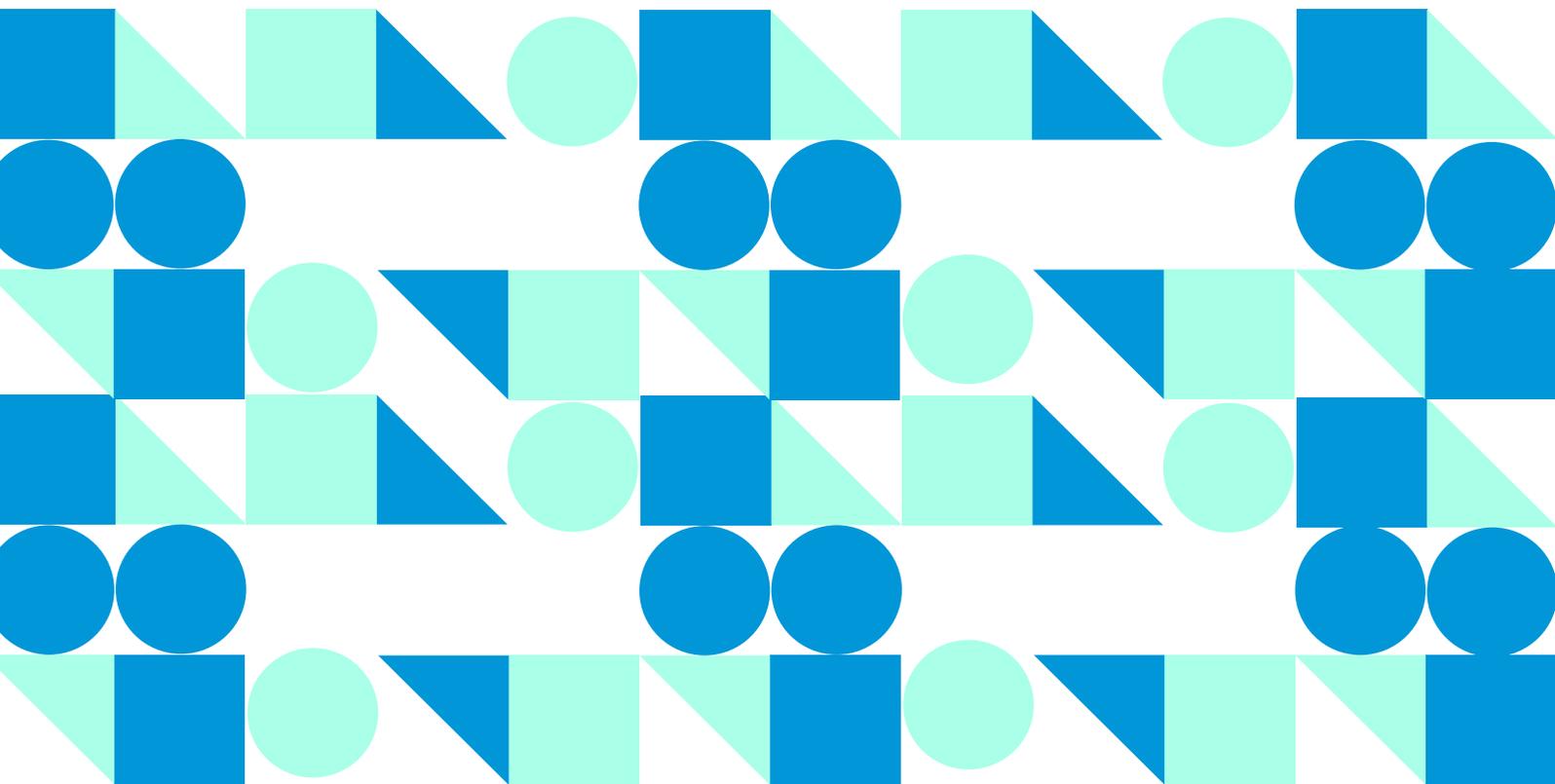




Research paper

Entrepreneurship competence in vocational education and training

Case study: Croatia





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The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training, skills and qualifications. We provide information, research, analyses and evidence on vocational education and training, skills and qualifications for policy-making in the EU Member States. Cedefop was originally established in 1975 by Council Regulation (EEC) No 337/75. This decision was repealed in 2019 by Regulation (EU) 2019/128 establishing Cedefop as a Union Agency with a renewed mandate.

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Foreword

Modern society is changing rapidly the way we live, work, and learn. Technological developments, climate change, demography, crises (pandemic, humanitarian) require adapting to new realities. To manage these changes, we need the right skills and competences. Resilience, flexibility, adaptability, acting upon opportunities and ideas are just a few elements of entrepreneurship competence, a key competence for all.

European cooperation in vocational education and training (VET) has an important role in promoting entrepreneurship competence. In 2020, the *European skills agenda for sustainable competitiveness, social fairness and resilience* stressed the importance of fostering entrepreneurial and transversal skills. The *Council Recommendation on VET for sustainable competitiveness, social fairness and resilience* calls for adapting and expanding VET by supporting the acquisition of entrepreneurial skills together with digital and green skills. The *Osnabrück Declaration on VET as an enabler of recovery and just transitions to digital and green economies* sets an objective, by 2025, of promoting resilience and excellence through quality, inclusive and flexible VET that includes entrepreneurial education, empowering learners to open new businesses.

Responding to this EU priority, Cedefop launched a study to provide VET stakeholders with new evidence on how entrepreneurship competence is embedded in VET. This report presents findings of the research carried out in Croatia, underpinning the dimensions of learning ecosystems that nurture entrepreneurship competence in VET.

VET plays a crucial role in Croatia in promoting entrepreneurship competence, with 7 out of 10 upper secondary learners enrolling in VET programmes. The country has established various components within the VET entrepreneurial learning ecosystem, but there is still room to improve the links between these components and foster collaboration among stakeholders. Both broad and narrow definitions of entrepreneurship competence coexist. However, our research indicates that the narrow interpretation prevails in curriculum modules, making the term less attractive to some VET practitioners.

We hope that this country case study and the others from the series – [Spain](#), France, [Italy](#), [Latvia](#), Austria, Finland and Sweden – will help policy-makers, social partners and VET providers continue their successful cooperation to nurture entrepreneurship competence in VET and make sure all learners are equipped with it.

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Executive summary

This case study provides evidence on the integration of entrepreneurship competence in vocational education and training (VET) in Croatia; it explores the dimensions of entrepreneurial learning ecosystems and how they facilitate the acquisition of entrepreneurship competence in VET. It also highlights the policies, methods, tools, and approaches that are most effective in embedding such competence in VET.

The research was conducted from May to December 2022, combining desk-based and field research; it involved VET stakeholders from government agencies, six VET providers, including management, teachers and workplace mentors from the companies providing apprenticeships and learners. The selection of VET providers was based on their experience in offering entrepreneurship education across a wide range of VET programmes throughout the country.

The study addresses two main research questions.

- (a) To what extent and how do the dimensions of entrepreneurial learning ecosystems facilitate acquiring entrepreneurship competence in VET?
- (b) What policies, methods, tools and approaches best support embedding entrepreneurship competence in VET?

Croatian VET is provided in the form of initial VET (IVET) and adult education. Continuing VET (CVET) is not available, despite references to it in regulatory documents. IVET is primarily offered at upper secondary level, mainly through 4-year programmes, which enrol two-thirds of VET learners, and 3-year programmes, which enrol less than one-third of VET learners. The only 5-year programme available is for a general nursing qualification. There are also 1- and 2-year programmes attended by less than 1% of all VET learners. VET programmes encompass professional and general competences, along with work-based learning (WBL).

Recent government policies have aimed to reduce the share of VET learners from nearly 70% to 60%, redirecting them towards general education. The rationale behind this is to provide a more balanced access to various education opportunities for all young people (Croatia. Ministry of Science and Education, 2019e). Concurrently, VET qualifications are being promoted as a desirable career path for learners, focusing on excellence rather than as a second choice.

Strategic and regulatory documents primarily refer to entrepreneurship competence as one of the eight key competences for lifelong learning aimed at promoting an entrepreneurial mindset. Within VET curricula – both for compulsory and optional modules / courses) – this competence is often defined in terms of

knowledge and skills needed to initiate and manage a business venture. However, in cross-curricular activities, entrepreneurship competence takes on a broader definition, focusing on personal development. It emphasises the need to be proactive, innovative and creative, and to possess problem-solving and management skills. It also highlights the need for a basic understanding of business and awareness of self-employment opportunities (Croatia. Ministry of Science and Education, 2011) (1).

In this study, the entrepreneurial learning ecosystem is conceptualised through interrelated components: policies, resources, governance and partnerships, teachers and trainers, curricula and pedagogies, non-formal learning modes, assessment and recognition, as well as support for careers and start-ups (UNESCO-UNEVOC, 2019). Several components of this entrepreneurial learning ecosystem are in place in the Croatian VET context, including a strategic and regulatory framework, VET schools, teachers, curricula and pedagogies, and extracurricular activities. However, these components are often insufficiently interrelated. To increase the integration of entrepreneurship competence in the VET system, career development, and start-up activities are key. It is also crucial to develop efficient stakeholder collaboration for work-based learning provision.

