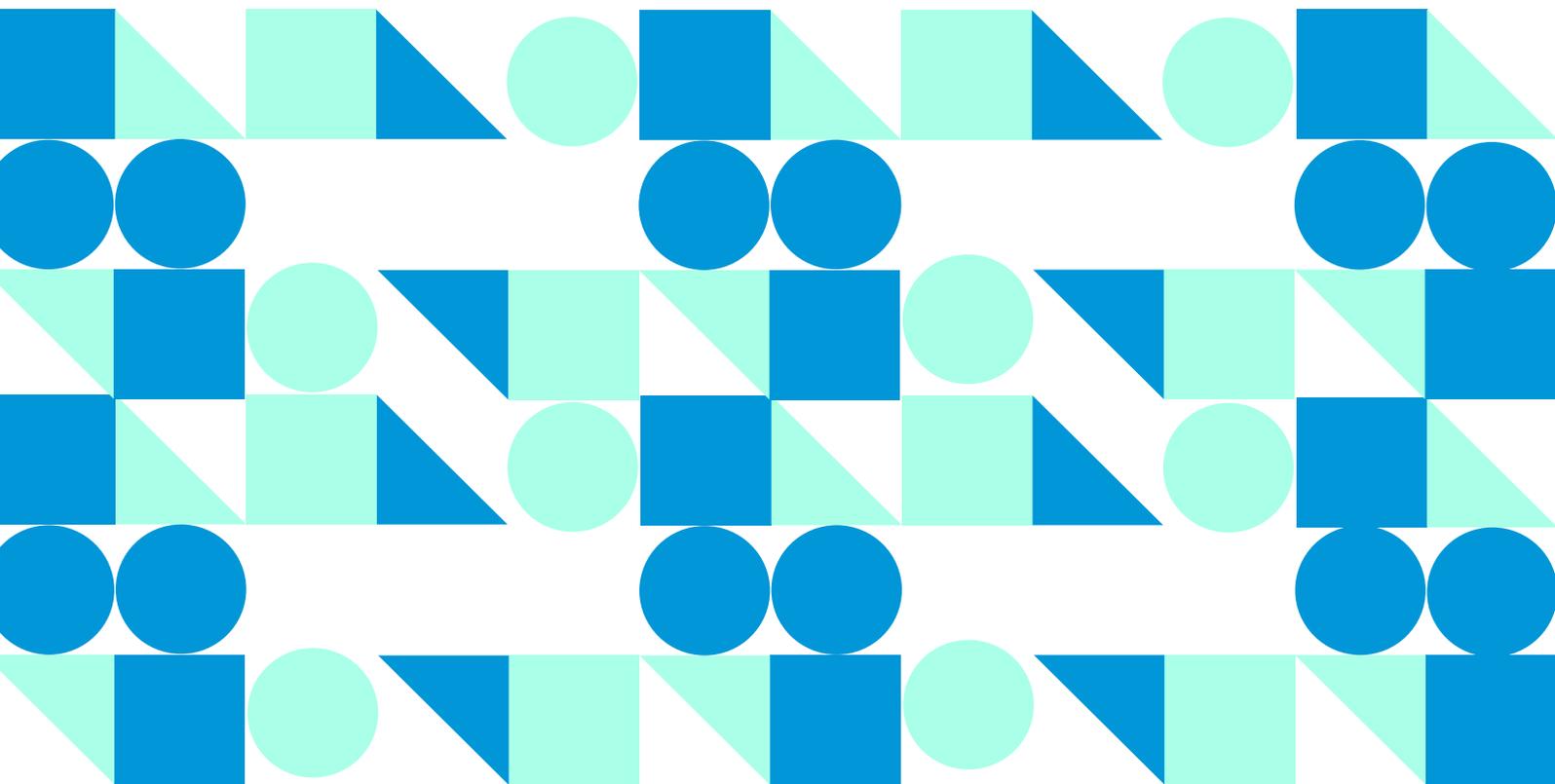




Research paper

# Entrepreneurship competence in vocational education and training

Case study: Italy







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It can be accessed through the Europa server (<http://europa.eu>).

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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) and other factors 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 in 2021 launched a study to provide VET stakeholders with new evidence on how entrepreneurship competence is embedded in VET. This report presents findings of the pilot research carried out in Italy, underpinning the dimensions of learning ecosystems that nurture entrepreneurship competence in VET.

In Italy, there is a solid base for promoting entrepreneurship competence in VET. Guidelines for transversal skills promote entrepreneurship competence through work-based learning. Further, the national curriculum for entrepreneurship education comprises an extensive list of learning outcomes linked to entrepreneurship. Strong policies in several regions support building the local entrepreneurial learning environments. The study also found gaps between the national policy and its implementation at VET provider level.

We hope that this country case study and the others from the series – Spain, France, Croatia, [Latvia](#), Austria, Sweden and Finland – 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

The study explores to what extent, and how, the dimensions of entrepreneurial learning ecosystems support acquiring entrepreneurship competence in VET, and which policies, methods, tools and approaches best support embedding entrepreneurship competence in VET.

For the study, entrepreneurship competence is defined as a key competence which applies to all spheres of life: from nurturing personal development to actively participating in society, (re-)entering the job market as an employee or as a self-employed person, and starting new ventures. The concept of an entrepreneurial learning ecosystem helps embed entrepreneurship competence in VET as an interplay between elements at policy-making, provider and learning environment levels.

There is no specific (dedicated) overarching strategy for promoting entrepreneurship competence in VET in Italy. However, there is a broader strategy for secondary education. At national level, nurturing entrepreneurship competence is embedded in VET mainly through the Pathways for transversal skills and orientation programme [*Percorsi per le competenze trasversali e per l'orientamento*] (PCTO) (MIUR, 2019b) and the Curriculum for entrepreneurship education in upper secondary school [*Educazione all'Imprenditorialità: Sillabo per la Scuola Secondaria di Secondo Grado*] (the 2018 Curriculum) (MIUR, 2018b, 2018c), comprising an extensive list of learning outcomes linked to entrepreneurship.

The broad definition of entrepreneurship as a key competence for lifelong learning has been generally adopted in the 2018 Curriculum; it is referred to as 'entrepreneurship education' and defined as 'Ability to turn ideas into action. Creativity, innovation and risk-taking, planning and managing projects, seizing opportunities which can lead to establishing or contributing to social or commercial activity. Realisation of entrepreneurial autonomous activity' (MIUR, 2018b, p.1). Field research with stakeholders, including policy-makers and VET providers, also signalled the use of (implicit) definitions for entrepreneurship competence, including competence for employability <sup>(1)</sup>, a sense of initiative and competence for business (start-up) creation. While business creation is strongly promoted by the national curriculum for entrepreneurship education, the present

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<sup>(1)</sup> Interviewees used the word '*occupabilità*' for 'employability'.

study shows that entrepreneurship competence in Italy is primarily connected to the development of VET learner employability.

Explicit learning outcomes for entrepreneurship competence are included in the 2018 Curriculum and in the State VET curricula reformed in 2016. The learning outcomes for entrepreneurship competence can also be implicit, revolving around understanding how companies work and their value in society, as well as teamwork and communication in work environments. Even when entrepreneurship competence is intentionally promoted, explicit learning outcomes are often difficult to find in the curricula. While the 2018 Curriculum assumes that entrepreneurship is a key competence for all, in the field, it is signified as both a key competence and a competence for employability.

In 2020-21, there was an acceleration in regional policies (the Emilia-Romagna as notable example – see Section 4.3) that supported building local entrepreneurial learning environments, mostly in northern Italy. Further, the Parliament's mandate to VET providers to create learning ecosystems has put them at the centre of broad community networks (Parlamento Italiano, 2015), offering schools more autonomy. Availability of funding (e.g. Operational Programme for Education) (MIUR, 2014) is also key to translating national policies on entrepreneurship competence into practice, especially in initial VET (IVET).

The study found rather limited alignment between the IVET provider practice and what is written in the policy documents. Teachers and school management who participated in this study were often unaware of the 2018 Curriculum for entrepreneurship education, even though it was republished in 2019 as an attachment to the PCTO guidelines (MIUR, 2019b) which they knew well. VET experts and social partners suggested that this gap in awareness arose partly because education priorities have been changing since the curriculum release, not least due to the COVID-19 pandemic. Only a few schools under scrutiny included learning outcomes related to entrepreneurship education in their 3-year plan of the formative offer <sup>(2)</sup>.

Certain challenges in promoting entrepreneurship competence are typical in VET and other education settings. For example, the advocated approach to teaching in IVET is generally disciplinary and knowledge-based rather than focusing on interdisciplinarity which, according to research, is vital for cultivating key competences. Most interviewees viewed the time devoted to PCTO interdisciplinary programmes as insufficient for nurturing entrepreneurship

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<sup>(2)</sup> The [strategic document](#) published by each secondary school.

competence. Also, since teachers are paid per hour spent in class teaching their subjects, it is often hard for them to allocate time for extracurricular activities supporting the development of entrepreneurship competence. As well, most of the interviewed teachers had not received training in entrepreneurship, and very few had significant experience of working in industry. Teacher recruitment is rigid and follows rules that value mainly academic qualifications and years of service. The above pertains mainly to State IVET rather than to regional IVET. The latter is subject to policies that vary considerably by region. There is a lack of initial and in-service teacher training in entrepreneurship.

