

VETEntre
Transnational
Report: Developing
the Entrepreneurial
and Digital Skills of
VET Educators
Prepared by CARDET

VETENTRE

Building VET Trainers Entrepreneurial Competences



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Executive Summary

The transnational report is a summary and comparative analysis of the research conducted to develop the first output of the VETEntre - Building VET Trainers Entrepreneurial Competences project, which is co-funded by the Erasmus+ Programme of the European Union.

Research was conducted by seven organisations in five countries (Germany, Ireland, Spain, Cyprus, and Greece). The current state of VET systems and the entrepreneurial landscape was explored in all five countries, where 25 VET educators were interviewed, and 96 VET learners responded to an online survey. The study revealed similarities and differences among countries regarding the VET provision in each one of them and the needs and challenges VET educators and VET learners face.

Both the desk and field research have shown that the image of VET needs to improve and the necessity to make VET a more attractive choice for people. Training on entrepreneurial skills was found to be desirable, but a lack of entrepreneurial skills training in VET programs was identified. VET educators and learners need to make VET programs more relevant, practical and targeted to the needs of VET learners.

VET educators and learners from all five countries have noted the importance of increasing the interactivity in training on entrepreneurial skills, particularly when the training medium is an online platform. VET educators supported and encouraged the use of methodologies and techniques such as role-playing, case studies, group activities when teaching entrepreneurial skills, and interactive digital tools when training takes the form of blended or online learning.



Introduction

Thematic Focus

The VETEntre project is an EU-funded project which targets two key challenges. The first challenge is the need to improve the attractiveness and quality of Vocational Education and Training (VET) in Europe and the competences of VET educators to engage their students in meaningful learning. The second challenge is the promotion of entrepreneurship education across European education systems.

The project will develop an innovative set of tools and resources to empower VET trainers and educators to nurture the entrepreneurial mindset of their learners. One of the fundamental premises of the project is that, for educators to teach entrepreneurship, the educators themselves first need to develop an entrepreneurial mindset. The entrepreneurial mindset is one of the competences included in the European framework for key competences.

Aim and Objectives

This transnational report is part of the first project output, the “Entrepreneurship Toolkit for VET Educators”. The objective of this output is to develop a practical and innovative toolkit to support VET educators in developing, designing and implementing programs to support the development of entrepreneurship mindset in their learners.

The consortium aims to create a practical and meaningful for the users' toolkit. Therefore, partners will draw on findings from the desk and field research that were conducted for the development of this output, as well as findings from previous projects and research to:

- Assess what is currently available and what VET educators and learners really needed
- Define the challenges that many users faced in VET
- Ideate new solutions for toolkit users
- Prototype an interactive and practical toolkit
- Test the toolkit for feedback
- Develop the final toolkit



Methodology

The seven partners of the consortium of the VETEntre project have collaborated to produce this transnational report. In situations where two partner organisations were representing the same country, one desk research report and one field research report were written for the specific country with the contribution of both partner organisations. For the purpose of this report, researchers from CEFÉ and ACQUIN collaborated in both desk research and field research in Germany.

Desk Research

The partner organisations have done their individual research on the status quo of their country regarding VET, entrepreneurial skills and mindset, and digital skills. The guidelines were developed by CARDET, and all organisations contributed by providing their feedback.

The desk research took the form of a state-of-the-art national report, outlining significant information on VET and entrepreneurship in each partner country. The aim of the state-of-the-art report was twofold. First, it provided a needs assessment of each partner country and helped partners identify any differences between the needs assessment and the initial assessment that took place at the proposal development phase. Second, this report will be a tool that VET providers can use to understand the current state of entrepreneurial skills development and VET provision in their country.

Field Research

The field research of this project aimed at understanding the needs, challenges and best practices in the field of VET regarding digital and entrepreneurial skills. To capture these aspects, it was necessary to gain the insights and thoughts of both educators and learners. Thus, interviews and surveys were used.

25 interviews were conducted with VET educators, with five interviews being conducted in each partner country. The interview guide is included in Annex 2 of this report. A survey has also been shared with VET learners to receive at least 15 responses in each partner country and a total of at least 75 responses cumulatively. The survey conducted in all five partner countries received a total of 96 responses.

Limitations

The scarcity of VET programs on entrepreneurial skills has identified VET educators who have experience with training on entrepreneurial and digital skills as a challenge. Therefore, researchers of the project consortium chose VET educators who offer training programs in which entrepreneurial and digital skills are embedded.

In regard to the survey, researchers from the consortium organisations could not identify and reach VET learners who are over 60 years old.



Germany

Overview of VET Provision in Germany

VET in Germany is regulated by national law, the Vocational Training ACT – BBiG. It defines the various forms of VET, more specifically the initial VET (IVET) and the continuous VET (CVET). Furthermore, it regulates the relations between apprentice, company and school. VET must follow a national wide VET regulation for each of the 327 certified professions.

Dual VET is used as a synonym for a special, extremely attractive VET form in Germany because it links learning and work, as well as schools and companies. VET learners have to pass a final exam controlled by the professional chambers. Some of these chambers are: Chamber of Commerce and Industry (IHK), Chamber of Crafts (HWK), Chamber of Agriculture, Medical Association (each Federal State has its own) and more. Apprentices receive a chamber certificate to document that training has been completed. This certification has high recognition among employers.

“The dual system is conducted in two places of learning: companies and vocational schools. The professional competences to be acquired through in-company training are specified in training regulations and included by the training enterprise in an individual training plan. The binding requirements of the training regulations guarantee a uniform national standard. For teaching in vocational schools, a framework curriculum is drawn up for every recognised training occupation in accordance with the training regulations.