The focus of curricula and pedagogies is shifting towards a learning outcomes approach. Its implementation in VET is under way, supported by the project Modernisation of the VET system (2017-23). Introducing the learning outcomes approach in VET may allow for better monitoring of learner performance in entrepreneurship competence.

Translating policies that promote entrepreneurship competence into practice usually requires synchronised interventions in institutional, organisational, human and financial resource infrastructures, and awareness and involvement of all stakeholders, including policy-makers, teachers, learners, parents, companies, and principals.

This case study highlights interesting practices of embedding entrepreneurship competence in VET, such as the inclusion of regional competence centres, dual VET and teacher training.

The involvement of teachers and learners in the implementation of new practices is one of the key challenges faced. During the field research, teachers often referred to their limited involvement in the design of the entrepreneurial learning ecosystem. In response to these concerns, the introduction of a participatory approach could position teachers as active partners in strategic and policy discussions.

(1) Covering also VET.

Strengthening VET by applying a learning outcomes approach, balancing work-based and school-based learning, and raising awareness among business owners / management and employees about the need to participate in VET activities, all present opportunities to further embed entrepreneurship competence in Croatian VET.

CHAPTER 1.

Introduction

This case study provides evidence for policy-makers, social partners, vocational education and training (VET) providers and researchers on how entrepreneurship competence is embedded in VET in Croatia. It enriches existing knowledge on the methods, tools and approaches used to facilitate learning, teaching, and assessment of entrepreneurship competence.

The findings of this study are based on research conducted in 2022. It forms part of a series of eight national case studies that include Spain, France, Croatia, Italy, Latvia, Austria, Finland and Sweden.

1.1. Research questions and core terms

The study addresses the following main research questions.

- (a) To what extent, and how, do the dimensions of entrepreneurial learning ecosystems support acquiring entrepreneurship competence in VET in Croatia?
- (b) Which policies, methods, tools and approaches best support embedding entrepreneurship competence in VET in Croatia?

To explore these questions, entrepreneurship competence is conceptualised as a key competence applicable to all spheres of life. This includes personal development, active social participation, (re-)entering the job market as employee or self-employed and starting new ventures. Entrepreneurship competence in this study is considered from this broader perspective rather than solely as a competence for business creation. All activities that assist learners in acquiring entrepreneurship competence are referred to as entrepreneurship education ⁽²⁾.

(2) This term is not explicitly used in legal and policy documents.

Box 1. **Entrepreneurship education in Croatia**

The discussion on entrepreneurship education in Croatia first emerged within tertiary education, when the first related programme was introduced in 2000 ⁽³⁾. Several teachers from VET and higher education institutions who graduated from this programme are now experts in promoting entrepreneurship education within their institutions. These professionals have played a significant role in the recognition of entrepreneurship competence as a lifelong key competence (as seen in the 2008 Small Business Act for Europe, the 2012 Communication on rethinking education, the 2016 New skills agenda for Europe and the 2018 Recommendation on key competences for lifelong learning), particularly within VET. They have significantly contributed to the development of curricula and training programmes for teachers, in order to embed entrepreneurship competence within the learning process. At national level, these teachers promote entrepreneurship education and draw the attention of interested parties, such as businesses and local governments, to entrepreneurship competence.

Source: Authors.

The concept of an entrepreneurial learning ecosystem paves the way towards embedding entrepreneurship competence in VET. This ecosystem fosters a collaborative environment among learners, teachers, VET providers, policy-makers and other stakeholders within the framework of entrepreneurship education.

1.2. **Methodological note**

This country case study explores existing practices and policies within the VET entrepreneurial learning ecosystem in Croatia. It investigates entrepreneurship competence from various perspectives, ranging from policy concepts to their practical implementations.

Developing case studies in eight countries required a standardised content structure around research questions. This structure encompasses elements of the entrepreneurial learning ecosystem: VET policy, resources, governance and partnerships, teachers and trainers, curricula and pedagogies, learning modes other than formal curricula, assessment, validation and recognition of learning

(3) Postgraduate programme Entrepreneurship (pre-Bologna, Master of Science degree) was established at the J.J. Strossmayer University in Osijek, Faculty of Economics, as the first programme focused on entrepreneurship in Croatia. Graduates from the programme are business owners, VET teachers, managers/consultants/trainers employed in institutions supporting start-ups and growing SMEs, who created the first pool of professionals in entrepreneurship competence in Croatia.

outcomes, career guidance and support for starting a business (UNESCO-UNEVOC, 2019).

The case study report contributes to comparative analysis by answering the research questions at a national level through the following methods:

- (a) literature review/desk research at national level, including policy documents;
- (b) field research at policy and stakeholder levels, including VET providers, conducted between May and September 2022. The field research employed three methods:
 - (i) interviews with representatives of ministries and agencies responsible for VET, principals of VET schools, and company managers / owners / human resources managers in the case of apprenticeships;
 - (ii) focus groups with VET teachers and learners;
 - (iii) observations of VET learning spaces in schools and companies.

Table 1. **Research in figures**

Research activity	Total
Interviews with policymakers	4
Interviews with school principals	4
Interviews with company managers	2
Focus group with teachers and trainers (4 groups)	23
Focus groups with learners (4 groups)	46
Observations of premises	4

Source: Authors.

The data collected through both desk and field research were analysed together. Cross-checking findings for discrepancies among interviewees during the field research provided valuable insights into the state-of-play of embedding entrepreneurship competence in VET.

The list of VET providers participating in the study is included in Annex 1. The case-sampling provided valuable insights into how entrepreneurship competence is embedded in VET. Providers were selected based on three criteria: experience in entrepreneurship education, representativeness of qualifications offered, and geographic spread.

CHAPTER 2.

Overview of the Croatian VET system

This chapter briefly outlines the main characteristics of the Croatian VET system, providing the necessary context for the study findings. More detailed information about the Croatian VET system is available at Cedefop's [VET in Europe database](#) (Cedefop and AVETAE, 2022).

VET in Croatia is offered as initial VET (IVET) and adult education. While continuing VET (CVET) is not explicitly labelled as such, various documents related to VET reference professional training and development, lifelong learning and adult education ⁽⁴⁾.

VET is predominantly provided by public schools (only 10 private schools are in operation). Most public schools offer either vocational or combined programmes (general and vocational). VET providers offer programmes in one or multiple study fields. They may also offer fee-based programmes for adults once approved by the Agency for Vocational Education (*Agencija za strukovno obrazovanje i obrazovanje odraslih*, AVETAE).

VET has two major objectives:

- (a) prepare young people for the labour market;
- (b) enable IVET learners to continue their studies in tertiary education ⁽⁵⁾.

Public schools are established by local governments, with the approval of the Ministry of Science and Education. They are jointly funded by the State and local/regional authorities (Cedefop, 2020b).

The State finances: the salaries of teachers and other education staff; in-service training of teachers; education for vulnerable groups; transportation costs for upper secondary learners, teaching materials and equipment; ICT infrastructure, maintenance of school libraries and capital investments.

Local and regional governments finance: school premises and equipment; operating costs for secondary schools; transportation costs for upper secondary school staff; food and learner dormitories (cost shared with learners); and, in some cases, capital investments. Mentors for work-based learning are paid by

⁽⁴⁾ For example, the Law on Vocational Education (Republic of Croatia, 2018) explicitly stipulates continuing education and lifelong learning (Article 4) and 'professional training and development and lifelong learning for the needs of business entities, the unemployed and other participants' as part of a VET provider's activities – in this case, adult education (Article 33).

⁽⁵⁾ In 2021, 29,6% IVET graduates with a medium level vocational qualification (ISCED 3 or 4) enrolled in tertiary education (Cedefop, 2023).

companies, and some companies even compensate learners for their work-based learning experiences.

Teachers can freely choose learning / teaching methods (such as team or individual-based projects, games, and discussions). However, they must ensure that learners achieve the expected learning outcomes as stipulated by the Croatian qualifications framework (CROQF).

IVET at upper secondary level consists of 4-year programmes (attended by two-thirds of VET learners) and 3-year programmes (attended by around one-third of VET learners).

There is also a general nursing VET programme (5 years) and 1- and 2-year programmes, which account for only 0.21% of VET learners (Školski e–Rudnik, 2023). In 2021/22, 302 VET schools offered 251 programmes for nearly 97 thousand IVET learners (Table 2). Learners typically enter VET at the age of 14 or 15, after completing compulsory education (integrated primary and lower secondary education), hereafter primary education.

Table 2. **Initial VET programmes and learners, 2021/22**

Programme type	Programmes	%	Learners	%
2-year	8	3.19	202	0.21
3-year	139	55.38	27 690	28.56
4-year	103	41.04	63 737	65.74
5-year	1	0.40	5 330	5.50
Total	251	100	96 959	100

Source: Školski e–Rudnik, 2023.