Regarding methods, tools and approaches supporting acquisition of entrepreneurship competence, the PCTO guidelines suggest 'practice enterprise' and 'enterprise in action' as methods, and service learning (where learners apply academic knowledge and critical thinking skills to address genuine community needs) as didactics (MIUR, 2019b). In IVET, most of the observed activities supporting the development of entrepreneurship competence were one-off pilot projects, notable exceptions being Junior Achievement Italy's Mini-Enterprise model and a practice enterprise model Simulimpresa (Centro Studi Opera Don Calabria, 2021; J.A. Italia, 2017). Another programme, popular for instance in Trentino, develops entrepreneurship competence through simulating the creation of a social cooperative. In the field, the study also found several interesting programmes seeking to develop entrepreneurship competence, one of which dealt with start-up creation in the Puglia region.

VET features that help nurture entrepreneurship competence include strong connections with industry and professional networks, the professional practice of teachers, qualifications which naturally lead to start-ups or provide the ideal ground for developing innovative ideas (e.g. through business studies), and hands-on experience of learners at enterprises. There is also a substantial difference in the minimum compulsory hours of PCTO: 210 hours in vocational schools [*istituti professionali*] and 150 hours in technical schools [*istituti tecnici*] compared to only 90 hours in general education [*licei*].

The study also reveals how digital technology helps in the entrepreneurial teaching and learning activities, making subjects more compelling and closer to the interests of young people. While the COVID-19 pandemic boosted teacher and learner digital competences by enforcing the use of the same digital tools as in industry, lack of face-to-face learning made it more difficult to run entrepreneurship programmes during the pandemic period.

## CHAPTER 1.

# Introduction

This report aims to provide new evidence for policy-makers, social partners, vocational education and training (VET) providers and researchers of how entrepreneurship competence is embedded in VET in Italy. It complements the existing knowledge of methods, tools and approaches that support learning, teaching and assessing entrepreneurship competence.

The findings of the report are based on the pilot research of Cedefop's study Entrepreneurship competence in VET, carried out in 2021. It is part of a series of eight national case studies (Austria, Croatia, Finland, France, Italy, Latvia, Spain and Sweden) and the final report, due in 2023.

### 1.1. Research questions and core terms

The study aims to answer the following main research questions:

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

For this study, entrepreneurship competence is defined as a key competence which applies to all spheres of life: from nurturing personal development to actively participating in society, (re-)entering the job market as an employee or as a self-employed person, and starting new ventures. The study seeks to explore entrepreneurship competence from this wider perspective rather than as a competence for business creation only.

The concept of an entrepreneurial learning ecosystem paves the way towards embedding entrepreneurship competence in VET as an interplay between elements at policy-making, provider and learning environment levels.

### 1.2. Methodological note

This country case study report describes existing policy and practice within the entrepreneurial learning ecosystem, including VET provision and learning environments in Italy. It investigates activities that take place at each of these layers, how they interact and the reasons behind the findings. The case study

contributes to comparative analysis and answering the research questions through:

- (a) literature review/desk research at national level;
- (b) field research at policy and stakeholder levels, including VET providers.

The research departs from a literature review to trace progress in embedding entrepreneurship competence in VET, and to identify methods, tools and approaches that support this process.

For each selected VET provider, field research includes:

- (a) interviews with school management (or, in the case of apprenticeships, company managers or owners, or human resources managers) and VET teachers/trainers (company trainers/mentors in apprenticeships);
- (b) focus groups (or interviews in apprenticeships) with VET learners;
- (c) interviews with former graduates;
- (d) where possible, observations of class interactions during the delivery of entrepreneurship programmes.

Table 1. **Research in numbers**

Research activity	Total
Interviews with policy-makers, VET experts and social partners	6
Interviews with school managers	6
Interviews with teachers	16
Interviews with work tutors	4
Interviews with company (HR) managers	8
Interviews with VET graduates	11
Focus groups with teachers	3
Focus groups with learners	8
Class observations	5
Policy documents analysed	30
School documents analysed	98

Source: Authors.

In Italy, the desk research was carried out between July and September 2021 and the field research from October to December 2021. Annex 1 lists the VET providers that took part in the study. Case-sampling was selective and is by no means representative of the population of VET providers. The aim was to gain valuable insights into how entrepreneurship competence is embedded in VET. 'Information-rich' cases were selected: VET providers with advanced understanding of the competence and a diverse portfolio of activities (curricular and extracurricular) delivered in collaboration with other stakeholders in the entrepreneurial learning ecosystem.

## CHAPTER 2.

# Overview of the Italian VET system

This chapter briefly presents the main features of the Italian VET system, providing contextual information for the study findings. More detailed information about the VET system in Italy is available at Cedefop's [VET in Europe database](#).

In Italy, VET encompasses both national and regional education programmes. Strategies are determined by the education <sup>(3)</sup> and labour ministries. The strategies are carried out by general education and VET providers, which, since 2000, have a degree of administrative, organisational and programme autonomy (PdR, 1999). After Grade 8 (lower secondary school), learners can enrol either in general education programmes (ISCED 344) or VET. Education is compulsory until the age of 16, although the fulfilment of a citizen's 'educational duty' is reached only when the learner acquires an EQF 3 certificate at the age of 18 (Cedefop, 2021).

There are three types of VET provider (Cedefop, 2021; Roberto, 2019):

- (a) technical schools (*istituti tecnici*, ISCED 354);
- (b) vocational schools (*istituti professionali*, ISCED 354);
- (c) providers belonging to the Professional Education and Training System (IeFP, ISCED 353).

Technical and vocational schools deliver national curricula and offer 5-year qualifications which allow university enrolment. IeFP providers offer 3- or 4-year programmes, resulting in nationally recognised certificates at EQF levels 3 and 4.

Upper secondary VET can be combined with apprenticeships. An apprenticeship contract is signed, and learners work part-time as they fulfil schooling requirements, resulting in the award of the EQF level 4 certificate. VET is completed in post-secondary VET programmes (*istituti tecnici superiori*): either 1-year long (IFTTS, leading to another EQF level 4 certificate, ISCED 453) or 2- to 3-year long (ITS, leading to an EQF level 5, ISCED 554). Annex 2 explains VET-related expressions used in the Italian educational system.

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<sup>(3)</sup> *Ministero dell'Università e della Ricerca.*

## CHAPTER 3.

# Entrepreneurship competence

### 3.1. Understanding the competence

There is no specific (dedicated) overarching strategy for promoting entrepreneurship competence in VET in Italy. According to the interviewed policy-makers, this approach underlines the transversal nature of this key competence for all learners at secondary education. At national level, nurturing entrepreneurship competence is embedded in VET mainly through the Pathways for transversal skills and orientation programme [*Percorsi per le competenze trasversali e per l'orientamento*] (PCTO) (MIUR, 2019b) <sup>(4)</sup> and the Curriculum for entrepreneurship education in upper secondary school [*Educazione all'Imprenditorialità: Sillabo per la Scuola Secondaria di Secondo Grado*] (the 2018 Curriculum) (MIUR, 2018b, 2018c) <sup>(5)</sup>. Both promote entrepreneurship education mainly through work experience (work-based learning).

The 2018 Curriculum is a principal document when it comes to defining entrepreneurship competence in VET. It defines entrepreneurship education <sup>(6)</sup> as '[...] ability to turn ideas into action. Creativity, innovation and risk-taking, planning and managing projects, seizing opportunities which can lead to establishing or contributing to social or commercial activity. Realisation of entrepreneurial autonomous activity' (MIUR, 2018b, p.1). This definition has been adopted by the education ministry. It links back to the definition of the Innovation cluster for entrepreneurship education project (ICEE, 2016, p.17) and almost perfectly mirrors the 'sense of initiative and entrepreneurship' definition in the European key competences framework (European Parliament, 2006). In addition, a translation into Italian of excerpts of the *EntreComp framework* (JRC Science Hub, 2016) is enclosed with the 2018 curriculum to underline that it is based on the framework.

Applying the PCTO guidelines is mandatory in upper secondary education including VET, and entails work experience or other learning forms (the so-called

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<sup>(4)</sup> From 2005 to 2018, known as School to work alternation (*Alternanza Scuola Lavoro*) (PdR, 2005).

<sup>(5)</sup> For the first time, however, entrepreneurship (as self-entrepreneurship) for promoting active citizenship was mentioned in the 2015 'Buona Scuola' reform law.

<sup>(6)</sup> The term 'entrepreneurship education' (*educazione all'imprenditorialità*) is often used instead of 'entrepreneurship competence' in the Italian context.

'paths') related to nurturing key competences (not exclusively an entrepreneurship competence). The link between PCTO and the 2018 curriculum (and thus entrepreneurship competence) is clear, since the curriculum has also been published as an attachment to the PCTO guidelines (see MIUR, 2018b). The PCTO guidelines call for collegiality in designing these paths, and the class council see them as interdisciplinary projects, thus making apparent the 2018 curriculum is competence-based (see Section 5.2). Apart from applying the PCTO guidelines, teachers may decide to nurture entrepreneurship competence also through their subjects.

According to the policy-makers we interviewed, the definition of entrepreneurship is connected to the European Entrepreneurship Competence (EntreComp) Framework (JRC Science Hub, 2016). However, VET experts suggested that the education in Italy is based more on the transmission of knowledge than on acquisition of competences. This means that the word competence should not be taken for granted. Interviews with social partners, VET provider management, teachers/tutors and company representatives signalled the use of (implicit) definitions for entrepreneurship competence, referring to it as:

- (a) a competence for employability <sup>(7)</sup>;
- (b) a sense of initiative;
- (c) a competence for business creation.