Besides the dual systems, Germany also knows school-based VET programs which always include a phase of work-based learning (WBL). These programs are delivered by full-time vocational schools (Berufsfachschulen). These are generally regulated by state legislation except for healthcare, which is subject to Federal law.”¹

The rationale of the VETENTRE project is also aligned with the Vocational Training Act, which states: "When defining the knowledge and skills ... technical and digital development, in particular, are important." (Section 5 / 1 of the Vocational Training Act of 4 May 2020). Entrepreneurship or economic issues are not mentioned. This already indicates that the vocational training law on its basis is geared towards employed activities. Here, the BBiG will have to adapt to European directives. "In the coming years, teachers and trainers in vocational education and training will have the task of developing fast and flexible solutions to new requirements when it comes to integrating thousands of refugees and migrants into the labour market and providing them with the necessary basic digital and entrepreneurial skills."²

¹ Cedefop (2020). Developments in vocational education and training policy in 2015-19: Germany. Cedefop monitoring and analysis of VET policies. Available at: <https://www.cedefop.europa.eu/en/publications-and-resources/country-reports/developments-vocational-education-and-training-policy-2015-19-germany>

² Cedefop (2016), Available at: www.cedefop.europa.eu/files/9112_de.pdf



Training plans for certified professions are listed here (in German only):
www.kmk.org/themen/berufliche-schulen/duale-berufsausbildung/rahmenlehrplaene-und-ausbildungsordnungen.html

The training of VET providers and teachers in Germany

Germany has two kinds of VET teachers corresponding to the two places of learning: vocational school teachers and in-company trainers. VET school teachers are teaching theoretical knowledge (general and occupation-related). In general, teachers must have a university degree at the master level (EQF level 7). Vocational school teachers are trained under the jurisdiction of the federal states. First, they must study at a university and absolve the practical preparatory service, also called the probationary period (Referendariat).

In-company trainers are in charge of training the apprentice at the workplace according to the training regulation for the specific occupation and the individual training plan. According to the Vocational Training Act (Berufsbildungsgesetz BBiG, 2005), only in-company trainers who possess pedagogical and professional aptitude are eligible to train. The aptitude of the training staff is guaranteed by the competent chamber that registers them (e.g. chambers of industry and commerce, chambers of skilled crafts). The in-company trainers must successfully absolve an examination called Trainer Aptitude Regulation (Ausbilder-Eignungsverordnung, AEVO, last amended in 2009).

In general, it can be assumed that the dual system, and in particular the in-company trainers are naturally not interested in including entrepreneurship in training. The system is aiming at generating employees who stay in the company. However, there is also a hint of change here, as some companies attach importance to the entrepreneur in the company, i.e. the employees are also to develop a certain degree of entrepreneurial spirit.

Entrepreneurship, unlike digitalisation, has virtually no place in the training of teachers in the field of vocational training. The first, albeit sparse, approaches can be found in continuing education and training.

Table 1: Examples of VET teachers' training

Relevant body	Website
Bayerisches Staatsministerium für Unterricht und Kultus	www.km.bayern.de/lehrer/lehrausbildung/berufliche-schulen/studium.html
Due to the shortage of teachers, newcomers are currently being encouraged and promoted for the recognition of foreign qualifications. The link on the right contains more information.	www.berlin.de/sen/bjf/anerkennung/lehramtsabschluss
VET teachers association: Bundesverband für Lehrkräfte der Berufsbildung e.V. (BvLB)	www.bvlb.de



Examples of providers in Germany who offer continuous training for teachers, including VET teachers.	
Offer on Entrepreneurship: Student Company Reimagined: Entrepreneurship - From Business Idea to Startup.	www.alp.dillingen.de
Offers for digital competences but none for entrepreneurial competences.	https://lehrkraefteakademie.hessen.de/fortbildung
Online Training: Entrepreneurship Education – Gründergeist im Klassenzimmer.	fobizz.com/fortbildung/entrepreneurship-education-gruendergeist-im-klassenzimmer/
Bildungsserver Berlin-Brandenburg	https://bildungsserver.berlin-brandenburg.de/qualifizierung/weiterbildung-fuer-lehrkraefte/
Bildungsserver berlin brandenburg (No offer on entrepreneurship).	https://tisonline.brandenburg.de/home
Junior companies exist in many federal states. However, the emphasis here is often on students recognising how companies' departments work, rather than teaching entrepreneurship as a mindset.	www.schule-bw.de/faecher-und-schularten/berufliche-schularten/schulartuebergreifend/juniorenfirma
Information from BBiB on the education and training of VET teachers.	www.bibb.de/de/8608.php

Main stakeholders providing VET education and certifications

The main school types, according to the Bavarian Ministry of Culture, are the following:

- **Berufsschulen:** Only public. They are located in every major city.
- **Berufsfachschulen:** Public and private. Specialised in one professional field (e.g. Healthcare, economics).
 - Sabel Akademie: <https://muenchen.sabel.com/berufsfachschule/>
 - Chemieschule Dr. Elhard: <https://chemieschule-bayern.de/>
 - Informatics and Economics: www.ifb-rosenheim.de
- **Berufsfachschulen des Gesundheitswesens:**
 - Albert Akademie: www.albert-akademie.de
 - Heimerer Schulen: www.heimerer.de

Other private schools offering a vocational qualification:

- Kolping Educational Institute is available in many regions of Germany.



- The largest training provider in Bavaria is the vocational training centres of the Bavarian Employers' Associations: www.bfz.de

All these schools offer training courses that conclude with the state-recognised conclusion of the relevant chamber (IHK, HWK, Chamber of Agriculture, etc.). More information can be found on the website of the Federal Association of Vocational Training Providers: <https://bildungsverband.info/>

Since the change from a “Magister” degree and a diploma to bachelor's and master's degrees, more and more universities have moved to vocational degrees since 2005 following the so-called Bologna process from 1999. In particular, in one of the federal states, in Baden-Württemberg, but also in Hessen, the dual system was extended to the academic field. In a narrow sense, a dual course of study takes place like a dual education, only for a university to take over the part of the vocational school. The time schedule here is 3 months university, 3 months as a trainee in a company (in the dual training this is usually 3 days a week in the company, 2 days vocational school).

Other federal states did not want to take this on board and simply offered more internship semesters during their studies. The correct term for this is “study with in-depth practice” (“Studium mit vertiefter Praxis”). They could also plan parts of the study for additional training, e.g. a student completes a degree and is at the same time contracted to a company for an apprenticeship in the dual system. The term for this is a training-integrating joint study programme (“Ausbildungsintegrierendes Studium”). The term “dual study” is therefore understood to mean quite different models. Companies prefer an early integration of academic employees into the company. That is why, for example, many Bavarian companies had sent their students to study in Baden-Württemberg and even took over overnight stays and tuition fees.