All VET programmes combine professional and general competences, including work-based learning (WBL). For example, 4-year VET programmes include about 10% of WBL, while 3-year VET programmes range from 5% (school-based) to 60% (apprenticeships) (Cedefop, 2021). In 2021, 39.7% of recent IVET graduates had work-based learning experience as part of their training (EU27: 60.7%) (Cedefop, 2023).

Despite the consistently high share of learners in VET programmes in Croatia (around 70% since 2015 (Cedefop, 2023)), the government’s recent policy aims to reduce this figure to 60% by 2024 to increase the proportion of general education (Croatia. Ministry of Science and Education, 2019e). The rationale is to provide more balanced access to diverse education opportunities for all young people (Croatia. Ministry of Science and Education, 2019e). Simultaneously, the government is trying to promote VET as a desirable career choice, highlighting its excellence and positioning it as a first choice rather than a fallback education option.

Despite having one of the highest shares of IVET learners at upper secondary level (Cedefop, 2021), Croatia records consistently low participation of adults in learning (3.5% in 2019 and 5% in 2021) placing it among the countries with the lowest indicators compared to the EU-27 average (10.8%), or to Sweden, where a third of adults are involved in education and training (34.7%) (Eurostat, 2022).

With 38.2% of STEM graduates in upper secondary IVET (ISCED 3), Croatia is on par with the EU-27 average of 37.4%, as of 2020 (Cedefop, 2023).

Entrepreneurship competence is mentioned in several VET-governing legal provisions that often refer to the 2018 Council Recommendation on key competences for lifelong learning ⁽⁶⁾.

⁽⁶⁾ [Zakon o strukovnom obrazovanju](#) [Act on Vocational Education];
[Zakon o obrazovanju odraslih](#) [Adult Education Act];
[Zakon o Hrvatskom kvalifikacijskom okviru](#) [Act on the Croatian Qualifications Framework].

CHAPTER 3.

Entrepreneurship competence

3.1. Understanding the competence

To gain insight into the concept of entrepreneurship in Croatian VET, the study examined the presence of the following four core terms in selected strategic policy and regulatory documents, as well as in research literature:

- (a) entrepreneurship;
- (b) entrepreneurship competence;
- (c) entrepreneurship education/learning,
- (d) entrepreneurial learning ecosystem.

Table 3 explores the semantic field of the various terms used to describe entrepreneurship in the Croatian VET system, and the context in which these terms are typically used. Entrepreneurship can refer to different abilities, ranging from starting up a venture ('narrow' sense) to a generic, 'broader' mindset including, for instance creativity, critical thinking problem solving.

Table 3. Terms related to entrepreneurship in Croatian VET

English term	Croatian term	Notes
Entrepreneurship	<i>Poduzetništvo</i>	Widely used in public communication, with different meanings: <ul style="list-style-type: none">- as synonym for SMEs;- venturing;- as synonym for entrepreneurship competence. Used in analysed strategic documents, only a few regulatory documents and published research papers.

English term	Croatian term	Notes
Entrepreneurship / enterprise / entrepreneurial competence	<i>Poduzetnička kompetencija / poduzetnost</i>	Referred to entrepreneurship key competence as defined in the European Reference framework for key competences in lifelong learning. The terms 'enterprise' or 'entrepreneurship' are used in English translations of the Croatian word <i>poduzetnost</i> .
Entrepreneurship education / entrepreneurship learning	<i>Poduzetničko obrazovanje / poduzetničko učenje</i>	Both terms are used but more in professional and academic discussion than in the legal/policy documents relevant for education and VET. For example, the term <i>poduzetničko učenje</i> ('entrepreneurship learning') was used on the CARNET's (Croatian Academic and Research Network) portal <i>škole.hr</i> when they introduced the UNEVOC's Entrepreneurial learning for TVET institutions: Online Guide (with worksheets).
Entrepreneurial learning ecosystem	<i>Eko sustav za poduzetničko učenje</i>	Rarely used. 'Entrepreneurial environment' (<i>poduzetničko okruženje</i>) is more frequently used, both in policy and academic communication.

Source: Authors.

Entrepreneurship is sometimes misused as a synonym for small and medium-size enterprise(s), ignoring the dimensions of proactiveness, innovation and accountability. The concept of entrepreneurship is further diluted by phrases like 'small entrepreneurship' (*malo poduzetništvo*) and 'medium entrepreneurship' (*srednje poduzetništvo*). Such linguistic constructs are even found in regulatory

documents (7). While businesses can range from micro to large, entrepreneurship, as a mindset and set of activities, cannot. Owners of businesses, irrespective of their size, can either embody entrepreneurial qualities (proactive, innovative, accountable for their decisions) or disregard them.

The prevalent interpretation of 'entrepreneurship' in its narrower sense (starting a business) has made the term less attractive to some interviewees during the field research in Croatia. A psychologist from the VET school learner support service commented: 'I find entrepreneurship repulsive, but I find enterprising interesting' (8). The importance of semantics around entrepreneurship is undeniable: this example illustrates the fact that the long-standing debate surrounding the definition of key terms related to entrepreneurship is far from closed (Gedeon, 2010).

The use of terms containing entrepreneurship (as entrepreneurship, entrepreneurship competence, entrepreneurship education, entrepreneurship learning, entrepreneurial learning ecosystem) is more prevalent in strategic and policy documents than in regulatory ones. Several strategic documents and government decisions cited in this chapter (Section 3.1.1 and 3.1.2) affirm that entrepreneurship is expected to be a compulsory component of VET for all learners.

While Croatian strategic and regulatory documents on VET reference the definition of entrepreneurship competence as one of the eight key competences for lifelong learning, encompassing a broader entrepreneurial mindset, school curricula still predominantly describe it as the knowledge and skills required to establish and manage a business venture.

3.1.1. Policy

The 2011 National framework curriculum for preschool education and general compulsory and secondary education (*Nacionalni okvirni kurikulum za predškolski odgoj i obrazovanje te opće obvezno i srednjoškolsko obrazovanje*), which encompasses VET, explicitly states that entrepreneurship competence is a cross-curricular matter. Teachers are free to integrate it into various courses, making cross-curricular topics an integral part of each subject. Entrepreneurship competence is defined in terms of personal development, based on expectations of proactivity, innovation, creativity, problem-solving, responsivity to change, as

(7) For example, see the decision on vocational curriculum for attaining the qualification Economist, (Croatia. Ministry of Science and Education, 2017b), where one of the learning outcomes for the module Entrepreneurship in Praxis, is phrased as 'to recognise a need for institutional support to small and medium entrepreneurship'.

(8) Entrepreneurship as a mindset and set of activities is sometimes connected to business behaviour, described through objectives, strategies and performance indicators which cannot pass the test of ethical principles.

well as the ability to identify processes in immediate work environments and in society at large, and possessing basic business knowledge including understanding opportunities for self-employment (Croatia. Ministry of Science and Education, 2011).

A key characteristic of the National framework curriculum is the transition to a system of competences and learning outcomes. It establishes general education objectives at the national level, as well as learning outcomes to be achieved at the end of each cycle.

The Croatian qualifications framework (CROQF) (Republic of Croatia, 2013b) helped VET stakeholders understand the added value of a competence-based approach, including entrepreneurship competence.

In 2013, Parliament approved the Strategy for the development of entrepreneurship in the Republic of Croatia 2013-20 (Republic of Croatia, 2013a). This strategy promotes entrepreneurship and the improvement of entrepreneurship skills, with an explicit reference to the EU SME Act in relation to starting up a venture. The strategy did not provide a definition for entrepreneurship competence, and it was not renewed, reportedly 'because entrepreneurship education was no longer a priority theme for the government' (European Commission. EACEA/Eurydice, 2016).

In 2014, the Strategy of education, science and technology (*Nove boje znanja*) (Croatia. Ministry of Science and Education, 2014) emphasised lifelong learning, science, and innovation as the knowledge triangle. It outlined a comprehensive curriculum reform in pre-tertiary education and efforts to boost adult participation in lifelong learning. The strategy incorporated the concepts of enterprising and entrepreneurial behaviour, referring to the 2006 Recommendations of the European Parliament and the Council on key competences for lifelong learning.

In 2017, the *School for life* (*Škola za život*) project (Croatia. Ministry of Science and Education, 2019d), jointly funded by the European Union, offered the conceptual framework for exhaustive curriculum reform of education cycles from primary to secondary schools, including VET. This reform was an extension of the 2014 Strategy of education, science and technology. The *School for life* project highlighted entrepreneurship as one of the seven cross-curricular topics and identified entrepreneurial skills as the creative, responsible, and innovative activation of personal potential across various areas of life and social roles. Entrepreneurship is also perceived as an individual's ability to translate ideas into action.