Competence for employability helps understand how a company works, promote an enterprise-friendly culture and build learners' intrapreneurial skills. When the focus is on promoting a sense of initiative, entrepreneurship competence is seen as useful in many contexts, promoting creativity, autonomy and proactiveness. This connects well to the first edition of the European key competences for lifelong learning (European Parliament, 2006), emphasising the importance of developing 'a sense of initiative'. A competence for business creation mainly focuses on specific technical courses dealing with innovation (for example on information technology) where new ideas could lead to start-up creation, or vocations (such as hairdressing) leading to self-employment.

This study found that the ways entrepreneurship competence is conceptualised vary by VET provider, and the three above-mentioned working

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<sup>(7)</sup> Interviewees used the Italian word *occupabilità* for 'employability'. In this paper, the term is used in one of the senses explored by McQuaid and Lindsay: a form of self-sufficiency, which is achieved through the ability to interact with the labour market and adapt to the changing needs of the world of work. When entrepreneurship competence is dealt with as a key element for employability, the distinction between the two blurs (McQuaid and Lindsay, 2005).

definitions are commonly used. However, a competence for employability is the most popular way of interpreting it. Apprenticeship providers that participated in the study mainly understand entrepreneurship as a competence for employability. It is particularly valued by companies, as exemplified by the statements of a work tutor and human resources manager: 'Through early inclusion in a company, apprentices end up partaking in that company's goals'.

Entrepreneurship competence as a sense of initiative was promoted by providers offering school-based IVET programmes, for example by creating a social cooperative. Business creation was at the core of the CVET programme (providing food and wine tasting tours for foreign tourists). Start-up creation that also falls under this definition was preferred by school-based IVET providers.

**Box 1. Entrepreneurship competence: a teacher's perspective**

An interviewed teacher considered entrepreneurship competence as self-entrepreneurship: 'a 360° competence useful in all contexts of life, not only to create entrepreneurs, but also an entrepreneurial mindset. Some hashtags that characterise it are creativity, innovation, change-making, being the main actor of one's own life, managing risks and failures'. Learners attending the programme perceived entrepreneurship competence as 'having an idea that tackles a [social] need and implementing it with the available resources by working in teams'.

### 3.2. Opportunity, value and venture creation

The desk research <sup>(8)</sup> found that entrepreneurship competence definitions include some traits of economic citizenship. A connection to opportunity, value or business creation depends largely on VET programmes, in the designing of which VET providers have autonomy.

The above is supported by the interviewed VET management and teachers, who argued that, once entrepreneurship projects are carried out, social and cultural values are also created, although employability still emerges as a common and most important area of focus. VET providers offering school-based IVET programmes also strongly connect entrepreneurship competence with the creation of value for the local community and relate it to business creation and

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<sup>(8)</sup> (ANPAL, 2017; Giunta Regionale della Regione Autonoma Friuli Venezia Giulia, 2016a, 2016b; INAPP, 2021, 2022; INDIRE, 2017, 2020; INVALSI, 2021; MI, 2020, 2022; MIUR, 2011a, 2011b, 2014, 2015, 2016, 2017, 2018a, 2018b, 2018c, 2019a, 2019b; MIUR/MLPS, 2015; Parlamento Italiano, 2011, 2015, 2018; PdR, 1999, 2010, 2017).

supporting the local community. For example, one idea that was referred to during the interviews was the development of a web portal form promoting the goods of local craftspeople. Such small ideas may even scale up to national level, as in the case of the MaBasta start-up.

## Box 2. The MaBasta start-up

MaBasta is an initiative aiming to eradicate bullying in schools. A successful start-up, it has been endorsed by famous football players, actors and even Pope Francis.

The image displays three promotional materials for the MaBasta initiative. On the left is a flyer with a cartoon character asking 'Vuoi prevenire e contrastare BULLISMO e CYBER-BULLISMO nella tua classe o scuola?' and promoting the 'MODELLO MABASTA'. In the center is a list of supporters under the heading 'Al nostro fianco abbiamo:', featuring photos of Tom Holland, Roberto Mancini, Alessio Sakara, Nicolò Zaniolo, Papa Francesco, and Presidente Mattarella. On the right is a red poster with the text 'MABASTA BULLISMO IN PUGLIA!' and 'OGNI STUDENTE HA IL DIRITTO DI VIVERE LA SCUOLA CON LA MASSIMA SERENITÀ'. The flyer also includes sections for '3 Premesse', '2 Comandamenti Mabasta', and '6 Azioni'.

More information available at: <https://www.mabasta.org/>

## 3.3. Explicit and implicit learning outcomes

### 3.3.1. Explicit learning outcomes

Policy documents and national curricula have a diverse approach to explicit and implicit learning outcomes related to entrepreneurship competence. The national reform of technical schools (*istituti tecnici*) (PdR, 2010) does not mention entrepreneurship competence in their curricula; only the 'Administration, Finance and Marketing' and 'Tourism' programmes offer economics-related subjects that are in some ways related to entrepreneurship competence.

The national reform of vocational schools (*istituti professionali*) (PdR, 2017) also incorporated entrepreneurship competence as an aspect of their programmes. The curricula include entrepreneurship-related learning outcomes in two of the 11 available qualifications. In the curriculum for Industry and Craft, both sense of initiative and youth entrepreneurship are mentioned; three of its seven macro-competences contain entrepreneurship-related competences: write a project to make a product; prototype models; elaborate, implement and undertake a production plan. Also, the qualification Showbusiness and cultural services mentions ideation, design and production of audio-visual products (MIUR, 2018a). One of its eight high-level competences includes the assessment of costs, expenses and revenues at different stages of production, as well as the ability to offer budget-based solutions from a self-entrepreneurship perspective (MIUR, 2018a).

The 2018 Curriculum for entrepreneurship education details how to nurture entrepreneurship competence and identifies five areas with related knowledge and learning activities (MIUR, 2019b):

- (a) opportunities of doing business;
- (b) idea generation, context and social needs;
- (c) idea-to-business, resources and competences;
- (d) enterprise in action (how to operate in the market);
- (e) a standalone topic on economic citizenship (dealing with financial education).

The 2018 national curriculum on entrepreneurship education also lists a high number of learning outcomes related to entrepreneurship competence, many of them related to knowledge, such as: understand (43), meet with experts (5), reflect (6), explain (3). However, there is also a range of activities that seek to apply knowledge to 'turn it' into a competence, such as: work in groups (13), compare (5), design (5), role-play (4), simulate (3), create (3), brainstorm (1). Overall, although the knowledge and activities reported in the 2018 curriculum vary, they tend to revolve around business creation. The curricular learning outcomes are often delivered through PCTO activities, including work experience.

Including explicit learning outcomes in school documents in apprenticeship schemes is decided by VET providers. In one case, acting 'autonomously and independently to solve electronics-related problems in a workplace setting', the outcome was loosely related to entrepreneurship competence. One VET graduate stated: 'We were given an opportunity to check on the machine's data in real time. Then, my supervisor and I would use another software to manage the production stream to ease the burden of production-line workers'. Another

VET provider offered to the researchers a long list of learning outcomes related to entrepreneurship competence, such as: 'draft a business plan to start up a venture that respects the formal requirements of Italian corporate law; communicate effectively within a work environment to promote ideas and products', and 'value ideas that are creative and meet the demands of a community'. This was because regional policies in this provider's region list a series of contents to be addressed (see Articles 4(c) and Attachment A of *Giunta Regionale della Regione Autonoma Friuli Venezia Giulia* (Giunta Regionale della Regione Autonoma Friuli Venezia Giulia, 2016a)).

In initial and continuing VET, the study found that, even when entrepreneurship competence is developed through specific programmes, explicit learning outcomes directly related to entrepreneurship competence are difficult to find in the documents. In the CVET course, the field research traced learning outcomes such as 'interact in work groups to reach a common goal; apply marketing to communication of food tourism; organise and make a Food Concept event'. A notable exception was an IVET programme that included learning outcomes such as 'creating a start-up; developing personal autonomy and resilience; awareness of one's skills; and trust in the future (through self-entrepreneurship)'.

### **3.3.2. Implicit learning outcomes**

When it comes to implicit learning outcomes, the interviewed policy-makers stressed the development of the learner's autonomy. Also, in IVET, the PCTO guidelines encourage the development of learning outcomes connected to key competences. In this sense, it may be that entrepreneurship competence is 'implicitly' nurtured, as suggested by the VET experts, meaning that there may be competences that are transversal and connected to entrepreneurship competence, for example working in groups to achieve self-organisation and autonomy objectives. Further, the same PCTO guidelines suggest that learners develop competences related to guidance (or self-guidance), which are obviously connected to entrepreneurship competence; in this sense, they may be considered implicit (i.e. they are not explicitly mentioned in the documents).

The most relevant implicit learning outcomes for entrepreneurship competence in apprenticeships are related to learners' direct participation in company activities. The research shows that learning outcomes for employability are often implicit, revolving around understanding how a company works, and the role of an enterprise in society. Also, by taking part in company activities, learners develop implicit learning outcomes such as teamwork and

communication, and in some cases a positive attitude towards the enterprise world.

IVET providers indicated that the implicit learning outcomes for entrepreneurship competence revolve around attitudes loosely related to a sense of initiative. For example, they include 'improve engagement and motivation' and 'participate actively in the community'. Similarly, an interesting example of an implicit learning outcome in a CVET programme refers to the need to 'adapt to an ever-changing world'. When VET providers focus on promoting entrepreneurship competence, implicit learning outcomes are more clearly specified, as they can be a by-product of start-up creation. They include 'learn from own errors and failures; learn to be the main actor of own life; be ready to solve problems without seeking for help at the first difficulty; learning by doing; developing own passions'.

