. The descriptions of the work assignments are written in the student's apprenticeship practical training plan by the student until the end of the apprenticeship, when the student submits the plan together with the application for the journeyman's exam. After completion of the theoretical and practical part of the program, the apprentice takes the journeyman's exam, whose procedures are regulated in a by-law as a way of quality assurance.

2.10. Work conditions and teaching apprentices

Students may enter the apprenticeship process after completing compulsory primary education at the age of 14. The selection and enrolment of candidates into three-year education programs for vocational qualifications for associated trades and crafts is based on the following:

- The candidate's success in primary school (the last two years).
- The candidate's health status and his/her ability to work and carry out work activities in the selected occupation, and
- A Signed Apprenticeship Contract.

A medical examination is compulsory for certain qualifications due to contraindications to performing that occupation. The candidate's medical fitness to work and carry out work activities in the selected occupation is confirmed by an official health certificate issued by an occupational medicine physician.

The Apprenticeship Contract is signed by the employer and parent/guardian of the minor (apprentice). The Contract includes the obligations and responsibilities of the employer and apprentice, as well as ways of terminating the contract.

The craftsman or legal entity shall organize practical training and exercises for apprenticeship in accordance with their working hours, but no more than eight hours a day and 40 hours a week, and in accordance with the established annual work plan and program of the school.

The student may not attend classes at school and practical training and apprenticeship exercises at the crafts business or other legal entity in the same day.

The craftsman or legal entity shall organise practical training and apprenticeship exercises in the period from 8 A.M. to 8 P.M.

Exceptionally, regular students in first grade cannot attend practical training and apprenticeship exercises for longer than 4 hours a day and 20 hours a week.

The schedule for practical training and apprenticeship exercises, or the start and end time for all days is determined by the implemented curriculum for practical training and apprenticeship exercises separately for each year.

The craftsman or legal entity must record the number of hours the student has spent in practical training and apprenticeship exercises during the day in the record sheet of the practical training and exercises map.

If the practical training and apprenticeship exercises last for more than four hours continuously, the student has the right to daily rest of at least 30 minutes.

The student must be provided with a daily rest period between two consecutive days spent in practical training and apprenticeship exercises that last at least 14 hours without interruption and must be provided with a weekly rest period of at least 48 hours without interruption.

During the school year, the student shall have 45 working days of rest ensured.

The apprentice's obligations at the craftsman's business or other legal entity:

- Regularly attend the classes and apprenticeship exercises, as well as other forms of compulsory education,
- Regular fulfil school obligations arising from the curriculum and the Apprenticeship Contract,
- Act in accordance with the instructions of the craftsman or legal entity and the school regarding the period and implementation of practical training and apprenticeship exercises,
- Act in accordance with the occupational safety regulations,
- Regularly keep the prescribed documentation for the duration of the apprenticeship,
- Protect the property and trade secrets of the craftsman or legal entity.

2.11. Quickly respond to labour market conditions

At the moment, the Republic of Croatia has no procedure for monitoring the harmonisation of the VET program, including apprenticeships, with the labour market needs.

However, the realisation of apprenticeship enables the better monitoring and evaluation of learning outcomes according to labour market needs, given that apprentices need to spend

70% of their apprenticeship in a real working environment. Unfortunately, the share of apprenticeship in the entire VET system has been significantly reduced since 2013.

Prior to 2013, the learning outcomes according to labour market needs were monitored by control and journeyman's exams because those exams were taken by all students educated for occupations in associated trades and crafts. Since 2013, the number of students that took the journeyman's exam has decreased significantly because the Crafts Act prescribes that the exam must be taken by students after they have completed vocational secondary education.

The Croatian Chamber of Trades and Crafts conducted a study in 2009 and 2010 (Herceg, 2010) with the support of the European Training Foundation (ETF) in order to gain insight into the quality of VET in crafts occupations and in order to verify its effects on student employability. The study yielded a number of findings regarding the long-term outcomes for apprentices.

http://www.hok.hr/obrazovanje/projekti/povezanost_kvalitete_strukovne_izobrazbe_za_obrtnicka_zanimanja_i_zaposljivosti

According to the study, the students acquire the necessary knowledge and skills and most of them (over 73%) are able to work independently or independently with the minimum help from more experienced workers immediately after they find a job. They also stated that the practical skills acquired in a crafts workshop have great benefits for their work.