Examples of dual studies according to the Baden-Württemberg model can be found here: www.dhbw.de

Excluded from this dual system are fields such law, medicine, education. These must be completed with a state examination that can only be completed as a mere study at state universities (there are a few private universities in the medical and legal field - but not in the pedagogical field - which have this status). Psychology can be studied in the dual system, but these graduates are not subsequently admitted to the training as psychotherapists. Here, studying at a state university is still a prerequisite. The strong lobby group of psychotherapists has failed to establish studies in psychology in a more practical way.

Examples of dual studies according to the Bavarian model can be found here: www.hochschule-dual.de

On the one hand, the Bologna-Process has brought the academic world closer to the economy's needs and made it easier for graduates to enter the profession. Employability has become a central theme for the admission of all courses of study. Critics see the danger of a one-sided orientation of the concept of education towards its economic usability in the status quo. But this also increases the dependence of teaching and research on the financial big



players. And the qualities needed in the VUCA future, namely volatility, uncertainty, complexity and ambiguity, are neglected. We need both institutions that train practice and universities with independent teaching and research that do not train for the status quo of society and the economy but can cope with a disruptive future.

Value of VET certifications for employers

In Germany, there are 3 types of employees:

- An **unskilled** worker often has no schooling or formal training in a teaching profession.
- A **trained** worker has limited training and basic knowledge of the profession which it pursues.
- A **certified** worker completed an apprenticeship in a profession with a passed examination.

According to the Federal Employment Agency, unskilled workers make up half of all unemployed people in Germany. This shows the high importance of completed VET in Germany.

Mechanisms and tools for quality assurance of VET

In Germany, responsibility for education lies largely with the federal states, so there is no uniform concept for innovation and entrepreneurship in formal education. The education standards to safeguard quality and innovation ([Bildungsstandards zur Sicherung von Qualität und Innovation im föderalen Wettbewerb der Länder](#)) contain some approaches and notes on innovation, as do the resolution of the Standing Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz, KMK) on cultural youth education ([Beschluss der Kultusministerkonferenz zur kulturellen Jugendbildung](#)) and the KMK strategy on education in the digital world ([Strategie der Kultusministerkonferenz ‚Bildung in der digitalen Welt‘](#)).

Main actors for the quality assurance in VET in Germany are:

- the Federal Institute for Vocational Education and Training ([BIBB](#))
- the German Reference Point for Quality Assurance in Vocational Education and Training ([DEQA-VET](#)) that is part of BIBB
- DEQA-VET actively engages in networking VET actors and institutions in Germany. As a point of contact and service office for questions relating to all aspects of quality assurance and quality development in vocational education and training (VET).

Critical review of the current needs and challenges of VET providers

The declaration of the Conference of Ministers of Education sees the following needs for future vocational education and training:



- Integration of immigrant young people
- the creation of a common European labour market
- Digitalisation
- Further development of personal skills so that trainees can actively shape cultural change³

Entrepreneurship is not mentioned at all. It might be integrated under the key point "personal competences". Entrepreneurship (or comparable skills) is also not mentioned in the curricula of vocational training.

The Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF) is responsible for general VET policy issues. Nationally, the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung, [BIBB](#)) is the core institution for consensus building between all parties involved in VET.

Part 3, Section 71 of the BBiG, states the competent authorities:

- Chambers of crafts (HWK)
- Chambers of industry and commerce (IHK)
- Chamber of Agriculture
- Other professional chambers for the liberal professions⁴

Critical review of the current needs and challenges of VET learners

After completing their university entrance qualification, an increasing number of young people in Germany choose to study, as they have more chances to pursue a successful career. Those who have opted for an apprenticeship will then face great competition from academically trained students when they start their careers. Employers often prefer those with a degree. An often-stated argument is that academics are more likely to be empowered to think independently and solution-oriented. They overlook the fact that companies do not have enough tasks that meet the demands of both the content and financial nature of the graduates. This can lead to a high turnover of employees.

This makes it all the more important to place the aforementioned competences (independent and solution-oriented thinking and acting) just as prominently in the training professions. Entrepreneurship as a mindset is the appropriate learning field for this.

³ Conference of Ministers of Education (N.D.). Available at: https://www.kmk.org/fileadmin/user_upload/Erklaerung_Berufliche_Schulen_4.0_-_Endfassung.pdf

⁴ BBiG (N.D.). Available at: https://www.gesetze-im-internet.de/bbig_2005/_71.html



Many VET curricula in Germany are still geared towards ensuring that the trainee stays in the company for a long time, if not all his life. The flexibility of the world of work requires a rethink, a willingness to also deal with the possibilities of one's own entrepreneurship. These curricula can be found here: www.bayreuth.ihk.de/hauptnavigation/service/ausbildung/sachliche-und-zeitliche-gliederungen-von-a-bis-z.

In craft occupations, the proportion of entrepreneurial skills is somewhat higher, as the craft sector consists mainly of small enterprises. For an example, see the farmer's framework curriculum here: www.bibb.de/dienst/berufesuche/de/index_berufesuche.php/profile/apprenticeship/0110101

Table 2: SWOT Analysis of Vocational Education and Training in Germany

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ The dual system (school, company) guarantees the linking of theory and practice. ▪ Innovation is carried by schools into businesses and vice versa ▪ Formalisation of occupational profiles guarantees equal quality 	<ul style="list-style-type: none"> ▪ Formalisation makes innovation more difficult ▪ In-company training in the dual system may be inadequate ("apprentices are exploited"). This wastes learning time. ▪ Education is too geared to employers' needs and neglects personal skills such as entrepreneurship ▪ It is mainly trained for employee relationships in hierarchical structures.
Opportunities	Threats
<ul style="list-style-type: none"> ▪ Support for social change. ▪ Training geared to the existing labour market 	<ul style="list-style-type: none"> ▪ Social needs arrive late or not in vocational training. ▪ Education is understood purely economically ▪ If entrepreneurial skills are not developed young people are not prepared for a highly flexible working environment. ▪ Too few start-ups and thus rising unemployment



The Entrepreneurial Landscape in Germany

In the modern entrepreneurship literature, there are numerous, sometimes comprehensive definitions. Entrepreneurship is more than just starting a business and using resources efficiently. It includes creative elements such as the systematic identification of (market) opportunities, finding new (business) ideas, and their implementation in the form of new business models.⁵

The term entrepreneur in today's context goes far beyond the actual function as owner or managing director. For example, an entrepreneur is characterised by:

- Ideas that are ahead of their time
- A disruptive personality
- A keen sense of innovation

An entrepreneur usually acts very goal-oriented, committed and does not shy away from uncertainty or risks. Striving for improvement is also a core quality of an entrepreneur - even in the event of setbacks and defeats.⁶

Entrepreneurship initiatives in Germany

The German government has launched a variety of programs to support and fund start-ups and entrepreneurship. The start-up support is based on the triad of advice, networking and financing.