The National curriculum for vocational education, adopted in 2018, emphasised the personal development of learners (based on entrepreneurship competence, innovation, and creativity) as one of the main components of VET. It provided strategic input into the comprehensive curriculum reform at primary and

secondary education and contributed to the 2018 amendment to the VET Act; this established occupational and qualification standards (Cedefop, 2020a), without explicitly referring to entrepreneurship competence.

3.1.2. Legislation

The Act on Vocational Education, the Adult Education Act and the Act on the Croatian qualifications framework identify 'enterprising' (*poduzetnost*) among other lifelong competences, such as literacy, multilingualism, mathematical, digital, personal, social and learning-to-learn skills, citizenship, and cultural awareness. The Law on education in primary and secondary schools⁽⁹⁾, which serves as an umbrella legal education document for primary and secondary education, does not mention entrepreneurship. Detailed definitions related to entrepreneurship competence are provided in the 2019 Decision on curriculum for cross-curricular topic entrepreneurship (Croatia. Ministry of Science and Education, 2019b), which covers primary and secondary education levels. Referring to the Council of the European Union (2018) Recommendation on key competences for lifelong learning, the document specifically defines enterprising (*poduzetnost*) as a value and entrepreneurship competence (*kompetencija za poduzetništvo*) as 'one of the key lifelong competences needed [...] for everyone to build own (self-) employability and ensure personal development in the society of knowledge'. The document clearly states that entrepreneurship as a cross-curricular topic is not exclusively focused on starting one's own venture, but through its content (think entrepreneurially, act entrepreneurially and economic / financial literacy), builds capacity of learners to act responsibly in all aspects of their future professional lives. It also stipulates that entrepreneurship as a cross-curricular topic should be included in all education cycles, courses and extra-curricular activities to provide the following learning outcomes.

- (a) Develop organisational and management skills (planning, implementing plans, monitoring execution, time management) and the ability to make decisions, set objectives and priorities, solve problems, work in a team, and lead; develop communication skills (interpersonal and group, presentation and negotiation skills); become familiar with the rules for learning and working in an intercultural environment.
- (b) Be open to new ideas and opportunities, develop innovative, competitive and creative solutions; create opportunities, not wait for them.
- (c) Become familiar with the preparation of project proposals and project management.

⁽⁹⁾ The Act on Vocational Education and the Law on education in primary and secondary schools are considered as 'connected' laws.

- (d) Understand the economic environment, develop economic and financial literacy, become familiar with basic economic concepts (creating value) and behave in a socially responsible manner.
- (e) Develop persistence, a positive attitude towards work, work habits; develop self-assessment and critical thinking skills, define and solve problems; differentiate and explore different occupations; adopt basic knowledge of the business world for the purpose of career development; recognise the need and opportunities for lifelong learning.

For each cycle and each grade, learning outcomes are determined using a two-dimensional matrix, which is designed as a combination of learning outcomes and the way they are attained through knowledge, skills and attitudes (Croatia. Ministry of Science and Education, 2019b).

3.1.3. Business sector

The business sector typically refers to entrepreneurship using a narrower definition: primarily focusing on starting – or developing – a business. The concept of entrepreneurship competence is almost exclusively used to describe the abilities of business owners rather than employees. This observation was confirmed through field research. Interviewees from the businesses world usually presented the content of work-based learning focused on professions, without including components of entrepreneurship competence.

3.2. Entrepreneurship competence, sustainability and inclusiveness

Incorporating entrepreneurship competence in VET curricula is expected to contribute to learners' personal development, fostering proactivity, innovativeness and responsibility. It also contributes to sustainability, focusing on the wellbeing of people and the planet (UN, 2019). In Croatia, this aspect is not yet present in VET-related legislation, but it is highlighted in several strategic documents and decisions (e.g. Croatia. Ministry of Science and Education, 2019a). Enabling VET learners to understand the concept of sustainability requires teachers to comprehend the holistic concept of sustainable development and to adopt a collaborative, interdisciplinary approach in designing appropriate learning processes.

In 2011, the Education and Teacher Training Agency (*Agencija za odgoj i obrazovanje*, AZOO) published a Guide for primary and secondary schools (including VET schools) on education for sustainable development (Mićanović et al., 2011). Although the guide remains relevant, some of the planned activities

have been discontinued, particularly those aimed at training teachers in how to integrate sustainable development issues, (Box 2).

Box 2. Education for sustainable development: a guide for primary and secondary schools

The guide was developed in a three-year project in collaboration between the Education and Teacher Training Agency and KulturKontakt Austria. In designing the guide, education for sustainable development was placed in the context of the UN sustainable development goals, as well as the 2009 Croatian strategy for sustainable development (Hrvatski sabor, 2009), which explicitly defines education for sustainable development as a lifelong learning process. The guide also pays attention to linking the proposed activities to the National curriculum for secondary education (as identified in MZOS, 2007), and to the education outcomes expected after the completion of secondary education, among others:

- (a) advanced entrepreneurial competences;
- (b) advanced ecological consciousness;
- (c) ability to face changes, find solutions and opportunities for yourself and others.

An important contribution of the guide is identifying the competences required for teachers involved in the learning process on sustainable development:

- (a) understand the broad and complex concept of sustainable development (environment, society, economy);
- (b) recognise the problems that arise in the community;
- (c) identify the issues that need to be addressed in the context of sustainable development after graduation;
- (d) have organisational skills to plan projects;
- (e) work in teams;
- (f) be motivated.

Besides the guide with teaching tools for developing project-based learning processes in sustainable development, the 3-year project resulted in a curriculum for future teacher training activities to expand appropriate education resources, as well as a series of school projects resulting from the first teacher training cycle.

Source: Mićanović et al., 2011.

More recently (2019), education for sustainable development emerged as a cross-curricular topic in VET, along with personal development, health and environmental protection, learning to learn, entrepreneurship, ICT and citizenship education. Implementation depends on whether the teacher finds it beneficial to integrate such content into the teaching context of a specific course.

In July 2021, the Ministry of Science and Education introduced the Guidelines for working with learners with difficulties in personal development (Croatia. Ministry of Science and Education, 2021). This document establishes the legal framework for inclusiveness in education and defines the roles of all actors involved in this

process: teachers, other staff members participating in the education process, principals, learners in inclusive classes, and collaboration with parents. It advocates for personalised learning, tackling the specific learner difficulties (hearing, vision, speech, learning, ADHD, autism). The document also elaborates on the evolving role of the teacher in adapting curricula and learning processes, providing numerous examples. During focus group discussions, many teachers expressed concern that they were not fully prepared for this role.

VET graduates with difficulties in personal development must be able to work autonomously in the profession for which they were trained; this requires entrepreneurship competence, tailored to the needs of learners. Throughout the learning process, the school must ensure that the conditions are in place to enable the learner to meet the minimum requirements of the occupational profile. This implies that VET schools need to adjust their education content to align with learning outcomes adapted to the individual abilities of learners.

CHAPTER 4.

Nurturing entrepreneurship competence in VET

Developing entrepreneurship competence requires a systemic approach that encompasses interconnected elements: policy, resources, governance and partnerships, teachers and trainers, curricula and pedagogies, schemes for validation of non-formal learning, career and start-up support.

According to the 2018 Act on Vocational Education, VET stakeholders include ‘the competent ministries in each sector, local and regional governments, unions, employers’ associations, professional and other associations, chambers, higher education institutions, legal entities providing employment mediation, and VET institutions’ (Article 18).

4.1. Strategic framework

Strategies and policies on entrepreneurial learning provide a platform for cooperation between VET stakeholders to secure resources that help embed entrepreneurship competence in VET (Section 3.1). Partnerships and networking between VET providers, businesses, local authorities, and other stakeholders are at the core of this process. The success of the strategic framework depends on its consistency with the agreed vision, supported by research evidence and consensus on actions among stakeholders.

Strategic thinking and regulatory solutions have not always been streamlined in Croatia, which has slowed down the process of embedding entrepreneurship competence in VET. The country began building a policy framework to support entrepreneurial learning in 2011, with the adoption of the National framework curriculum for preschool education and general compulsory and secondary education; this stipulated the need for introducing entrepreneurship as cross-curriculum content. This was not accompanied by regulatory intervention in the Law on education in primary and secondary schools (in force since 2008 and updated eleven times up to the latest 2020 version at the time of writing this report). This led to a situation where some important provisions on entrepreneurial learning were not addressed: education/training of teachers for embedding entrepreneurship competence in the learning process, assessing and rewarding the work of teachers, preparing trainers for work-based learning. The same applies to the Act on Vocational Education. Only in 2019 was the Decision adopted on

curriculum for cross-curricular topic entrepreneurship (accompanying the Act on Vocational Education), in which the development of an entrepreneurial attitude, the ability to think and act entrepreneurially, reinforced by economic and financial literacy, was explained in terms of learning outcomes.

Despite such different dynamics in designing and implementing strategies and policies, there are good examples of building blocks for reforming VET initiated by the government and its agencies, and implemented by VET providers, teachers, and companies providing work-based learning (Box 3).