A large number of employers assessed the practical skills and theoretical knowledge of their new employees as very good and excellent.

3. Conclusions and recommendations

3.1. The main bottlenecks and challenges

The barriers for the greater involvement of crafts and SMEs in apprenticeship are as follows:

- Great responsibility taken by employers without protection (a poorly developed aid system at the level of institutions and ministries),
- The situation in the overall economy (lack of work) – most of those teaching the apprentices cannot teach them everything they need, and cannot guarantee their employment, which automatically reduces the attractiveness of vocational training,

- The employers' lack of knowledge about apprenticeship and the benefits of taking apprentices,
- Inadequate implementation of education programs – in addition to the small number of hours for practical training, schools are not prepared to ensure continuous practical training,
- Students' lack of motivation and interest in the professions they are being educated for, as well as avoidance of responsibility,
- Underestimation of work,
- Lack of incentives for employers participating in apprenticeships,
- The need to increase the involvement of stakeholders from the education sector in the apprenticeship system – stronger cooperation and the establishment of partner relations are needed to enhance and expand the existing apprenticeship system,
- Lack of cooperation between schools/parents and employers,
- Lack of students interested in enrolling in certain education programs,
- Lack of support from the relevant institutions in addressing existing problems,
- Fear of competition.

Other challenges that need to be recognised and areas to improve in the future, as stated in the literature (Herceg, 2010; Klenha, 2010), are as follows:

- Ensure that the education on offers meets the labour market needs, e.g. through continuous monitoring of curricula and programs;
- Activities aimed at informing employers about the benefits of taking apprentices;
- Strengthening the employers' roles.

In the end, in the current economic context and taking into account youth unemployment in Croatia, it is clear that more needs to be done in order to improve access to employment for young people after they complete their education. This could be achieved, for example, by encouraging employers to take into account the practical training taken by students during apprenticeships when selecting new employees.

3.2. Key strengths and points with potential

The Croatian Chamber of Trades and Crafts' many years of experience show that the guidelines and standards for implementing vocational education in EU Member States can be successfully applied in Croatia. The Croatian crafts sector has long recognised that a well-educated workforce is a guarantee of the survival and growth of the entire economy. Since Croatia has a long tradition of trades and crafts, immediately after gaining independence, the Croatian Chamber of Trades and Crafts took a number of actions to develop an education system that will adequately respond to the demands of craftsmanship.

That experience has shown the following benefits of apprenticeship for employers:

- They can decide who to employ/train,
- They may use apprenticeship as a way of getting trained workers in the future,
- The apprentice contributes to the company's productivity during training,
- A worker trained in this way requires a much shorter period of introduction to the job,
- A positive impact on the supply of skilled workforce,
- Apprenticeships help students keep in touch with the latest tools, devices and materials, which enhances the quality of training,
- "Tailored training" resolves the problem of the lack of certain skills needed by the employer,
- Reduced costs of investment into a new employee,
- A positive impact on employment and retaining workers,
- Improved productivity and performance,
- A positive impact on employee development,
- Training for work during apprenticeship gives the employer the opportunity to get to know the future worker and teach him/her the knowledge and skills needed on the job (including entrepreneurial skills),
- Higher product and service quality and consumer protection.

3.3. Recommendations

Information collected by surveys, interviews and focus group discussions showed that crafts and SMEs would be more actively involved in apprenticeship schemes if the following was ensured:

- Ensured curricula containing the learning outcomes of practical training, the optimum number of hours of practical training and the continuous implementation of practice in the economy,
- Encouraged partnerships on the local, regional, national and the EU level,
- Better knowledge of craftsmen and SMEs about the benefits of apprenticeship and existing incentives,
- Recognition of employers that participate in apprenticeships,
- A developed aid system for employers participating in apprenticeships and for those employers wanting to participate in apprenticeships (financial aid, tax breaks, etc.),
- Ensured payment for business sector mentors for their mentoring activities,
- Incentives for the procurement of materials, tools, business departments, equipment for training apprentices, payment of water or electricity, covering the damage to devices by apprentices (insurance policies),
- The ensured availability of information and tools for any employer that wishes to participate in apprenticeships or already participates in apprenticeships,
- The ensured exchange of good practices between employers on the national and EU level,
- The promotion of vocational education in order to increase student interest to enrol in VET programs.

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