Start-up advice

- The database on www.existenzgruender.de contains around 25,000 addresses of public facilities and institutions that advise founders.
- The chambers of industry and commerce (IHK), crafts, and municipal business development agencies offer comprehensive advice.

Innovation, technology and business incubators

Innovation, technology, and start-up centres support founders and young companies by creating favourable framework conditions - both for the concept, start-up and first development phase and further company growth.

Central platform for founders and young companies

⁵ Wikipedia (N,D.). Unternehmertum, Available at: <https://de.wikipedia.org/wiki/Unternehmertum>

⁶ Für Gründen (2021). Available at: <https://www.fuer-gruender.de/>



All the information below are based on the Federal Ministry for Economic Affairs and Energy⁷:

- Information on preparation, financing and starting a business
- Corporate governance information
- Expert forum on various start-up topics
- Start-up workshop: online tools, e.g. Business plan, authority guide
- Checklists and overviews

The National Agency for Women Start-ups Activities and Services (bga) offers information, services and advice for women who want to start their own business or take over a company:

- eTraining for women founders
- Seminars, workshops, specialist conferences
- Databases with experts
- Networks, women's start-up centers, etc.⁸

Competitions: Opportunity for young entrepreneurs

Business start-up and business plan competitions are aimed at people with innovative ideas who are taking steps towards self-employment.

The Federal Ministry for Economic Affairs and Energy supports a number of competitions. Some examples are:

- Gründerwettbewerb Digitale Innovations: www.gruenderwettbewerb.de
- Deutscher Gründerpreisdeutscher: www.gruenderpreis.de
- Kultur- und Kreativpiloten Deutschland: kultur-Kreativpiloten.de
- KfW Award founder Champions: www.kfw.de

Start-up week Germany (www.gruenderwoche.de)

The nationwide action week takes place every November as part of the Global Entrepreneurship Week. Its aim is to:

- inspire young people in particular for the topic of business start-ups,
- exchange ideas, experiences and opinions on the topic of business start-ups and self-employment,
- present successful start-up support initiatives.

WIPANO - knowledge and technology transfer through patents and standards

⁷ Federal Ministry for Economic Affairs and Energy (2021). Available at: www.existenzgruender.de

⁸ National Agency for Women Start-ups Activities and Services (bga) (2021). Available at: www.existenzgruenderinnen.de



- WIPANO supports public research and companies in patenting and exploiting their ideas and supports innovative (research) projects for standardisation. Support in patent applications and the exploitation of patents.

Entrepreneurship in school

This is an initiative of the Federal Ministry for Economic Affairs and Energy (BMWi) to invite school principals and teachers to implement business projects in schools. The idea is to promote creativity to develop a viable business model and to understand economic relationships should be part of the German school education. You can find more information on the website of the Federal Ministry for Economic Affairs and Energy here: www.unternehmergeist-macht-schule.de

Available Funding Sources and Schemes on entrepreneurship in Germany

In addition to the [Federal Ministry for Economic Affairs and Energy](#), the most important start-up funding institutions (financial resources, advice, and information) in Germany are:

- Ministries of the federal states
- Chambers of Commerce and Industry
- Chambers of Crafts
- Regional and local business promoters
- [KfW banking group](#) and federal state development banks
- Credit institutions and associations
- Foundation networks

Both the federal government and the federal states promote advice to founders: the federal states in the pre-founding phase, the federal government after the foundation. Some of these offers are co-financed by the EU - for example from the European Social Fund ESF.

- For start-up financing, the federal government provides promotional loans (through KfW banking group), equity capital (through medium-sized investment companies) and guarantees (through the guarantee banks).
- The federal government contributes to the consulting costs for start-ups with a grant from the "Promotion of entrepreneurial know-how" program.
- The federal states also offer promotional loans and other financing instruments through their promotional institutions (e.g. investment banks).
- Further offers exist at the regional and municipal level (municipal business development).
- Private investors, e.g. B. Business angels and venture capital companies, invest financially in young companies.



Selected Funding Programs / Support programs

You can find information about funding options on the BMWi funding database:
www.foerderdatenbank.de

Examples of different funding opportunities are listed below:

- [EXIST-Gründerstipendium](#) (english: EXIST start-up grant) supports the preparation of innovative technology-oriented and knowledge-based start-up projects by students, graduates and scientists.
- [ERP-Gründerkredit Startgeld](#) (ERP start-up loan entry fee) provides debt capital for founders and small companies up to € 125,000 for terms of 5 to 10 years are available. In particular, smaller start-ups are supported.
- **German Accelerator** - Young ICT companies get familiar with the U.S. market. Provided support, i.e.: Review of the business plan, improved access to technological and financial resources, Infrastructure, e.g. through the provision of office space
- The [High-Tech Gründerfonds](#) invests venture capital in newly founded high-potential technology companies and provides follow-up financing.
- [“INVEST - grant for venture capital”](#), BMWi supports private investors - especially business angels, to increase involvement in young innovative companies.
- **Microcredit Fund Germany.** The federal government has established a nationwide system for granting microloans in Germany in order to meet the financing needs of small businesses that otherwise have no access to credit financing. The target groups of the fund are small and young companies, founders and people with a migration background or creative self-employed.
- **Mikromezzaninfonds** was launched in 2013 and awards silent participations up to a maximum of € 50,000 for small companies and start-ups, for companies in the special target group up to a maximum of € 150,000.