Box 3. Building blocks for reforming VET: bringing stakeholders together

Different initiatives, based on the 2104 Strategy of education, science and technology and the *School for life* project, showed high potential for collaboration among some stakeholders in addressing major issues in VET (such as relevance of qualifications for the labour market). Even though the four initiatives do not explicitly relate to entrepreneurship competence, they contribute to building the capacity of VET providers to shift from teaching to learning outcomes.

Regional Centres of Competence: as part of the VET system development programme 2016-20, the Ministry of Science and Education selected 25 VET schools in July 2018 as regional centres of competence in five sectors (mechanical engineering, electrical engineering and computing, agriculture and healthcare) to promote VET relevance, excellence and international mobility of learners and teachers, including teacher training and lifelong learning. The key features of the programme include innovative learning models with a strong work-based learning component, teaching excellence (including workplace mentors), lifelong learning, high-quality infrastructure, and creative partnerships among relevant stakeholders, particularly local businesses. Regional centres of competence aim to be active partners in the development of the community in which they operate. The development of the full functionality of these centres is part-financed by EU funds.

Pilot programme Dual education in VET: this programme, which complements the VET reform, was launched in 2018 by the Ministry of Science and Education with the aim of improving the quality of work-based learning and apprenticeship training through collaboration with chambers of economy and crafts, associations of employers and partner institutions from Austria, Germany and Switzerland. In 2019/20, the project was extended to 13 additional VET schools, providing even more opportunities for work-based learning. The aim is to address the gaps in practical training and entrepreneurial skills, and to reduce the skills mismatch as more than half of the registered unemployed are VET graduates.

Modernising the vocational education and training system (2017-23): this project, which focuses on increasing the autonomy of schools and developing innovative teaching tools, involved teachers of vocational subjects and principals of VET institutions. The project is part-financed by the European Social Fund and implemented by the Agency for Vocational and Adult Education.

Modernising the VET teacher training system (2019-21): this project, implemented by the Agency of Vocational Education and Training and Adult Education, focused on building an innovative, open, and flexible system of professional development for vocational teachers. It also supported the training of principals of VET schools. A VET teachers' day was created as an annual promotional event for VET.

Source: Authors.

A private initiative was launched by secondary school teachers to instigate a consultation process through social networks, to make their voices heard (Box 4). Their discussions are primarily focused on issues related to teacher roles in school, such as the learning process, organisational aspects, access to teaching resources, and their need for continuous education. They also explore topics critical for successful functioning of a school and the capacity of a school to provide learners with expected learning outcomes, including entrepreneurship competence.

Box 4. Teachers taking action

Secondary school teachers took the initiative and publicly offered to form a partnership with State and local governments, as well as other stakeholders, to discuss the challenges of secondary education and find solutions.

The best-known Facebook groups include: *Školska zbornica / Teachers' room* (with 23 000 members), *Teachers Organised nastavnici.org* (with 20 100 members) and *45 minuta / 45 minutes* (10 600 members). These groups are created through the individual initiative of entrepreneurial teachers. Potential participants must identify themselves based on their school affiliation. Within these groups, members support each other by sharing knowledge about regulatory provisions, discussing issues related to the functioning of secondary schools, and sharing examples of good practice. Members can post and raise issues (anonymously) about the running of their school, their personal issues with learners, colleagues, or parents. Other members can then comment and provide support in addressing the problems raised.

Their collective efforts contributed to the significant teachers' strike in 2019, which led to important changes in teacher compensation rules. They have subsequently increased their visibility and representatives of these Facebook groups are now regularly invited to public debates on topics related to secondary education, as well as to some working groups organised by the Ministry of Science and Education.

Source: Authors.

There is a noticeable asymmetry between the existence of a mechanism for improved communication between schools and policy actors and the lack of utilisation. This was expressed during interviews by policy actors stating: 'We do not have enough information about what is happening in the classroom regarding entrepreneurship competence'. Many comments from policy actors were essentially an inventory of challenges without suggesting potential interventions: 'Knowledge and learning are devalued'; 'There is no system or mechanism for rewarding good teachers (workers)'; 'Teachers struggle to find replacements in school when they go for training'; 'Teachers can go to companies to develop their professional skills, but they are not very interested'.

These challenges cannot be addressed by a single stakeholder. They require the cooperation of policy-makers, local governments (in charge of VET schools), schools, teachers, parents and businesses.

4.2. Approaches for embedding entrepreneurship competence in VET

IVET providers use national qualification standards to develop their programmes. These standards outline the content, teaching/learning methods and learning outcomes for each subject in the curriculum. Learning outcomes cover knowledge, skills and attitudes. While VET providers have autonomy in selecting learning/teaching methods and adding extracurricular activities, these must align with the expected learning outcomes.

Entrepreneurship is integrated into vocational education and training through four channels: as a cross-curricular topic, as a compulsory subject, as an optional subject or as an extra-curricular activity.

4.2.1. Cross-curricular approach

Teachers in VET and general education implement the cross-curricular approach by including specific topics in their courses: personal development, health and environmental protection, learning to learn, entrepreneurship, ICT, civic education and sustainability. Entrepreneurship competence is taught as a cross-curricular theme with the following requirements (Table 4).

Table 4. Requirements for the cross-curricular topic Entrepreneurship

Education requirements	Domains
Identify, define and solve problems and apply innovative and/or creative solutions	Think entrepreneurially
Manage risky and uncertain situations	
Understand and critically assess career development and professional orientation options.	
Develop an entrepreneurial idea from concept to implementation	Act entrepreneurially
Set objectives and formulate one's own vision	
Develop the ability to plan and manage activities	
Career planning and management	Economic and financial literacy
Understand financial products, services and concepts	

Source: Croatia. Ministry of Science and Education, 2019b.

These requirements are mandatory for the course(s) but teachers are free to choose appropriate learning and teaching methods. Yet there is no mechanism for checking whether requirements are met. Consequently, most of the teachers interviewed admitted that they did not include entrepreneurship themes in their teaching because they lacked confidence in their ability to handle such topics and had not received support to prepare.

This view is corroborated by the evaluation report on the implementation of the comprehensive curriculum reform in Croatia (Croatia. Ministry of Science and Education, 2020) ⁽¹⁰⁾. Respondents ranked entrepreneurship and ICT as the least likely to be embedded in their teaching activities (civic education being the highest ranked). This highlighted the need for support in embedding entrepreneurship competence in teacher training, curricula, and multi-actor project-based learning (including team members from business, local government, and civil society). However, it was not followed up with specific interventions.

4.2.2. Compulsory modules

Embedding entrepreneurship competence in VET is aided by compulsory modules, featuring specific groups of learning outcomes relevant to the qualification (example in Table 5). However, not all VET qualifications require such a module.

⁽¹⁰⁾ The survey, conducted in February 2019, involved more than 1 000 teachers and school directors from pilot schools with experience of the *School for life* (Škola za život) concept, who gave their views on four themes: learning outcomes, problem-solving, learning to learn, and coaching, as key elements of the education reform.

Table 5. **Compulsory module Entrepreneurship in Praxis in Economist qualification**

Module	Entrepreneurship in Praxis
Set of vocational learning outcomes defined in the qualification standard	<ul style="list-style-type: none"> • Structure of entrepreneurial venture • Legal forms of entrepreneurial venture and business functions • Managing an entrepreneurial venture • Development of employability through a simulated entrepreneurial venture
Courses that are taught in this module:	<ul style="list-style-type: none"> • Entrepreneurship (1st year (grade), 2 hours* • Entrepreneurship (2nd year (grade), 3 hours* • Training firm (3rd year (grade), 2 hours* • Training firm (4th year (grade), 2 hours*

NB: * weekly

Source: (Croatia. Ministry of Science and Education, 2017b)

As shown in Table 5, the compulsory module Entrepreneurship in Praxis consists of the following courses: Entrepreneurship for the 1st and 2nd grade, Training firm for the 3rd and 4th grade. They include the following learning outcomes (Table 6).

Table 6. **Learning outcomes of the compulsory courses in Entrepreneurship in Praxis module for the qualification Economist**

Grade 1 and 2 learning outcomes in the course Entrepreneurship	
In the first grade, the learner achieves the following learning outcomes:	<ul style="list-style-type: none"> • recognise the importance of entrepreneurship in society; • explain the basic determinants of entrepreneurship; • describe entrepreneur as the initiator of an entrepreneurial venture; • identify ways and methods of getting a business idea off the ground; • interpret the importance of the organisational structure of a business organisation; • identify the legal forms of setting up an entrepreneurial venture; • compare the launch of an entrepreneurial venture in terms of different legal forms of incorporation; • analyse the business functions of a business organisation; • describe the life cycle of an entrepreneurial organisation; • distinguish the factors that influence the development of entrepreneurship.