In conclusion, Italy seems to be in a transition from implicit learning outcomes on entrepreneurship competence (not written in the curricula) to explicit ones. This indicates that the competence is progressively gaining status in the curriculum. Even in the case of the six VET providers selected for this study, learning outcomes for entrepreneurship competence were not always present.

### 3.4. Entrepreneurship as a key competence

The study findings indicate that entrepreneurship is mainly perceived as a key competence, e.g. in the 2018 Curriculum (MIUR, 2019b). In addition, given the reduced number of hours dedicated to the competence (for example through PCTO), it is unlikely to be an occupation-specific competence, according to VET experts.

Only in specific cases of self-entrepreneurship is it considered occupation-specific. This applies to a few qualifications of vocational schools (*istituti professionali*) such as 'Industry and Craft' and 'Cultural and Show Business Services', and in technical schools (*istituti tecnici*) to economics- and business-related study curricula (such as the technical course 'Administration, Finance and Marketing'), or information technology courses that prototype new ideas.

Policy-makers and most VET providers interviewed suggested that entrepreneurship was balanced between being a key competence and a competence increasing learners' employability, and was rarely perceived as purely occupation-specific.

## CHAPTER 4.

# Entrepreneurial learning ecosystem

This section describes to what extent the main elements of the entrepreneurial learning ecosystem(s) are in place in Italy and how they help embed entrepreneurship competence in VET.

### 4.1. Policy intervention

Policies fostering entrepreneurship competence can be divided into the pre- and post-2018 periods. Until 2018, mixed approaches to competences and skills dominated; a comprehensive national strategy for embedding entrepreneurship competence in VET was lacking. The competence was pursued implicitly and through 'blanket' policies that did not specifically target VET providers. Since 2018, increased attention has been given to entrepreneurship competence, as demonstrated by the publication of the 2018 Curriculum for entrepreneurship education in upper secondary schools [Educazione all'Imprenditorialità: Sillabo per la Scuola Secondaria di Secondo Grado] (MIUR, 2018c).

Work experience is considered key to acquiring entrepreneurship competence. *Alternanza scuola-lavoro* (ASL) school-to-work programmes have pioneered this approach in VET and general education programmes (ENRI, 2018; PdR, 2005). Introduced in 2005, the ASL was initially conceived as a type of extracurricular activity tailored to learners as a kind of mini-apprenticeship without a contract. Following the 2015 reform of the educational system ('La Buona Scuola'), the ASL became more prominent (Parlamento Italiano, 2015).

In 2018, the ASL was renamed PCTO and became a subject equivalent in the national curricula (MIUR, 2019b; Parlamento Italiano, 2018). Business simulation games are a popular way to introduce PCTO in VET programmes (ISFOL, 2013). However, with the rebranding, the number of hours devoted to PCTO was dramatically reduced. A representative of a regional school office confirmed this and added: 'Sadly, PCTO hours were slashed. But would you believe some schools find it hard to meet the [even reduced] targets? Instead, schools that work well tend to extend PCTO time beyond given limits'.

With the publication of the Curriculum for entrepreneurship education in upper secondary schools (MIUR, 2018b, 2018c), which was later republished together with the PCTO guidelines, a tighter relationship was developed between learners' work experience and entrepreneurship competence. Since 2021, PCTO

has been recognised not only as an opportunity to prepare learners for work, but also as a source of guidance and development of key competences.

## 4.2. From policy to practice

While the education ministry national curricula set high expectations in terms of acquisition of key competences in VET, the reality is somewhat different. Relatively poor results in annual learner tests administered by the National Institute for the Evaluation of the School System <sup>(9)</sup> suggest that a competence-based approach to education has not yet been fully applied in VET. When it comes specifically to entrepreneurship competence, the field research showed that less than 10% of the interviewed experts were familiar with the 2018 national curriculum on entrepreneurship education. This is partly because national reforms are often hindered by budget constraints and carried out differently at local level, given the autonomy of VET providers <sup>(10)</sup>. The turnover of government coalitions and changing priorities as well as the COVID-19 pandemic have added to the challenges in applying the 2018 curriculum. As a result, schools rarely include learning outcomes related to entrepreneurship competence in their 3-year-plans of the formative offer. In this context, Michelotti (Michelotti, 2021) analysed the plan of the formative offer in the schools of the Trentino Region (considered one of the most virtuous examples in education). Her analysis reveals that, while there is still resistance to introducing the term entrepreneurship in schools, those schools that provide specific projects take a key competence perspective and develop entrepreneurship competence in a broad way (applying a broad definition).

The interviewed VET provider representatives showed a general unawareness of the 2018 curriculum, even though it is attached to the PCTO guidelines (MIUR, 2019b), which they knew well. Hence, policy documents on entrepreneurship education are detached from what the study observed in practice, especially in IVET programmes. Even the 4-year course on self-entrepreneurship at the Costa was prepared mainly without considering the policy. The same accounts for Lancia and Primiero. At the Spallanzani, the CVET course is linked to the regional policies (it is delivered in cooperation with a

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<sup>(9)</sup> For example, numeracy test at upper secondary level in 2021.

<sup>(10)</sup> For example, pedagogical provisions from the education ministry are often treated as 'guidelines' and not 'orders to be followed' by VET providers.

regional VET provider, IAL Emilia Romagna) rather than to national policies on entrepreneurship.

Policy-makers and social partners agree that availability of funding plays a key role in translating policies for promoting entrepreneurship competence in practice.

In 2016, with the introduction of compulsory school-to-work programmes, which are key to nurturing entrepreneurship competence, the Parliament authorised expenditure of EUR 100 million for their implementation (Parlamento Italiano, 2015). However, the funding was later limited to cover the minimum number of mandatory hours (Parlamento Italiano, 2018).

In 2017, the education ministry launched a call for entrepreneurship projects in upper secondary schools (MIUR, 2017). One in four eligible schools have applied for grants (INDIRE, 2017). Around 1 900 projects were approved and received grants up to EUR 18 000 each. Priority was given to schools in underdeveloped regions; funding was not IVET-specific, but all VET schools were eligible to apply. The running of projects was delayed with the spread of COVID-19 (MI, 2020) and many were still not completed in 2021.

In addition, scattered initiatives are carried out by local chambers of commerce, which, depending on availability, offer grants (not exceeding EUR 3 500) for running 'business simulation games' (*imprese formative simulate*) (e.g. Camera di Commercio di Bergamo, 2018). Not all funding specifically targeted IVET.

In the State VET, public funding often follows a top-down approach, and initiatives flourish when there is funding available. However, such initiatives depend on the teachers' willingness (it is not compulsory, and they receive little extra money) and ability (to present a compelling project). Regional VET is mostly offered by private entities that need to raise money for new initiatives also through sponsors.

### 4.3. Community networks

Network agreements are a crucial element of the entrepreneurial learning ecosystem. They were originally introduced in the national legislation with the purpose of expanding the offer of the education system (PdR, 1999) but also help reduce the gap between policy and practice and act as a medium between learners and their communities, including companies, agencies and other partners.

In 2013, a survey commissioned by the Italian employers' federation (*Confindustria*) collected evidence from 32 major school-business networks,

mostly coordinated by unions of entrepreneurs. The publication with best practices related to the network between schools, including VET providers and enterprises (Il Sole 24 Ore, 2013), showed the interest of social partners in nurturing entrepreneurship competence.

In 2015, the Buona Scuola law outlined the need to foster an 'educational ecosystem' involving families, companies and other social partners (Parlamento Italiano, 2015). It also entailed (Article 1, Section 60) the involvement of local communities in improving pedagogies and creating technical-professional hubs (*poli tecnico-professionali*) managed by the Local Departments of Education (*Uffici Scolastici Territoriali*). Further, it introduced 'territorial workshops' (*Laboratori Territoriali*), that is, facilities such as labs or classrooms, set up by either schools, companies or other types of VET providers, for delivering IVET or CVET (MIUR, 2015, pp. 36-38). The workshops are not focused on entrepreneurship *per se*, but constitute one of the few opportunities for schools (including VET providers) to introduce entrepreneurship competence at the curricular level: they give learners opportunities to understand how to start a business and receive career guidance.

In addition, the education ministry, based on several pre-existing local projects, has suggested introducing 'master craftsmen' in VET, i.e. skilled professionals teaching learners a craft (e.g. mosaic, sculpture, woodcarving). The ministry also recommends activities that could transform VET providers into full-fledged business ventures, such as 'farm-schools' or 'didactic restaurants' (MIUR, 2015, pp. 38-39). The PCTO guidelines follow the same approach: the creation of local networks of schools (including VET providers) and business is recommended, but with no further specific instructions (MIUR, 2019a).

Since 2020, according to VET experts, there has been an acceleration in regional policies that promote the building of local entrepreneurial learning environments. They are mostly connected to the districts in northern Italy. The most notable example is that of Emilia-Romagna; this region promoted an alliance between research institutes, industries, universities, CVET providers (ITS foundations), regional agencies and, to a lesser extent, technical schools (*istituti tecnici*). Some noteworthy exceptions to northern clusters are in the centre of the country: Tuscany (textile, goldsmith industries), Marche (automotive industries) and Lazio (chemical and pharmaceutical industries); Abruzzo, with the *Grandi Imprese* system, deals with automotive (Abruzzo, 2020). In the south, some initiatives are reported in Apulia and Sicily. The policy experts agreed that an entrepreneurial learning ecosystem is particularly well developed in northern Italy.