Available entrepreneurship teaching

- Master of Arts in International Management and Entrepreneurship at [Hochschule Heidelberg](#)
- The AHEAD (Advanced Holistic Entrepreneurial Attitude Development) program at Munich University of Applied Sciences is an example of holistic entrepreneurship training.
- Entrepreneurship (M.Sc.) at WHU - Otto Beisheim School of Management
- Entrepreneurship and Innovation Management (MBA) at [Ostfalia Hochschule](#)
- Bachelor of Arts (Distance Learning) Entrepreneurship at [IUBH Internationale Hochschule](#)



The BMWI initiative EXIST-Gründungskultur (English: EXIST start-up culture) supports universities in formulating a holistic university-wide strategy for start-up culture and entrepreneurship and implementing it sustainably.

The Entrepreneurial Ecosystem

The German government considers start-ups as an important requirement for securing national prosperity and has launched a variety of programs to support and fund start-ups and entrepreneurship, but a strong sense of security and a risk-averse culture reduces the incentives for innovative business start-ups.

To learn more, you can read the article “Start-ups: a driving force for growth and competition” by the Federal Ministry of German Affairs and Energy: <https://www.bmwi.de/Redaktion/EN/Dossier/start-ups.html>

Moreover, as stated in the GEM Report, “Germany ranks moderately high in the NECI index (19 out of 54), with strengths relative to government programs, commercial and legal infrastructure, regulatory factors and the ease of market entry. These conditions likely support the ongoing health of businesses as they transition to maturity”.⁹

Germany's rather poor performance in terms of entrepreneurship is not due to the lack of government funding but to other barriers to entrepreneurial activity. These include the risk-averse culture, funding gaps for risky business models and the absence of entrepreneurial and technological centres. These emerge in Berlin, Hamburg and Munich and have developed into hubs in Europe. The legal protection of investors who invest money in new companies is relatively weak in Germany. Access to capital is also difficult.¹⁰

Experts attest to Germany's major weaknesses in entrepreneurial education both for schools and vocational activities. According to the Eine Studie des Alexander von Humboldt Instituts für Internet und Gesellschaft, founders are looking for well-educated and experienced co-founders and employees but are faced with high wages and wage costs. Established companies have, because offer higher wages and better job security and therewith have a stronger position in the competition for skilled workers than startups. The German overall labor market is not very flexible and poses another obstacle to entrepreneurship.

Table 3: SWOT Analysis of Entrepreneurship in Germany

Strengths	Weaknesses
Factors that support entrepreneurship:	Factors that hinder entrepreneurship:

⁹ Bosma and Kelley (2018). Global Entrepreneurship Monitor. 2018/2019 Global Report. Available at: <https://www.gemconsortium.org/file/open?fileId=50213>

¹⁰ Eine Studie des Alexander von Humboldt Instituts für Internet und Gesellschaft (2017). Entrepreneurship in Deutschland (2017). Available at: https://www.hiig.de/wp-content/uploads/2017/08/Entrepreneurship_Deutschland_print.pdf



<ul style="list-style-type: none">• The government has established funding and initiatives to foster entrepreneurship (see above).• Many start-up events and a grown start-up ecosystem is established in Berlin, Hamburg and Munich.¹¹• Germany shows strength in innovation• High reliability of legal and political framework conditions from which young and growing companies benefit.¹²	<ul style="list-style-type: none">• Weak financial support for radical and disruptive innovations.• Absence of entrepreneurial and technological centres in many regions of Germany.¹³• The existing German labour market promotes long-term employment in large companies. This makes it difficult for founders to find suitable employees or co-founders, especially in IT the area.¹⁴• There is a weak entrepreneurial mentality with a high risk-aversion and lack of social status of entrepreneurs in society next to the higher status of employment in a large corporation with a secure job and higher salaries.¹⁵• 45.9% state that despite their technical expertise, they rarely see opportunities for founding a company.¹⁶ Little or no practical training neither in the secondary nor in tertiary education. The school-based start-up training was rated
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¹¹ Institut Für Innovation Und Technik (2018). Studie Trends in der Unterstützungslandschaft von Start-ups – Inkubatoren, Akzeleratoren und andere im Auftrag des Bundesministeriums für Wirtschaft und Energie (BMWi). Available at:

https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/trends-in-der-unterstuetzungslandschaft-von-start-ups.pdf?__blob=publicationFile&v=6

¹² Sternberg, R., Gorynia-Pfeffer, N., Wallisch, M., Baharian, A., Stolz, L., von Bloh, J. (2020). Global Entrepreneurship Monitor Unternehmensgründungen im weltweiten Vergleich Länderbericht Deutschland 2019/20.

¹³ Institut Für Innovation Und Technik (2018). Studie Trends in der Unterstützungslandschaft von Start-ups – Inkubatoren, Akzeleratoren und andere im Auftrag des Bundesministeriums für Wirtschaft und Energie (BMWi). Available at:

https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/trends-in-der-unterstuetzungslandschaft-von-start-ups.pdf?__blob=publicationFile&v=6

¹⁴ Sternberg, R., Gorynia-Pfeffer, N., Wallisch, M., Baharian, A., Stolz, L., von Bloh, J. (2020). Global Entrepreneurship Monitor Unternehmensgründungen im weltweiten Vergleich Länderbericht Deutschland 2019/20.

¹⁵ Eine Studie des Alexander von Humboldt Instituts für Internet und Gesellschaft (2017). Entrepreneurship in Deutschland (2017). Available at: https://www.hiig.de/wp-content/uploads/2017/08/Entrepreneurship_Deutschland_print.pdf

¹⁶ RKW (2020). Global Entrepreneurship Monitor 2020 – Infografiken.



	<p>negatively by a total of 68% of those surveyed.¹⁷</p> <ul style="list-style-type: none"> Weaknesses in entrepreneurial education both for schools and vocational activities.¹⁸
Opportunities	Threats
<ul style="list-style-type: none"> The German government considers start-ups as an important requirement for securing national prosperity.¹⁹ R&D networks between public institutions and the established economy are well developed. Successful incremental innovations and strong economic growth. 	<p>(Based on the report by Eine Studie des Alexander von Humboldt Instituts für Internet und Gesellschaft)²⁰</p> <ul style="list-style-type: none"> Incremental innovation is preferred to radical and disruptive innovation. Germany is good at bringing innovations to existing industries. A large part of the focus is on innovating existing products and processes. This favours the increase in incremental innovation, but at the same time, hinders radical or disruptive innovation. Jobs, security and prosperity, are closely connected to the existing structure and are the basis of the German industry. A deviation of this course to a culture of stronger entrepreneurship is difficult. Secure jobs, a stable education system and high salaries attract young people to existing institutions instead of turning them into founders.