<p>In the second grade, the learner achieves the following learning outcomes:</p>	<ul style="list-style-type: none"> • recognise the need for institutional support for small and medium-size enterprises; • list the types of investments and financing of entrepreneurial ventures; • identify the elements of business planning; • prepare a business plan; • recognise management methods to run an entrepreneurial venture; • describe the elements of the human resources management process.
<p>Grade 3 and 4 learning outcomes in the course Training firm</p>	
<p>In the third grade, the learner achieves the following learning outcomes:</p>	<ul style="list-style-type: none"> • choose a business idea; • conduct the procedure for establishing a limited liability company in the information system of SUVT (Central Office for Training Firms); • carry out the selection process of recruiting employees/learners with the aim of effectively positioning employees and employers on the labour market (employable workforce); • apply written business communication, link it to all stages of the sale and purchase transaction; • do VAT calculation and salary calculation with the associated documentation.
<p>In the fourth grade, the learner achieves the following learning outcomes:</p>	<ul style="list-style-type: none"> • perform work tasks and processes with particular attention to purchasing and sales activities; • carry out activities related to the participation of the business entity in a trade fair; • prepare financial reports for the training firm.

Source: (Croatia. Ministry of Science and Education, 2017b).

This granular approach (from learning outcomes designed for a module, to learning outcomes designed for each course of the module) requires a high level of collaboration among teachers involved in the implementation of courses making up the module. The teachers jointly decide which learning outcomes will be covered in their courses and how they will contribute to achieving the learning outcomes planned for the entire module.

4.2.3. Elective approach

Qualification standards set the requirement for compulsory and optional modules. Once content related to entrepreneurship competence is designed as an optional module with course(s), it is tailored to the needs of the specific VET qualification (Table 7).

Table 7. **Optional module for the VET qualification Woodworking technician designer in the Forestry, wood processing and treatment sector**

Module	Entrepreneurship
Objective	Acquire knowledge and skills to set up and run a company, trade or freelance profession.
Description	From business idea and identification of markets to identification of resources and business model.
Course	Entrepreneurship (4th grade, 2 hours per week, 3.5 ECVET)
Set of vocational learning outcomes as identified by the qualification standard	<ul style="list-style-type: none"> describe and explain the terms: entrepreneur and entrepreneurship; describe the methods of selecting entrepreneurial ideas; create a business idea; describe a business plan; prepare a business plan.

Source: Croatia. Ministry of Science and Education, 2017a.

In this example, the module Entrepreneurship consists of a single course with the same name, but more courses can be included, as was demonstrated in the case of the compulsory module Entrepreneurship in Praxis (Table 5).

Implementation in a VET school can be exemplified by the case of the School of Economics in Varaždin (Box 5).

Box 5. **Entrepreneurship as a compulsory and optional course**

The Varaždin School of Economics, a VET provider, has made Entrepreneurship a compulsory course in its curriculum and offers two optional courses, Entrepreneurship in action and Entrepreneurship with management. The school takes an active role in managing the regional Centre of Excellence in Entrepreneurship, which provides a broader platform for embedding entrepreneurship competence in the learning process of learners from primary to secondary schools, as well as adults in the region. The concept of entrepreneurship applied in the school focuses on the knowledge and skills needed to start and run a business venture, helping to build career pathways for those who want to become self-employed, run their own business or enter the family business.

Source: ETC Hrvatska.

4.2.4. Extracurricular approach

Extracurricular activities for embedding entrepreneurship competence in VET vary and depend on the enthusiasm of teachers. Usually, they do not add learning / teaching hours to the programme. School cooperatives (Box 6) and project-based learning (Box 7) are examples of extracurricular activities promoting entrepreneurship competence in VET.

Box 6. School cooperatives

School cooperatives are the most common extracurricular activity in primary and secondary schools (672 cooperatives in 2022, [Register of school cooperatives](#)). Most are registered in primary schools because they encourage teacher participation by recognising 2 hours per week, which is not the case in secondary schools. The [Education and Teacher Training Agency \(AZOO\)](#) is responsible for coordinating the work of school cooperatives. There is also the [Association of Croatian School Cooperatives](#), a non-governmental organisation, that develops and promotes extracurricular activities to help establish and run school cooperatives, organises promotional events and cooperates with policy-makers

Source: Based on the interviews with policy-makers.

Box 7. Project-based learning

The Secondary School of Tourism and Hospitality Osijek offers entrepreneurship education as an extracurricular activity through the *Biti bolji* (Be better) social initiative, launched by the business journal *Poduzetnik / Entrepreneur*, in 2013. Since its inception, the project has involved more than 50 schools and around 20 000 learners across Croatia. The school selects the learners for the project and coordinates project activities in the school, but the introduction of learners to entrepreneurship competence is organised by project experts. Learners are introduced to the concepts of entrepreneurship, entrepreneurial culture and new venture creation. Activities are organised through panel discussions, guest lectures and projects.

Source: Based on the focus group with teachers at the School of tourism and hospitality in Osijek.

Other examples of extracurricular activities include the development of an ‘entrepreneurial personality’ without labelling the learning topics as entrepreneurship. An ‘entrepreneurial personality’ is expected to be creative, responsible and innovative in different areas of life and social roles. Entrepreneurship represents the ability of an individual to turn ideas into action, and the Ruđer podcast is a good example of this (Box 8).

Box 8. Teaching entrepreneurship without labelling it as such

At the Technical School Ruđer Bošković in Zagreb, entrepreneurship as a course is not included in the curriculum (neither as compulsory nor optional course).

However, teachers and other staff members carry out activities that contribute to the development of entrepreneurship competence of learners without calling it entrepreneurship education.

The Ruđer podcast is an excellent example of work-based learning for entrepreneurship. Learners work on this project with their mentor and the school librarian, to design and record nine podcast episodes, covering different topics. The topics are selected based on learner interest, collected through an anonymous online questionnaire and cover:

- (a) how to develop critical thinking;
- (b) what is needed for personal growth and development;
- (c) tips on career paths and employment;
- (d) how to build a positive self-image.

The project is not limited in time and depends on the interest of participants (learners, teachers, other school staff members; in this case, the librarian).

The podcast producers are learners (as presenters, recorders, etc.) and their guests are learners, teachers, people working in the private, public or civil sector, who have experience and/or qualifications in the relevant field to contribute to the quality of the podcast. (<https://www.tsrb.hr/ruder-podcast/>)

Source: Authors based on the focus groups with teachers.

4.3. Curricula

VET programmes are typically school-based with practical training taking place either at school or in a company. Schools have responsibility for implementing regulatory provisions related to entrepreneurship competence as part of the learning content; this can be adapted to the education focus of the school through the expected learning outcomes. They are also responsible for organising work-based learning opportunities. Teachers play a critical role in implementing education content, which they can complement with examples and innovative learning methods.

VET schools are expected independently to carry out the education process according to the school curriculum. This curriculum is developed by the school based on the framework vocational and sectoral curriculum approved by the Ministry of Science and Education. The cascading feature of school curriculum development is designed to link the national VET curriculum (Croatia. Ministry of Science and Education, 2018), sectoral curricula, VET curricula and school curricula, ensuring a comprehensive and cohesive approach to vocational education.

Schools have the freedom to define their specific education profile by incorporating up to 30% of work-based learning. However, the development of the sectoral and VET curriculum is still in progress, not all links in the chain are currently in place. Schools that have access to this curriculum can design their own curriculum based on a learning outcome approach.

Not all learners can participate in in-company training due to the limited internship places available. Practical work can be organised in schools, at the employer's place, or in combination.

The National curriculum for VET (Croatia. Ministry of Science and Education, 2018) sets the structure of teaching time between general content, vocational modules, optional modules and work-based learning.

Sectoral curricula provide information on approved occupational and qualification standards and expected learning outcomes, necessary for graduates to access the occupation. This provides a framework for the development of VET curricula. Occupational standards are based on information collected through surveys of entrepreneur needs for employee competences. Qualification standards derived from the occupational standards define the necessary learning outcomes for learners to acquire competences required to access the occupation. The development of these standards is part of the Modernisation of the vocational education and training system (2017-23) project; the standards are expected to be finalised in 2023.

VET curricula provide a framework for obtaining VET qualifications and are composed of mandatory and optional modules, with specific learning outcomes.

VET school curricula are developed by VET schools and must be based on the framework curricula. The schools are responsible for organising work-based learning opportunities outside the school; if they cannot find partners in the business sector, work-based learning takes place within the school. The schools are also responsible for organising the learning process to achieve the expected competences. As the sectoral curricula have not yet been finalised, several planned activities related to the training of principals and teachers for the development of school curricula have not yet been implemented. Many teachers and principals interviewed in the field research indicated that the curricula are overloaded (too ambitious) with expected learning outcomes, and that teachers are not always adequately prepared to handle such content, especially in relation to cross-curricular topics in their subjects. Further, there is currently no reward mechanism for teachers who want to invest more in themselves. Two prevailing principles among teachers suggest that they are overburdened by the amount of education content they need to cover: 'There is no room for new things'; 'We do a lot of things outside our working hours.'