Territorial Hubs [*Poli Formativi Territoriali*] and Territorial Workshops for Employment [*Laboratori Territoriali per l'Occupabilità*] have constituted the first-choice type of associations since they put CVET and IVET providers at the centre of the network. The education ministry enables this type of association and the regions, through local initiatives, initiates them. These hubs receive funding for their maintenance and project development from central government, the region, local associations and industries. The most advanced hubs tend to be in subregions that enjoy a long-running tradition of connecting companies and schools. One school director noted: 'We enjoy a tradition of workshops and close relationship with the local companies, [...] in other words, we are local educational strongholds [*presidi di formazione nel territorio*] and [companies] have enriched us through the years.'

#### 4.4. Local ecosystems

Italian VET is characterised by a degree of autonomy of VET providers (*istituti professionali, istituti tecnici*) (PdR, 1999). Other VET providers comply with regional laws, recognised by both the education and the labour ministries as important actors in compulsory education (MIUR, 2011a; MIUR/MLPS, 2011). While apprenticeship contracts are regulated by the labour ministry, the organisation of apprenticeship programmes is the responsibility of the regions (see art. 43 (PdR, 2015)).

The resulting national picture varies, which makes it difficult to argue the existence of national trends, despite the intentions of policy-makers. This means that national visions are not binding. For example, as a school director reported, although competence-based assessment is mandatory, schools are free to select competences they want to focus on, depending on local educational and training needs.

Local entrepreneurial learning ecosystems are made up of a series of learning environments fuelled by ground-level initiatives. As field research showed, there is hardly a one-to-one relationship between policies and actual implementation. Due to the peculiar nature of community networks (such as territorial hubs and workshops) and the autonomy of schools and VET providers, local partners involved in nurturing entrepreneurship competence rely on locally affordable resources rather than top-down orders.

The field research showed that the ministry guidelines are often partially applied because providers may adopt their own strategies on how to pursue learning outcomes. Ground-level learning environments may appear as ecosystems partly detached from the national one. Hence, as suggested in the

policy documents, the mandate to create learning ecosystems has put VET providers at the centre of broad community networks that blur the difference between ecosystems and single environments.

This is evident in cases such as that of Costa, Facchinetti, Lancia, and Primiero. At Costa, tasks with entrepreneurial challenges force learners to build their own network for the purpose of fundraising, marketing and distribution; thus each new initiative creates a whole new environment, which, in turn, acts as a learning ecosystem: it is students who reach out for locally available affordances rather than relying on specific national policies. At Facchinetti and Lancia, the learning ecosystem predates national policies and is grounded in a broad network of local companies that are eager to support schools and foster competences in their students. Finally, the case of Primiero is a further example of how entrepreneurship education programmes could be organised without reference to specific national policies. In all the above cases, the most successful programmes resulted from local initiatives on behalf of school staff and social parties, with the Ministry of Education playing a small role (either because no funding was available or because teachers had received no specific training and, occasionally, were not even aware of the newly approved policies for entrepreneurship competence). In sum, the broad lack of integration between such plurality of learning environments suggests an Italian entrepreneurial learning ecosystem in the making but not fully achieved.

The field research showed that approaches taken by VET providers vary from having a limited to an extended ecosystem. The learning ecosystem depends on the entrepreneurship programme delivered at each provider's premises, and it is thus difficult to generalise, even within the diverse offer of the same provider. For example, with an IVET provider, each start-up activates a different learning ecosystem depending on the product or service offered; one can be mostly comprised of schools that would like to implement the model on offer and the School Regional Office, while another may include local municipalities as the start-up specialises in applying for tenders. As highlighted by a class coordinator: 'The *next* level was achieved when our learners began presenting their management tools to learners in other schools. As they encountered their peers, a network was created'. This shows that the most fruitful networks are the ones set up by learners themselves.

Primiero's ecosystem is linked to the Federation of Trentino Cooperatives, which makes teaching materials and experts available; the local Agency to Promote Tourism, which gives learners a task to complete, and local cultural associations provide expertise on how to run an exhibition.

**Box 3. Example of an extended local entrepreneurial learning ecosystem**

Lancia is an example of a vast (extended) entrepreneurial learning ecosystem, which includes:

- (a) the School Regional Office which integrates vocational and technical school careers with regional VET;
- (b) the Region which regulates curricula;
- (c) Foundations which provide tools for marketing and consultancy services;
- (d) service clubs which provide funding;
- (e) companies which provide work experience (within PCTO schemes), hoping to eventually hire learners once they graduate;
- (f) the Metalworkers Association, a century-old guild of automotive, mechanical and smelting factories, which donates funds so that schools (and VET providers) run their entrepreneurship projects – all of which try to inspire learners to emulate the most renowned entrepreneurs of the valley.

Entrepreneurs and tradesmen take part in the ecosystem through their trade unions (Confartigianato, Confindustria, CNA).

VET provider Spallanzani stands between Lancia and Primiero. The main partner is IAL ER, the regional VET institution providing expertise and teaching staff; then, there are the companies where learners undertake work experience, as well as local consortiums providing further experts and support for promoting local food and wine products.

As VET providers exploit the above tools to create networks of social partners and involve communities in the learning process, they sidestep the lack of specific funding dedicated to nurturing entrepreneurship competence (Operational Programme for Education funds constituted the last major funding opportunity for entrepreneurship competence projects). In the case of the State IVET (*istituti professionali*) and technical schools (*istituti tecnici*), curricula are national, but applying PCTO is the responsibility of individual providers. Contrarily, CVET providers, as well as apprenticeships and regional IVET, follow regional guidelines to embed entrepreneurship competence in external education (i.e. classes that take place outside the workplace), but the content of the modules is up to individual teachers and providers.

With such diverse scenarios, the fieldwork revealed a plurality of pedagogies and learning outcomes across VET providers. At a general level, the interviewed VET learners and graduates showed self-confidence and an ability to learn from failure and to face problems with a positive attitude. More specific outcomes were abilities and skills related to: drafting a business plan; creating a network; scheduling work; team-working; managing a budget; using marketing techniques;

realising a concept-based event; meeting a challenge; and starting a company. Such outcomes are achieved through brainstorming, creation of a prototype, creation of a mini-company, face-to-face lectures by teachers and/or experts, pitches, presentations, project work, reflective journals, seminars, simulated workplace environment, SWOT analysis, visits to companies. Assessment, if any, is carried out by teachers themselves or a board of social partners, or is equated to the success of a given company started by learners or graduates.

The variety of the above approaches reinforces the view of the Italian entrepreneurial learning ecosystem being non-linear and even fragmented. Also, given that the selection of VET providers for the study was based on their prominence in nurturing entrepreneurship competence, other, less performing providers in different parts of the country are expected to be even more varied in their approaches.

#### 4.5. VET characteristics nurturing entrepreneurship competence

VET has diverse features that support the nurturing of entrepreneurship competence. An important element is that VET enjoys good connections with industries and professional networks. VET providers need to develop ties with local companies; for instance, to ensure apprenticeship places for their learners. Former VET graduates who are company owners or managers often return to the school from which they graduated to seek employees, offer placements for work experience, or propose projects that bridge the gap between school and work.

Additionally, IVET teachers may run a private practice (for example as engineers and architects), thus bringing their network to the VET provider and learners. Further, a school director pointed out, vocational education makes use of technical assistants, who help VET teachers in the workshops. Albeit generally younger than VET teachers, they sometimes have previous experience in the industry. At CVET, having a relevant background in the industry is a prerequisite for teachers to be recruited (PCM, 2008). Similarly, teachers working in regional IVET may have significant experience in the industry.

Specific VET qualifications lead to private practice (such as hairdressers) or provide the ideal ground to develop innovative ideas (such as IT, electronics). Further VET includes business-related qualifications such as 'Tourism', 'Administration, Finance and Marketing' and 'Commercial Services'. Finally, a school director suggested that the hands-on nature of entrepreneurship is particularly suitable for VET learners, since through entrepreneurship they can learn by doing.

## CHAPTER 5.

# Support mechanisms, methods and tools to nurture entrepreneurship competence in VET

### 5.1. Methods, tools and approaches

As mentioned above, the PCTO guidelines and the attached Curriculum for entrepreneurship education in upper secondary school [*Educazione all'Imprenditorialità: Sillabo per la Scuola Secondaria di Secondo Grado*] (MIUR, 2018b, 2018c) remain the main vehicle for nurturing entrepreneurship competence in upper secondary education, including VET. The guidelines include two methods and one pedagogical approach.

One of them is the simulated company (*Impresa formativa simulata*) method that promotes problem-solving, learning by doing, groupwork and role-playing. Learners reproduce the working model of a real enterprise in a workshop, thus learning how to manage it. All the training enterprises are connected through a simulation centre, and buy services and goods from each other, thus potentially simulating any entrepreneurial activity. An example of a simulated company is Simulimpresa in Ferrara, which has been listed in the best practices for entrepreneurship education in Europe (see Komarkova et al., 2015)). Another example is an initiative in the Trentino region involving the simulation of creating a social cooperative.

Junior Achievement's enterprise in action (*Impresa in azione*) allows learners to manage real enterprises by developing a product or service. They undertake all the activities, from developing an idea to implementing it (MIUR, 2019b, p. 44). This is probably the most widespread and long-standing approach for embedding entrepreneurship competence in VET.