¹⁷ Sternberg, R., Gorynia-Pfeffer, N., Wallisch, M., Baharian, A., Stolz, L., von Bloh, J. (2020). Global Entrepreneurship Monitor Unternehmensgründungen im weltweiten Vergleich Länderbericht Deutschland 2019/20.

¹⁸ Eine Studie des Alexander von Humboldt Instituts für Internet und Gesellschaft (2017). Entrepreneurship in Deutschland (2017). Available at: https://www.hiig.de/wp-content/uploads/2017/08/Entrepreneurship_Deutschland_print.pdf

¹⁹ Federal Ministry for Economic Affairs and Energy (N.D.). Startups: a driving force for growth and competition. Available at: <https://www.bmwi.de/Redaktion/EN/Dossier/start-ups.html>

²⁰ Eine Studie des Alexander von Humboldt Instituts für Internet und Gesellschaft (2017). Entrepreneurship in Deutschland (2017). Available at: https://www.hiig.de/wp-content/uploads/2017/08/Entrepreneurship_Deutschland_print.pdf



Digital Skills in Germany

As in all areas of education, the need for trainees to catch up with digital skills is very high. As mentioned above, the need for Digitalisation is strongly anchored in the awareness of those responsible for vocational education and training. In the German Bundestag, the Enquete Commission "Vocational Education in the Digital World of Work" is under the agenda: "Formulation of a clear strategy for the further development of vocational education and training and the strengthening of the equivalence of vocational and academic education in an age of digital change of occupational profiles and employment biographies." ²¹

To see examples of available offers in the institutions of teacher training, see:

<https://alp.dillingen.de/lehrerfortbildung/lehrgangsangebote/fortbildungsoffensive-zur-digitalisierung/>

However, most events relate to how teachers can design their digital teaching. This may be because of the challenges brought by the COVID-19 pandemic. Programming or computer science as a subject is offered in continuing training courses for secondary school teachers or vocational training within appropriate occupational fields such as mechatronics.

Available programs/schemes for VET educators

The following programs/schemes can be helpful to teachers, trainers, vocational trainers, and non-formal education providers.

Since the federal states carry responsibility for education, basic and advanced training for teachers is also regulated at the state level. Advanced teacher training is provided by state advanced teacher training colleges (Institute der Bundesländer zur Lehrerfortbildung). Teachers and vocational instructors can use a certain number of training days each year for further and continuing vocational training to keep their skills up to date. Educational leave (Bildungsurlaub) is a specific form of further education that provides individuals with further vocational training. Depending on the company and industry, the individuals responsible for apprentices in a company must have passed an appropriate [qualifying examination or a master craftsman examination \(Meisterprüfung\)](#).

Providers of further training on entrepreneurship education include:

- [Teacher training institutes](#) in the federal states (Länder). Provide further training in a range of areas, including economics and business-related subjects.
- Training institutes of the employer and industry associations in all Länder belonging to the consortium of training institutes in the German industry ([Arbeitsgemeinschaft der Bildungswerke der Deutschen Wirtschaft](#), ADBW).
- Members of the [SCHULEWIRTSCHAFT network](#). Teacher training on economic issues.

²¹ Deutscher Bundestag (2021). Enquete-Kommission „Berufliche Bildung in der digitalen Arbeitswelt“. Available at: www.bundestag.de/ausschuesse/weitere_gremien/enquete_bb



- Entrepreneurial Spirit in Schools ([Unternehmergeist in die Schulen](#)) Initiative. E-training courses for teachers on entrepreneurship education.
- Teacher training courses on integrating the Youth Start-Ups ([Jugend gründet](#)) school competition into lessons.
- [German Entrepreneurship GMBH](#) offers innovation workshops and coaching in the field of "Entrepreneurial mindset", "Corporate Entrepreneurship", "Innovation Multiplier".
- Adult Education Centres (Volkshochschulen) offer continuing vocational training courses on entrepreneurial skills.
- Joachim Herz foundation (Joachim-Herz-Stiftung). Carries out [projects on economic issues and teacher training](#) in the field of entrepreneurial thoughts and actions.

Certifications

There is no national policy for certification schemes in entrepreneurship in Germany. The below certification opportunities are offered upon completion of further training courses for teachers and learners:

- NFTE (Network for Teaching Entrepreneurship) Deutschland e.V. offers three-day [further training courses for teachers](#) across Germany, who become a Certified Entrepreneurship Teacher (CET) upon completion. Funded by the Federal Ministry for Economic Affairs and Energy
NFTE distinguishes between three training formats:
 - CET: Basic training to become a Certified Entrepreneurship Teacher
 - CET Plus: Advanced course with a stronger focus on current entrepreneurship research, teaching new game formats
- the Certificate uniENTREPRENEUR ([Zertifikat uniENTREPRENEUR](#)) at the University of Freiburg,
- the Certificate [Business and Management](#) at the University of Tübingen,
- the Certificate Entrepreneurship ([Zertifikat „Entrepreneurship“](#)) at the University of Saarland,
- the certificate of participation and the certificate entitled CEDUS-Gründungszertifikat at the [Center for Entrepreneurship](#) at the Heinrich Heine University of Düsseldorf.

Best Practices - Available tools for VET Education

Business plan games have been becoming increasingly popular since the 1970s and are also being used in schools.