4.4. Teachers and workplace mentors

Teachers and workplace mentors play a crucial role in promoting entrepreneurship competence. Their voice and feedback on what is happening in the classroom and in work-based activities are essential to develop personalised learning.

When asked what entrepreneurship means to them, some teachers were critical, stating that: 'entrepreneurship is only about money – how to sell more and earn more', and 'money is the only initiator of entrepreneurship'. One Croatian language teacher, who led a two-month project, in which learners had to work in teams, set objectives, prepare a survey, formulate and present findings, added: 'if you ask me if [the project] is entrepreneurship, I would say no'. These responses confirm that the issue of understanding key concepts (as discussed in Chapter 3 on entrepreneurship competence) remains and needs to be addressed in teacher training. Another VET teacher admitted that she does not consider herself an entrepreneurial person. There is no problem with that, but teachers need to know how to provide a learning process in which others will be able to internalise entrepreneurship competence.

When talking about the learning process and their own willingness to integrate entrepreneurship competence into their programme, many teachers noted that they were not confident, stating for instance: 'I don't choose entrepreneurship themes/topics among other cross-curricular topics because I don't feel safe. I do not know where to start. There are no guidelines'; 'I need too much time to prepare'.

These claims were shared by some principals who participated in the field research stating, for example: 'We are a vocational school, and our graduates are entering the labour market – we need to equip them with entrepreneurship competence. But now the school is not doing much in that direction.' The reasons for this are mainly rooted in a lack of resources, as well as in overloaded teachers with teaching and administrative obligations, which heavily limit their availability and enthusiasm for new initiatives.

Some teachers noted that, although there is training available on entrepreneurship, they are unsure how to apply it in their own teaching. A business representative stated that 'VET teachers lack professional experience, as they get employment in school immediately after graduating from university'.

The teachers recognise that they need additional expertise to participate in the transition from content teaching to contributing to the learning outcomes (Box 9). The principals go even further by saying that if teachers do not understand entrepreneurship competence, they cannot 'assess whether learners develop entrepreneurial skills'.

Box 9. **Train-the-teachers programme VirtuOS**

As part of the VirtuOS ⁽¹¹⁾ project, a group of professors from the Faculty of Economics at the J.J. Strossmayer University in Osijek, developed a teacher training programme Developing entrepreneurial skills among teachers.

The programme aims to help vocational school teachers to understand entrepreneurship competence, based on the EntreComp framework ⁽¹²⁾ and to encourage and support teachers in embedding entrepreneurship competence development into their curriculum without changing the content of the subject. The programme consists of 30 hours (6 days x 5 hours), with each day focusing on different aspects of entrepreneurship (teaching about entrepreneurship, teaching through entrepreneurship, and teaching for entrepreneurship: these three perspectives are used in the literature as a cover label for all approaches in learning entrepreneurship competence) (Gibb, 1999; Hytti & O’Gorman, 2004).

In 2022, 50 teachers and workplace mentors from four project partner schools in eastern Croatia and from two enterprises participated in two training sessions. Feedback from teachers has been extremely positive and encourages the programme to become a part of teacher training.

Source: Authors.

4.5. **Assessment of learning outcomes**

The process of assessing learning outcomes is defined by the Rulebook on methods, procedures and elements of student evaluation in primary and secondary schools (Croatia. Ministry of Science and Education, 2019c), which is supported by the *School for life* project. This project provides support for the implementation of the comprehensive curricular reform (Croatia. Ministry of Science and Education, 2019d, p. 6). Learning outcomes are defined as ‘clear and unambiguous statements about what is expected of learners in a certain domain, macro concept, concept or subject area in a particular year of learning and teaching a subject. Outcomes can be defined as knowledge, skills, attitudes or values.’.

Data on learning outcomes are currently only available for school-based programmes based on the comprehensive curriculum reform designed under the project Modernisation of the vocational education and training system (2017-23). As of December 2022, 408 occupational standards and 145 qualification standards were registered on the Croatian qualification framework website.

⁽¹¹⁾ [VirtuOS](#), establishment of a regional centre of competence in the tourism and hospitality sector UP.03.3.1.05.0006, Operational programme Effective human resources.

⁽¹²⁾ The European Commission has developed [EntreComp: the European entrepreneurship competence framework](#) as a reference framework to explain what is meant by an entrepreneurial mindset.

The assessment of learning outcomes can only be applied to VET programmes, which are based on learning outcomes. New VET curricula are planned to be introduced in all VET institutions by 2023, upon completion of the project Modernisation of the vocational education and training system (2017-23). To make this feasible, support will be provided to VET schools to assess learning outcomes. This includes 'train-the-teachers' events, as well as the publication of over 1 000 teacher manuals and over 2 100 other education materials.

Entrepreneurship competence is not explicitly identified as a learning outcome, but it is directly referenced as one of eight key competences for lifelong learning (Council of the European Union, 2018). The Rulebook on methods, procedures and elements of student evaluation in primary and secondary schools (Croatia. Ministry of Science and Education, 2019c) identifies three sets of key competences which include components of entrepreneurship:

- (a) way of thinking, including problem solving, critical thinking, creativity and innovativeness;
- (b) way of working and using tools, including communication, collaboration;
- (c) personal and social development, including managing own personal development, networking, active citizenships.

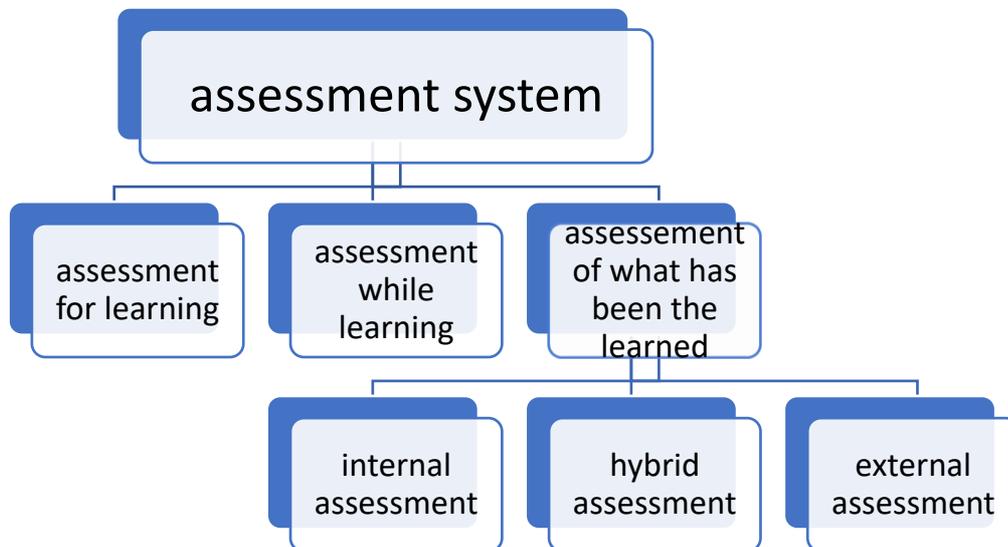
The analysis of several VET programmes revealed that some components of entrepreneurship competence are included, for example in the cross-curricular topic Entrepreneurship for secondary schools (Table 4). In the compulsory module Entrepreneurship in praxis, and in Training firm, for the qualification Economist, there are learning outcomes which are related to competences of structuring an entrepreneurial venture: choosing a business idea, getting a business idea off the ground (Table 6). Another example is the course Business communication, for the qualification Commercialist: communicational competences of a manager. The course Professional exercises includes creativity and innovativeness.

There are three basic approaches to collecting information on the assessment of learning outcomes:

- (a) assessment for learning;
- (b) assessment while learning;
- (c) assessment of what has been learned (based on three types of assessment).

Figure 1 illustrates the relationship between the types of information collection and types of assessment of learning.

Figure 1 **Methods of collecting information for assessment and types of assessment**



Source: Croatia. Ministry of Science and Education, 2019d.

Assessment ‘for learning’ and assessment ‘while learning’ (formative assessment) do not result in a grade. They provide qualitative feedback to improve learners’ learning and adapt teaching methods to their needs. They are applied throughout the learning and teaching process and are always assessed in the context of the expected learning outcomes, as set out in the VET curricula. Assessment while learning is based on peer learning between learners, which contributes greatly to their personal development.

Summative assessment provides an estimate of the learner’s personal development evaluated against the defined learning outcomes. It is applied during and at the end of the learning process but can also be carried out at shorter intervals. Learning assessment can be internal, external or hybrid, depending on who is responsible for it: a school teacher or an external evaluator. The map of a practical learning process may consist of a list of assignments developed by a teacher, and these are then the basis for workplace mentors to evaluate a learner’s achievements jointly with a teacher. For example, for the qualification Glazier, communication and responsibility are components evaluated as a learner’s achievement. Caring about the environment is a learning component to be evaluated.

Even though teachers and directors in the four VET schools that participated in the field research said that they were familiar with the concept of learning outcomes and use this approach to assess the effectiveness of the learning process, there remains room for development in the use of learning outcomes in all VET programmes.