Service learning (pedagogical approach) allows learners to learn by doing. They provide a service to the local community and learn by confronting real-life problems. Recently, the National Institute for Documentation, Innovation and Educational Research (INDIRE) coordinated a national experiment on this pedagogical approach, put schools in a network, and offered guidelines to them (INDIRE, 2020).

The study suggests that only a minority of VET providers develop entrepreneurship competence in a sustainable way; most follow a do-it-yourself approach, with pilots not sustainable over time. The methods, tools and

approaches observed at the VET premises vary: lectures, participation in company activities for apprenticeships; entrepreneurial project work for CVET; simulation of creation of a social cooperative, start-up creation, competitions and prototyping. Below are some examples of interesting practices.

**Box 4. Example of virtual cooperatives at Primiero Institute**

In 2020/21, simulation of a virtual cooperative was implemented at Primiero Institute (IVET). This was an interdisciplinary initiative involving three subjects: business studies, economics and literature. Learners attending grades 11 and 12 of the 'Tourism' and 'Administration, Finance and Marketing' programmes simulated the creation of a social cooperative to design an excursion to the three Tibetan bridges in the neighbouring valley.

As revealed by a focus group with learners, the initiative required teamwork skills; for example, learning how to manage conflicts. During the discussion, a learner stated: 'We've got to learn how to work with people. Paying attention to different ways of thinking and reaching a compromise, acceptable by everyone ... that is, finding an agreement, but without excluding anyone'.

The institute's evaluation grid lists the learning outcomes related to different subjects. Business studies (Marketing and Accounting) had the following outcomes: 'learn to commit to one's role, meet deadlines, work in a team, propose solutions, be constructive, participate in formative events and final feedback'. The Economics-related learning outcomes included helping learners be aware of the values of a social cooperative and how it works, and learning to solve problems. As part of the Italian language course, learners had to fill in a reflective journal and present its contents to an audience.

**Box 5. Acquiring entrepreneurship competence at Piedmont workshops**

At the Lancia VET provider in Piedmont, learners develop entrepreneurship competence through workshops. These activities are partly developed during PCTO and partly during the rest of the curricular hours. In the Toy Clinic, learners manage a workshop dedicated to repairing toys upon request from random customers.

The title of the second initiative is 'Discovering Valsesian Characters' [*Alla scoperta dei personaggi Valsesiani*]. It is a competition linked to successful entrepreneurs of the surrounding area. Drawing on their example, learners gather in teams, appoint a teacher as their tutor, then develop a prototype for a challenge issued by a joint committee of foundations, companies and trade unions (the school benefits from a vast entrepreneurial learning network). According to the teachers, the prize for 'best design' contributes strongly to the success of the project, which also increases learners' awareness of intellectual property.

**Box 6. Start-up creation programme in Apulia**

The Costa Institute is led by the outlier Daniele Manni, winner of the 2020 Global Teaching Award. The start-up creation programme is delivered as part of the technical programme 'Administration, Finance and Marketing' and within the subject of Informatics in the first biennium. It expands from brainstorming to designing and implementing the idea (including developing a website and marketing on social networks).

Sometimes the learners' ideas 'die' and are replaced by new ones. While this programme is curricular in the first biennium and done by the whole class, the learners can develop their own ideas (and passions) in small groups as extracurricular activities in the following triennium. The most successful start-ups survive after learners complete their diploma and take on a full-time job, such as in the case of the successful MaBasta.

The initiative was so popular that an experimental 4-year course on 'Self-entrepreneurship' is currently running. It includes other compulsory courses such as debating, while most subjects are assessed through public speech (for example through presentations). The curriculum has many hours of co-teaching where the language teacher assists the disciplinary teacher.

**Box 7. Circular economy for food programme in CVET**

The Spallanzani CVET provider delivers an 800-hour CVET course (in partnership with the regional VET provider) on valuing local food and wine, based on a circular economy and the United Nations' millennium goals to pursue sustainability. This programme appears to have little to do with developing entrepreneurship competence, but includes interesting project work throughout the course.

Coached by a former graduate, the learners brainstorm, select the best project ideas, and elaborate and write an abstract in groups, which is progressively enriched. In doing so, they apply what they have learnt in class. This group project work is the main topic discussed during the final exam and is considered preparation for the business plan which learners may seek to carry out after graduation.

## 5.2. Formative and summative assessment of entrepreneurship competence

Given that this study could not find mechanisms for impact evaluation, the question 'How do formative and summative assessments of entrepreneurship competence support its development?' is answered first from the policy point of view, including evaluation, assessment and certification, and then from the VET providers' point of view, where the study inquired about formative and summative assessment. On evaluation, the self-evaluation report provided by INVALSI helps schools (including IVET) draft a plan where they identify their areas of

improvement. Although the report contains questions on how schools cultivate key competences in learners, given school autonomy there is no obligation to deal with entrepreneurship competence.

While the Curriculum for entrepreneurship education in upper secondary school [*Educazione all'Imprenditorialità: Sillabo per la Scuola Secondaria di Secondo Grado*] (MIUR, 2018b, 2018c) does not include any specific suggestions, the PCTO guidelines provide hints on how to make the PCTO experience fully competence-based, especially with regards to the assessment:

- (a) The student is at the centre of the learning process: is involved in designing the experience (also in setting the goals) and, at the end of the path, carries out a self-assessment, for example through a module that is provided as an annex to the PCTO guidelines (pp. 66-68) or through a learning journal.
- (b) The PCTO is interdisciplinary: all teachers appointed to the same class of students (i.e. the full class council) are involved in designing each path, and each teacher should evaluate it for areas that pertain to their subject.
- (c) The guidelines suggest authentic assessment tasks, expert trials and project work.
- (d) The guidelines recommend assessment that uses multiple sources of information, including rubrics, scoring grids, learning diaries and digital portfolios.
- (e) Assessment of both process and product is recommended (this comes closest to formative or summative feedback, neither of which is mentioned in the guidelines).

Since most entrepreneurship programmes are delivered during PCTO, the visits to the IVET providers' premises did not fully confirm the scheme suggested by the PCTO guidelines. Formative assessment was not provided in a structured way as feedback (for example, the sandwich technique), and subsequently the student's self-assessment (as well as peer assessment) part was missing. The study revealed that the use of scoring grids (instead of assessment rubrics) predominated <sup>(11)</sup>, which indicates that a competence-based approach is not fully operational.

To finalise assessments, surveys of IVETs such as Lancia and Primiero revealed use of scoring grids for their educational activities. Annex 3 shows an

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<sup>(11)</sup> Scoring grids point to a psychometric view of assessment, where testing for knowledge predominates (see Baartman, Bastiaens, Kirschner, Van der Vleuten, 2007; Baartman et al., 2007). By way of contrast, in assessment rubrics the students' overall performance is assessed, thus following a competence-based approach to education (Ronchetti, 2017).

example with one criterion (self-organisation) loosely related to entrepreneurship competence as a personal sense of initiative. The study revealed assessment rubrics only for work tutors during learners' PCTO, the criteria being self-organisation, participation and respect of safety norms.

The Primiero Institute offered a summative assessment of the creation of a virtual cooperative with portfolios collecting evidence on the whole experience, multiple-choice tests on how to set up a cooperative, and group presentations on the idea. The experience was assessed in literature and in the technical subjects through scoring grids. Formative assessment was given as oral feedback, sometimes from industry experts.

At the Costa, entrepreneurship is assessed mostly formatively by means of formative feedback; in the first biennium (when they are compulsory), the entrepreneurial activities occasionally contribute to the subject taught by Daniele Manni (IT), and therefore were seldomly assessed summatively. The use of assessment rubrics was not observed.

The CVET course at the Spallanzani provided the most interesting assessment forms. The project work was assessed in diverse ways: 1) formatively, with blind peer assessment of the idea to be developed, and feedback from a graduate who did not impose their opinion (when the coach felt something was missing, the student had to justify the choice they had made); 2) summatively, during the graduation exam, by an external commission nominated by the region. The products assessed were diverse (a report, oral presentation, and a 'Concept Food event' where the learners had to turn their food concept into a menu), thus showing a fully competence-based evaluation programme. This programme, however, used scoring grids instead of rubrics.

In the case of apprenticeships, at the IAL FVG, the courses on entrepreneurship were assessed through multiple-choice tests, oral presentations and case studies. A former apprentice described the formative assessment at IAL FVG as follows: 'It is not tightly scheduled. You submit a project, and it is not necessarily assessed the following week; sometimes you receive corrections on the spot and can immediately improve your paper or plan'. This was later confirmed by an apprenticeship coordinator.

At the Facchinetti, entrepreneurship competence for employability was not directly assessed. This VET provider, however, made use of a curious assessment tool, between a scoring grid and assessment rubrics, where the descriptions of the level did not always correspond to the criteria, and the highest levels (3 and 4) had often one common descriptor. In this document, one criterion related to the learner's problem-solving ability and self-control, another partially

related to teamwork ability and ability to follow instructions, while the other five criteria related to technical skills.

### 5.3. Expected and acquired learning outcomes

The learners (and alumni) were asked what they thought they had learnt during the path and if they would now be able to apply this alone. They were mainly questioned in the teachers' absence so that they could speak out. They were all glad of the opportunity to discuss with the researchers what they had learnt; pedagogically, this exercise was useful for the students as well, since these group reflections helped the acquired learning to emerge. Among the first learning outcomes that the students pointed to was learning to work in groups.