- Example of commercial games: www.stratopoly.de/
- Example of an offer specifically for trainees: <https://bti-online.com/planspiele-simulationen/fur-auszubildende/>



- Example of a programme offered annually by the Educational Institute of the Bavarian Economy (bbw) in which several schools compete with each other: www.playthemarket.de

Relevant Initiatives

- Encouraging personal initiative and the motivation to learn with entrepreneurial teaching: a practical guide ([Eigeninitiative und Lernmotivation fördern mit Entrepreneurial Teaching. Ein Praxishandbuch für die Lehrerfortbildung](#)) by the German Children and Youth Foundation (Deutsche Kinder- und Jugendstiftung).
- Guide to entrepreneurship education – generating enthusiasm and discovering talent ([Leitfaden 'Entrepreneurship Education – Begeisterung wecken, Talente entdecken'](#)) by the Federal Ministry for Economic Affairs and Energy (Bundesministerium für Wirtschaft und Energie) and additional co-operation partners on entrepreneurship education.
- Learning modules on how to think and act like an entrepreneur ([Lernmodule 'Unternehmerisch Denken und Handeln'](#)) for economics lessons in schools from the Institute for Economic Education (Institut für ökonomische Bildung, IÖB) in cooperation with Joachim Herz foundation (Joachim-Herz-Stiftung).

European frameworks

Germany supports the implementation of the European Entrepreneurship Competence Framework (EntreComp) and the Digital Competence Framework for Educators (DigCompEdu). Several documents by the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder ([Kultusministerkonferenz](#)) provide a framework to foster people's entrepreneurship competence in education. These include:

- Agreement on types of school and courses of education at lower secondary level ([Vereinbarung über die Schularten und Bildungsgänge im Sekundarbereich I](#)).
- Framework agreement on vocational colleges ([Rahmenvereinbarung über die Berufsschule](#)). It mentions that one aim for vocational colleges is to offer an "overview of educational and vocational development prospects including entrepreneurial independence".
- Incorporation of entrepreneurship competence into curricula.
- The number of professorships in the field of entrepreneurship at public and private VET & higher education institutions in Germany is constantly growing (<https://www.bmwi.de/Redaktion/EN/Publikationen/Mittelstand/unternehmensgruendungen-und-gruendergeist-in-deutschland.pdf?blob=publicationFile&v=3>)

For further information of VET in Germany, see the following report:

[https://cumulus.cedefop.europa.eu/files/vetelib/2019/Vocational Education Training Europe Germany 2018 Cedefop ReferNet.pdf](https://cumulus.cedefop.europa.eu/files/vetelib/2019/Vocational_Education_Training_Europe_Germany_2018_Cedefop_ReferNet.pdf).



Ireland

Overview of VET Provision in Ireland

In Ireland, policy developments in relation to VET reform are mainly articulated through strategies drawn up by the Department (Ministry) of Education and Skills, either directly or through its agencies. Such agencies include SOLAS (further education and training authority), the Higher Education Authority (HEA), Quality and Qualifications Ireland (QQI), Education and Training Boards Ireland (ETBI), the Apprenticeship Council, Aontas (adult learning), among others.

In addition, while not directly related to vocational education and training, or indeed the education and training system, the work of other Government Departments also impacts on education policy. The two most significant initiatives in relation to digitalisation and future of work technologies include the National Digital Strategy and the Future of Jobs Programme. Neither initiative specifically focuses on vocational education and training, although they both recognise that all sectors of the education system play a key role in delivering the objectives set out in these initiatives.

As a result, several developments in education and training strategy and policy have been elaborated within the context of these (and other) broader initiatives, e.g., National Skills Strategy 2025 (2016) or the ICT Skills Action Plan (2018). These education and training related strategies have in turn impacted directly and indirectly on VET policy in recent years. Within the context of more general education and training strategies and action plans, there have been a small number of VET-specific plans: relevant to preparing learners for the future of work are the Strategy for Technology Enhanced Learning in Further Education and Training 2016-19, the Action Plan to Expand Apprenticeship and Traineeship in Ireland 2016-20, the Skills to Advance Programme, and the Explore Programme.

Training of VET providers and teachers

Quality and Qualifications Ireland (QQI) is the independent State agency responsible for promoting quality and accountability in education and training in Ireland. To become a recognised provider of VET (and FET) in Ireland under QQI, the training provider or institution must first secure approval of its institutional capacity and quality assurance procedures as part of the Initial Access to Programme Validation process operated by QQI. Once approved as a QQI provider, the institution can then prepare courses of learning for validation. Providers are responsible for the development, maintenance, provision and internal quality assurance (QA) of their own programmes; and they must have robust procedures in place for assessing enrolled learners on those programmes so that learners can acquire and demonstrate the necessary knowledge, skill or competence to justify the award(s) being offered in respect of that programme. All awards offered under QQI are linked to the NMQ. The initial cost of this recognition for training providers is €5,000 with additional fees for the validation of each programme thereafter.

Given the diverse nature of further education and training and VET programmes offered to learners in Ireland, there are several categories of teaching and training professionals working in VET. In general, VET teacher/trainer categories are distinguished by the programmes they deliver, their technical and pedagogical qualifications required, and the funding mechanisms. For individual teachers within the field of Further and Vocational Education, in accordance with the Teaching Council [Registration] Regulations 2016 and The Teaching Council



[Registration] (Amendment) Regulations 2016, they must evidence one of the following qualifications and experience:

1. An Honours Bachelor's Degree at Level 8 or higher on the NFQ which has a ECTS credit weighting of at least 180 credits
2. An Ordinary Bachelor's Degree at Level 7 on the NFQ which has a ECTS credit weighting of at least 180 credits AND either
 - (i) An appropriate additional qualification, or
 - (ii) A minimum of three years' experience in a workplace or instructional setting which is relevant to the qualification(s)
3. A Teaching Council accredited Further Education teacher education qualification (TEQ).

For apprenticeship instructors working in ETB training centres which deliver the first off-the-job phase of apprenticeship (phase 2): there is no requirement at present for instructors on classroom-based apprenticeship programmes to hold a pedagogical qualification, but they must hold a craft certificate (national framework of qualifications level 6; European qualifications framework level 5), plus 5 years' experience.

For other types of VET training in the further education and training sector the qualifications and professional standards of trainers vary. In general, programmes leading to a QQI award require a subject matter qualification (usually one level higher than that of the course being taught), a pedagogical qualification (usually at third level) and 5 years' industry experience. For all other training, such as computing or accounting, trainer profiles tend to vary depending on the awarding body, the subject matter being taught and the provider. However pedagogical qualifications are increasingly in demand for these types of courses.