CHAPTER 5.

Challenges and opportunities

This study has identified various elements of the VET entrepreneurial learning ecosystem, including strategic and regulatory framework, training providers, teachers, curricula and pedagogies and extracurricular learning. However, the links between these components do not always function well. Curricula that are not yet fully designed according to the learning outcomes approach make it difficult to monitor whether learners are acquiring entrepreneurship competence. In the developing cooperation between VET stakeholders to provide work-based learning, often scattered entrepreneurship competence elements in the curricula present challenges in embedding entrepreneurship competence into teaching and learning. Some components of the ecosystem are also missing, such as those related to apprenticeships and career and start-up support.

The translation of agreed strategic approaches into policies through regulatory interventions has not always been timely, which has hindered the process of embedding entrepreneurship competence in VET. The project Modernisation of the vocational education and training system 2017-23 invites VET stakeholders ⁽¹³⁾ to collaborate and build links among all components of the entrepreneurial learning ecosystem to increase the capacity of VET providers to ensure learners acquire entrepreneurship competence.

The case study also reveals interesting examples that contribute to embedding entrepreneurship competence in VET. All share a common feature: collaboration.

The research carried out for the case study shows that collaborative efforts have yielded positive results, such as dual VET, regional competence centres, and extracurricular activities that support the development of entrepreneurship competence. This evidence pleads for interventions based on establishing horizontal collaboration rather than a hierarchy among all stakeholders in the learning ecosystem.

⁽¹³⁾ Ministry of Science and Education, Agency for Vocational and Adult Education, training providers (schools and companies), teachers, directors and local communities.

Acronyms

AVETAE	Agency for Vocational Education and Training and Adult Education (<i>Agencija za strukovno obrazovanje i obrazovanje odraslih</i>)
AZOO	Education and Teacher Training Agency (<i>Agencija za odgoj i obrazovanje</i>)
CROQF	Croatian qualifications framework
CVET	continuing vocational education and training
IVET	initial vocational education and training
UNESCO- UNEVOC	International Centre for Technical and Vocational Education and Training
VET	vocational education and training
WBL	work-based learning

References

[URLs accessed 24.5.2023]

- Cedefop (2020a). *National qualifications frameworks developments in Europe 2019*. Qualifications frameworks: transparency and added value for end users. Luxembourg: Publications Office.
- Cedefop (2020b). *Vocational education and training in Croatia: short description*. Luxembourg: Publications Office.
- Cedefop (2021). *Spotlight on VET – 2020 compilation: vocational education and training systems in Europe*. Luxembourg: Publications Office.
- Cedefop (2023). *Key indicators on VET*.
- Cedefop and AVETAE (2022). *Vocational education and training in Europe – Croatia: system description*. From Cedefop; ReferNet. Vocational education and training in Europe database.
- Council of the European Union (2018). *Council Recommendation of 22 May 2018 on key competences for lifelong learning (2018/C 189/01)*. *Official Journal of the European Union*.
- Croatia. Ministry of Science and Education (2011). *Nacionalni okvirni kurikulum za predškolski odgoj i obrazovanje te opće obvezno i srednjoškolsko obrazovanje* [National framework curriculum for preschool education and general compulsory and secondary education].
- Croatia. Ministry of Science and Education (2014). *Nove boje znanja: strategija obrazovanja, znanosti i tehnologije* [New colours of knowledge: education, science and technology strategy].
- Croatia. Ministry of Science and Education (2017a). *Odluka o uvođenju strukovnog kurikuluma za stjecanje kvalifikacije drvodjeljski tehničar dizajner (120424) u obrazovnom sektoru šumarstvo, prerada i obrada drva* [Decision on the introduction of vocational curriculum for obtaining qualification Woodworking Technician Designer (120424) in the education sector Forestry, Wood Processing and Treatment].
- Croatia. Ministry of Science and Education (2017b). *Odluka o uvođenju strukovnog kurikuluma za stjecanje kvalifikacije economist (060724) u obrazovnom sektoru ekonomija, trgovina i poslovna administracija, NN 85/2017* [Decision on the introduction of vocational curriculum for obtaining qualification Economist (060724) in the education sector Economics, Retail and Business Administration, NN 85/2017].
- Croatia. Ministry of Science and Education (2018). *Nacionalni kurikulum za strukovno obrazovanje* [National curriculum for vocational education].
- Croatia. Ministry of Science and Education (2019a). *Odluka o donošenju kurikuluma za međupredmetnu temu održivi razvoj za osnovne I srednje škole u Republici Hrvatskoj* [Decision on the adoption of the curriculum for the

- intercurricular subject Sustainable development for primary and secondary schools in the Republic of Croatia, NN 7/2019]
- Croatia. Ministry of Science and Education (2019b). *Odluka o donošenju kurikuluma za međupredmetnu temu Poduzetništvo za osnovne i srednje škole u Republici Hrvatskoj* [Decision on the adoption of the curriculum for the intercurricular subject Entrepreneurship for primary and secondary schools in the Republic of Croatia, NN 7/2019]
- Croatia. Ministry of Science and Education (2019c). *Pravilnik o načinima, postupcima i elementima vrednovanja učenika u osnovnoj i srednjoj školi* [Rulebook on methods, procedures and elements of student evaluation in primary and secondary schools. NN 112/10, 82/19, 43/20, 100/21].
- Croatia. Ministry of Science and Education (2019d). *Škola za život: Smjernice za vrednovanje procesa i ostvarenosti odgojno-obrazovnih ishoda u osnovnoškolskom i srednjoškolskom odgoju i obrazovanju* [School for life: Guidelines for assessing the process and attainment of learning outcomes in primary and secondary education].
- Croatia. Ministry of Science and Education (2019e). *Smjernice za izradu mreže školskih ustanova i programa odgoja i obrazovanja za osnivače* [Guidelines for the development of the network of education institutions and education programmes for founders]
- Croatia. Ministry of Science and Education (2020). *Curriculum reform in Croatia: monitoring and evaluation: report for the technical support to the implementation of comprehensive curricular reform in Croatia: summary of monitoring and evaluation findings: technical support to the implementation of the comprehensive curricular reform in Croatia.*
- Croatia. Ministry of Science and Education (2021). *Smjernice za rad s učenicima s teškoćama* [Guidelines for working with learners with difficulties].
- European Commission. EACEA/Eurydice (2016). *Entrepreneurship education at school in Europe: Eurydice report*. Luxembourg: Publications Office.
- Eurostat (2022). *Adult learning statistics*.
- Gedeon, S. (2010). *What is Entrepreneurship? Entrepreneurial practice review*, Vol. 1, No. 3.
- Mićanović, M. et al. (2011). *Obrazovanje za održivi razvoj – priručnik za osnovne i srednje škole* [Education for sustainable development – a manual for primary and secondary schools]. Agencija za odgoj i obrazovanje (AZOO).
- Republic of Croatia (2013a). *Strategija razvoja poduzetništva Republike Hrvatske 2013- 2020* [Strategy of development of entrepreneurship in the Republic of Croatia 2013-2020, NN 136/2013].
- Republic of Croatia (2013b). *Zakon o hrvatskom kvalifikacijskom okviru* [Act on the Croatian qualifications framework].
- Republic of Croatia (2018). *Zakon o strukovnom obrazovanju* [Law on vocational education].

Školski e–Rudnik (2023). *School data mining*.

UNESCO-UNEVOC (2019). *Entrepreneurial learning in TVET: discussion paper*.

Annex 1. Participating VET providers

Name	Region	Type of VET (fieldwork focus)
Secondary school of tourism and hospitality Osijek	Osijek-Baranja County (Eastern Croatia)	Secondary vocational education (IVET), hospitality and tourism
Commercial School Istituto professionale Buje	Istria (Western Croatia)	Secondary vocational education (IVET) With programmes for wide range of qualifications (mechanical and electrical technicians; tourism and hospitality; services: cosmetics, hairdressers; trade, carpenters...)
Varaždin School of Economics	Varaždin County (North Croatia)	Secondary vocational education (IVET) Economics, trade, tourism, hospitality
Technical School Ruđer Bošković	Zagreb	Secondary vocational education (IVET) Electronics, computing, mechatronics, optics
Harburg-Freudenberger Belišće ltd	Osijek-Baranja County (Eastern Croatia)	Company providing apprenticeship training
Hotel Waldinger Osijek	Osijek-Baranja County (Eastern Croatia)	Company providing apprenticeship training

Entrepreneurship competence in vocational education and training

Case study: Croatia

This report describes how entrepreneurship competence is embedded in vocational education and training (VET) in Croatia. It complements existing knowledge with examples of methods, tools and approaches that can help policy-makers, VET providers and other stakeholders build better entrepreneurial learning ecosystems.

The report is based on the research of the Cedefop study *Entrepreneurship competence in VET*. It is part of a series of eight national case studies (Spain, France, Croatia, Italy, Latvia, Austria, Sweden and Finland) and a final report.



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