During the simulation of a social cooperative, the VET learners at Primiero learnt how to: organise things to meet deadlines; manage teams to reach goals; make decisions by comparing different options and listening to others; cooperate for a common goal by dealing with the strengths and weaknesses of team members; and perform a SWOT analysis. The teachers believed that the learners had learned a lot but lacked critical awareness, which suggests that a self-reflection element (including self- or peer-assessment) was missing.

At the Spallanzani, the learners learnt to brainstorm on a food idea; select best ideas to be developed into a written proposal during group work; perform a SWOT analysis of an idea; market an idea/product through storytelling in the local area; and apply the knowledge learnt during the course to develop a group idea. Such outcomes align with the course programme.

At Lancia, VET learners learnt to team-work to find a solution to a challenge and organise people and resources. This only partially met teachers' expectations, which were mostly based on employability and the acquisition of technical skills that matched the job role for which learners were being prepared.

At Costa, the study found learning outcomes most relevant to entrepreneurship competence: to face change and problems with a positive attitude; to present an idea in front of an authentic audience with confidence; to brainstorm ideas, starting from problems and issues; to develop an idea for a micro-company/start-up; to work in groups to reach set objectives; to reflect and learn from failure; to design an internet site to market an idea (also through social media); and to create an entrepreneurship network to develop one's own start-up project.

The learners showed impressive self-confidence and ability to present themselves and communicate with us. They indicated that they had developed these remarkable skills through debates (which are compulsory in the

experimental programme) and the many presentations they had delivered for each subject. It may be that debates and assessment through presentations are particularly suitable for developing entrepreneurship-related attitudes (self-confidence) and abilities (public speaking), provided they are part of a larger entrepreneurship programme. One teacher, who fully acknowledged these learning outcomes, believed it was important that students acquire autonomy and self-driven motivation to pursue their passions. One of his students said he and his classmates kept working on their micro-enterprise because they were getting tangible results, not grades: 'We were looking for a shared interest and we understood we were all engaged in this [...]. We created our school's first start-up'.

In the case of apprenticeships, both employers and learners found it sometimes difficult to think about entrepreneurship competence beyond the technical skills acquired during participation in company activities. As a former apprentice put it: 'You get to take care of what your employer wants'. Some of the skills the students at Facchinetti's acquired were understanding how a company works, cooperation and communicating effectively with colleagues in a work environment. At IAL FVG, the apprentices learnt to understand role and duties in the work environment, communicate with others, be aware of how a business functions; and manage daily life and schedule. Company tutors, on the other hand, focused on learners' motivation to stay at the company after graduation.

## 5.4. Main challenges and opportunities

Based on the interviews with the VET experts, several challenges and opportunities to nurturing entrepreneurship competence, especially in IVET, were identified.

### 5.4.1. Interdisciplinarity in pedagogy

A disciplinary and knowledge-based approach to teaching prevents interdisciplinarity, which is necessary to nurture key competences, including entrepreneurship. A reform of the curriculum beyond a disciplinary knowledge-based approach to competence might be an opportunity for more flexibility and space for optional subjects, multidisciplinary projects and co-teaching. The nurturing of entrepreneurship competence may also benefit by being compulsory or integrated in the curriculum and therefore assessed; for example, during the final exam for obtaining a diploma.

#### **5.4.2. Teacher mindset, experience and training**

According to policy-makers, entrepreneurship competence is not covered enough in initial and in-service teacher training. Other research participants observed that teachers rarely have significant experience in the business world or industry; the same is true for teacher training on entrepreneurship. Only a few of the interviewed teachers received training on entrepreneurship, according to the field research. As a result, many VET teachers do not take enough care in nurturing entrepreneurship competence in their teaching. Teacher recruitment is rigid and follows rules that value mainly their academic qualifications and years of service. This may discourage experts from the industry to apply for teaching positions. Also, teaching is not often highly esteemed as a profession (salaries are relatively low). One teacher stated: 'Lack of experience outside the school made it hard [for me] to train other teachers to deliver entrepreneurship competence classes'. A teacher at Costa exemplified the challenge. In his point of view, teaching entrepreneurship is difficult to learn, since teachers find it difficult to select learner ideas that have a chance of success, i.e. that are feasible, for example in terms of required equipment and money. He also said that sometimes his young learners suffered from scarce consideration by adults; when they went to local businesses to propose their products or services, they were not taken seriously. It was also difficult to run start-ups in schools as they could not make a profit. However, entrepreneurship was about finding solutions to problems, he said, so these challenges should be addressed with an entrepreneurial mindset. Accordingly, a solution to the problem was eventually found: 'We had to find a solution to ensure students would profit from their work. On the one hand, we did not want to determine an early access to the workforce, out of respect for the youth; on the other hand, however, it was a pity they could not compete with other actors in real-life scenarios. That is why we support their ideas through a cooperative society, which acts as an incubator and might help them profit through their ideas and implementation. Additionally, whenever they [learners] get recognition – for example, through an award – they feel more engaged'. It should be noted, however, that the above is not a common approach; teachers rarely take risks and develop incubators for learner ideas.

All the interviewed social partners, VET and entrepreneurship experts suggested that the development of entrepreneurship as a key competence requires a turnaround regarding teachers and their training, the curriculum, entrepreneurship as subject, the collection of good practices, and the role of industry experts in schools.

A new type of contract for teachers beyond the current 18-teaching-hour contract – where (similarly to other European countries) teachers are paid for

their overall service in the school (i.e. 40 hours per week) – whereby they could, for example, design and deliver interdisciplinary projects, might help improve the situation. With such a contract, teachers would be more incentivised to move away from teaching their subject using a knowledge-based approach towards applying an interdisciplinary approach (European Commission et al., 2018). Several teachers at Primiero believed that their national contracts should be revised so that VET providers could allocate time for interdisciplinary projects.

Also at Primiero, teachers suggested that making teacher recruitment more flexible could help to bring in more professionals from industry. A part-time teacher with experience as an architect observed: ‘I have my own business and know how things work in the industry. This is what makes me able to tackle things that are useful and strategic for students and challenge them with real-life problems’.

A teacher at Costa suggested training courses for teachers to develop an entrepreneurial mindset, as well as enabling VET providers to charge for commercial purposes. He also recommended that entrepreneurship be included as a separate subject, starting from middle school.

Other solutions may be applied immediately by VET providers, including personalising the national curricula and allocating more time at the beginning of the year to empathise with learners and to know their passions, which would then be embedded in the lessons.

Participation in competitions by teachers is important too. According to a teacher at Costa, the aspiring entrepreneurial teacher should enter as many competitions as possible, because, once acknowledgments started arriving, it was easy to gain autonomy and respect in the school as well as outside, which supported the teacher’s entrepreneurial activities. He also recommended that all teachers use social platforms such as LinkedIn to search for new contacts, as this was the most effective way to get in touch with professionals and companies, and most of the time the contacted people were keen to cooperate.

#### **5.4.3. Extracurricular activity**

Based on this study, developing entrepreneurship as a key competence is perceived as extracurricular <sup>(12)</sup>, an extra burden for teachers and learners. Teachers promote entrepreneurship competences on a voluntary basis, and their initiatives rely on goodwill and are not sustainable in the long run. As a VET expert put it: ‘Currently, competence-based education is mostly based on

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(12) Not falling within the scope of a regular curriculum.

extracurricular activities, managed by secondary VET teachers during their overtime’.

Field research at VET provider level, including companies offering apprenticeships, also revealed concerns that sometimes companies fear teaching entrepreneurship since it may encourage their apprentices to start their own venture rather than staying as employees.

#### **5.4.4. Regional policies**

Policy experts found it challenging that each region develops its own VET policy (and entrepreneurship competence) independently, thus creating 20 VET regional systems in Italy. However, in the National Plan for Recovery and Resilience, reform of regional VET is being discussed with the aim of harmonising the different VET regional legislations.

### **5.5. Digitalisation and the pandemic**

VET providers suggested that digital technologies generally help in the entrepreneurial teaching and learning activities, making the subject more appealing to young learners, and helping to market ideas. At most VET providers, learners learn how to market an idea through social media and to use software for presentations.

However, according to two VET providers, digital technologies may not have an impact on the delivery of entrepreneurship competence. Digital entrepreneurship is sparse and, at best, characterises specific VET courses, where digitalisation represents the link and the starting point for developing an entrepreneurial culture. This was reinforced by data collected in the field; for example, for the interviewed apprenticeship providers, digital entrepreneurship was not in focus.

There was a special focus on digital entrepreneurship in one school where the interviewee was a teacher of information technology teaching start-up creation, where learners were expected to be able to create a website, market their idea through social media, and use graphics to illustrate it. In this context, the use of the internet and social networks turned out to be an effective way to target costumers at low expense. The teacher stated: ‘Information technologies are inseparable from entrepreneurship practice, our second language. They help us set up meeting times beyond classes. After all, you cannot be entrepreneurial only 2 hours a week’.

Social partiers noted that the pandemic promoted a way of working similar to that of industry, with shared files, cooperation, use of the cloud, and work by

projects. The research gathered at the VET providers found unanimously that, from the pedagogical point of view, the pandemic boosted teachers' digital competences (as well as that of learners). At the same time, VET providers agreed that the pandemic made it more difficult to run entrepreneurship programmes, since these were delivered in cooperation with external partners.

Also, school directors unanimously blamed the COVID-19 crisis for having changed the education priorities, leading to the challenge of implementing distance learning, rather than applying the 2018 Curriculum for entrepreneurship education, and changing the school formative offer. By way of contrast, as a general remark, COVID-19 did not seem to have a significant impact on the apprentices, who went to work regularly, and attended courses online. At the IAL FVG, distance learning was even seen as an advantage for the learners as they did not have to commute.

## CHAPTER 6.

# Conclusions

This study involved a selective case sampling of VET providers; the field research findings should not be generalised. Since 2018, a curriculum promoting entrepreneurship competence in all State secondary education, including IVET, is in place, supported by compulsory PCTO hours for nurturing key competences through work-based learning. There is, however, a gap between policy and practice at VET provider level.

At the time of drafting this report, most State IVET providers had only started embedding entrepreneurship competence in their curricula. Entrepreneurship competence is not specifically addressed in the IVET final graduation examination. The education emergency provoked by the COVID-19 pandemic, with the sudden switch to online learning, is blamed by teachers and school directors for changing the education priorities and hampering the embedding of entrepreneurship competence in curricula.

Regional VET (IVET, CVET and apprenticeships) enjoys more flexibility; industry experts can teach, and teachers have contracts that allow them to design and deliver multidisciplinary teacher/training activities beyond the teaching hours. However, the situation varies by region and overall regional policy documents on entrepreneurship competence are scarce. In State IVET, the flexibility of teacher employment contracts is limited to their subject teaching hours. In combination with teacher views that teaching entrepreneurship competence is an extracurricular activity, this often makes it difficult to nurture the competence.

This report ends with a positive note coming from the few VET providers visited; the study found motivated school directors, company managers, teachers and work tutors who develop entrepreneurship competence in learners throughout Italy. On teaching and learning activities and assessment, this study found that both debating and giving presentations in front of a class or authentic audience (also as a form of assessment) contribute to nurturing entrepreneurship competence, provided that these activities are part of a larger entrepreneurship programme. It also found that advertising learners' ideas and designs through press releases attracts the interest of businesspeople and gains their support. When learners enter as many competitions as possible, acknowledgments start arriving and the teacher gains respect and autonomy, which promotes entrepreneurial work. In this regard, professional social networks are a useful tool for liaising with new partners.

## Acronyms

ANPAL	National Agency for Active Labour Policies [in Italian: <i>l'Agenzia Nazionale Politiche Attive del Lavoro</i> ]
ASL	school-to-work programme [in Italian: <i>Alternanza scuola-lavoro</i> ]
Cedefop	European centre for the development of vocational training
CVET	continuing vocational education and training
ENRI or ICEE	Innovation cluster for entrepreneurship education
EQF	European qualifications framework
leFP	vocational education and training [in Italian: <i>Istruzione e Formazione Professionale</i> ]
IFTS	higher technical education and training [in Italian: <i>Istruzione e Formazione Tecnica Superiore</i> ]
INAPP	National institute for public policy analysis [in Italian: <i>L'Istituto Nazionale per l'Analisi delle Politiche Pubbliche</i> ]
INDIRE	National Institute for Documentation, Innovation and Educational Research
INVALSI	National Institute for the Evaluation of the Education and Training System [in Italian: <i>Istituto nazionale per la valutazione del sistema educativo di istruzione e di formazione</i> ]
ISCED	International Standard Classification of Education
ISFOL	Institute for the development of vocational training for workers
ITS	higher technical institutes [in Italian: <i>istituti tecnici superiori</i> ]
IVET	initial vocational education and training
JA	Junior achievement
JRC	Joint research centre
MI	Ministry of Education [in Italian: <i>Ministero dell'Istruzione</i> ]
MIUR	Ministry of Education, University and Research [in Italian: <i>Ministro dell'istruzione, dell'università e della ricerca</i> ]
MLPS	Ministry of Labour and Social Policies [in Italian: <i>Ministero del Lavoro e delle Politiche Sociali</i> ]
PCM	President of the Council of Ministers [in Italian: <i>Presidente del Consiglio dei Ministri</i> ]
PCTO	Pathways for transversal skills and orientation [in Italian: <i>Percorsi per le competenze trasversali e per l'orientamento</i> ]
PdR	President of the Republic [of Italy] [in Italian: <i>Presidente della Repubblica</i> ]
SWOT	strengths, weaknesses, opportunities and threats
VET	vocational education and training

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## Annex 1. Participating VET providers

Name	Region	Type of VET (fieldwork focus)	Courses inspected	Entrepreneurship programmes
IAL FVG	Friuli-Venezia Giulia	Apprenticeship schemes	n/a (individual study plans are tailor-made depending on industry sector and company demands; entrepreneurship programmes are always included)	Name of course modules on entrepreneurship: Enterprise creation; Proactivity in communication and teamwork; Creativity in problem-solving; Citizenship rights and law; Basic financial tools; Enterprise communication
I.C. Primiero	Autonomous Province of Trento	IVET delivering technical education ( <i>istituto tecnico</i> )	Courses in: Tourism; Administration, Finance, Marketing	Simulated Social Coop
I.I.S. Lancia	Piedmont	IVET delivering vocational ( <i>istituto professionale</i> ) and technical education ( <i>istituto tecnico</i> )	<b>Technical education:</b> Mechatronics; Chemistry, Materials, and Biotechnologies; <b>Vocational education:</b> Course of Maintenance and Technical Assistance; Course of Industry and Crafts for Made in Italy <b>Regional (IeFP) accreditations embedded in State vocational courses:</b> Apparel operator, Mechanical operator, Woodcraft operator, Electrician	Toy Clinic Discovering Valsesian Characters
I.I.S.T.A.S. Spallanzani	Emilia-Romagna	CVET	1-year course in Expert in the promotion and production of the wine and food traditions of the territory, run in the premises of an <i>istituto professionale</i> in cooperation with IAL ER	Project work

Name	Region	Type of VET (fieldwork focus)	Courses inspected	Entrepreneurship programmes
I.S.I.S. Facchinetti	Lombardy	Apprenticeship schemes	Innovative type of apprenticeships delivered to some learners enrolled in the Mechatronics course at the technical institute ( <i>istituto tecnico</i> ).	
IST.T. Costa	Apulia	IVET delivering technical education ( <i>istituto tecnico</i> )	Courses in Administration, Finance, Marketing. Experimental articulation in 4 years in Self-Entrepreneurship	The institute is famous for hosting self-entrepreneurship classes by Daniele Manni, teacher of information technology, winner of Global Teaching Award 2020

## Annex 2. VET-related expressions in the Italian education and training system

Italian expression	Translation				
	Grades	VET type	Accreditation	Type of education establishment	Definition
Apprendistati di primo livello	9 to 12	Apprent/ship schemes (secondary)	Regional	Private and public VET providers	Apprenticeship schemes (first-level apprenticeships)
Apprendistati di secondo livello	12+	Apprent/ship (post-secondary)	Regional	Private (VET provider plus hosting company)	Apprenticeship schemes (second-level)
leFP – Istruzione e formazione professionale	9 to 12	IVET	Regional	Usually private	Regional secondary VET curricula
IFTS – Percorsi di Istruzione e Formazione Tecnica Superiore	12+	CVET	Regional	Different providers (VET institutions provide facilities)	Post-secondary regional VET curricula, or regional CVET (1 year)
Istituti professionali	9 to 13	IVET	National	Public or charter upper secondary VET providers	Vocational education
Istituti tecnici	9 to 13	IVET	National	Public or charter upper secondary VET providers	Technical schools
ITS – istituti tecnici superiori	12+	CVET	Regional	Different providers (VET institutions provide facilities)	Higher technical institutes; used interchangeably to denote regional CVET longer than 1 year and the providers that deliver it
PCTO – Percorsi per le Competenze Trasversali e l'Orientamento	11 to 13	IVET		Public or charter upper secondary schools (including VET)	Pathways for transversal skills and orientation programme (includes work experience, formerly ASL)
ASL – Alternanza Scuola Lavoro	11 to 13	IVET			Until 2018, old name for PCTO

## Annex 3.

### Example of transversal assessment grid

The following assessment grid is based on the one used by the Lancia vocational school (Borgosesia) to assess curricular and extracurricular activities that involve the following elements: a challenge, a production process (through teamwork) and a final product or design.

Indicator	Intermediate descriptors	Marks	Synthetic descriptor
Engagement	Constant and braced	2.5	Constant
	Active, yet not continuous	2	Occasional
	Participates if solicited	1.5	When prodded
	Scarce / Nil – not even when prodded	1	Scarce / Nil
Commitment	Independent initiatives and creation of original solutions and methods of work	4	Proactive
	Can act autonomously to apply already-known methods	3.5	Autonomous
	Is active when prodded	3	When prodded
	Scarce / Nil – not even when prodded	2.5	Scarce / Nil
Relational/ Organisational capability	Able to organise her/his own work and that of other team members	2	Excellent
	Able to organise her/his own work and to collaborate with others to tackle shared goals	1.5	Good
	Organises her/himself with the help of teachers	1	Satisfactory
	Unable to organise her/himself – tends to isolate or to cause distress to other when participating	0.5	Scarce / Nil
Abidance	Impeccable, follows rules and meets deadlines	1.5	Always
	Adequate; meets deadlines	1	Good
	Acceptable; no significant delays	0.5	Sufficient
	Defiant; does not deliver	0.25	Defiant





# Entrepreneurship competence in vocational education and training

Case study: Italy

This report describes how entrepreneurship competence is embedded in vocational education and training (VET) in Italy. 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 pilot research of Cedefop's 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 the forthcoming final report.

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