Main Stakeholders and what they provide

Overall responsibility for education and training lies with the Department (Ministry) of Education and Skills (DES) with a number of bodies, operating under the aegis of the DES, having responsibilities for different aspects of the VET education and training system; these include, among others: (a) SOLAS, which is Ireland's Further Education and Training (FET) authority, responsible for planning, co-ordinating and funding FET in Ireland (b) Quality and Qualifications Ireland (QQI), which has responsibilities for making awards and setting standards for FET programmes and some tertiary level education programmes (outside the university sector) (c) the National Skills Council (NSC) set up in 2017 by the Department of Education and Skills to assist Ireland in anticipating and responding to skills needs across economic sectors; (d) the expert group on future skills needs, which is based in the Department of Business, Enterprise and Innovation, and advises the Irish government on current and future skills needs of the economy and on other labour market issues that impact on Ireland's enterprise and employment growth; and (e) 16 ETB training centres and schools/colleges that operate on a nationwide basis. Most vocational education and training in Ireland occurs within the Further Education and Training sector as outlined above, although since 2016, a number of apprenticeship programmes have been proposed, developed and rolled out within the tertiary education system (i.e. insurance studies).

The characteristics of the main VET Programmes currently offered in Ireland are presented in the table below:



Main VET Programmes	Typical Duration	Awards	Typical fields of learning	No. of enrolments	Provider
Pre-2016 Craft Apprenticeships	4 years	NFQ 6 EQF 5	Engineering and Construction	7,000	ETBs and Institutes of Technology
Post 2016 Apprenticeships	2-4 years	NFQ 5 – 10		100	ETBs and Institutes of Technology
Traineeship	6 months – 2 years	NFQ 4 – 6	Health/ welfare services	4,500	ETBs
Traineeships for the employed	-	NFQ 4 – 6			ETBs
Specific Skills Training	6 weeks – 24 weeks	NFQ 4 – 5	Engineering and Construction	15,400	ETBs
PLC Courses	1-2 years	NFQ 5 – 6	Health/ welfare services, business	32,000	ETBs
VTOS	Varies; typically, 1-2 years	NFQ 4 – 6	Business, Services	8,900	ETBs

Source: SOLAS

According to CEDEFOP, in 2017, the employment rate for Irish IVET graduates (aged 20 to 34) at ISCED 3-4 was 5.6 percentage points higher than for graduates from general education; the employment rate for IVET graduates was also 32.5% higher than for graduates with lower-level qualifications demonstrating that there is a positive employment premium for IVET graduates in the Irish labour market and that VET certification is valued by employers.

Mechanism and Tools of Quality Assurance of VET

As previously mentioned, QQI sets the quality standards for VET provision in Ireland and those standards are broadly consistent with the European Instruments of EQAVET and ECVET. IQAVET is the Irish National Reference Point for European Quality Assurance in Vocational Education and Training, and it is hosted within QQI.

Critical Review of Current Needs of VET Providers and Challenges Faced

The National Further Education and Training (FET) Strategy 2020 – 2024 was launched by Solas in response to the COVID-19 pandemic and highlighted the pressing need for provision in Ireland to address three main pillars, namely, building skills, fostering inclusion, and facilitating pathways for learners (Solas, 2020). This new FET strategy, which encompasses VET, will empower, and enable four main themes including those of: digital transformation; learner and performance focus; staffing and structures; and capital development.

Major challenges will be faced by VET providers in the coming years to deal with the demographic bulge in school leavers who will require third level education. Over the coming years, it is expected that 222,000 additional learners will require further education and higher education courses within a ten-year timeframe, increasing the current pressures that are faced by providers. Due to these cyclical changes, FET providers across Ireland need to ensure that they have the teaching capacity to increase provision in light of these additional numbers of learners presenting for further education and training.



Economic shocks will inevitably increase these numbers further, with a potential for further economic downturns and a post-Brexit shock which could result in further additions to numbers seeking education and training opportunities. However, although there is a need to ensure that there are courses available, VET and FET providers need to address the current infrastructural deficits within the system and improve the overall quality of their capital assets, including building and equipment.

FET providers have identified a growing concern that they need financial autonomy to generate additional revenue and have options to strategically invest this revenue in order to offset any economic downturns or shocks that they may face. Each provider has specific needs based on the demographics within their community, therefore require the autonomy to make financial decisions to support those within their catchment areas.

Continuous Professional Development for teachers and trainers at VET level has been characterised as being ad-hoc in nature and lacking a strategic focus. For this reason, there is a need for a clear strategy to be implemented in order to ensure that educators can provide learners with up-to-date knowledge on trends in the marketplace.

Critical Review of Current Needs of VET Learners and Challenges Faced

There is a growing concern in Ireland that VET provision has to be simplified and easier to access in order for learners to improve their skill set and find employment opportunities in their local areas. As there is a skills mismatch in Ireland at present, VET learners have emphasised the need to learn the key transversal skills needed to successfully integrate and engage with a modern society. Learners on the margins of society need to be provided with a wide range of skills, including literacy and numeracy skills, English language skills and digital skills. Additional measures and supports need to be made available to learners on the margins of society, so that they have equal opportunities to access the services offered by VET in Ireland.

VET learners have highlighted a growing need for centralised learning centres in areas considered to be 'unemployment blackspots', such as Limerick, Waterford and Dublin. In areas where there are high levels of unemployment, learners need to be able to avail of educational courses to fight against the cyclical nature of unemployment. In order to support unemployed individuals to re-enter education, a range of monetary supports are offered by the Irish Government, including the Back to Education Initiative, which provides free tuition and support to adults and young people with few formal qualifications.

A looming threat of a post-Brexit fallout and future economic concerns have emphasised a need for up-skilling and re-skilling of individuals across Ireland. Due to personal circumstances, it can be challenging for learners to commit to full-time education and full-time employment. Significant reforms are being seen in the educational landscape which allow learners to attend further education in 'bite-sized chunks' (Solas, 2020). Additionally, new models of delivery including apprenticeship and traineeships will assist VET learners to meet the rapidly evolving needs of society.

The Entrepreneurial Landscape in Ireland





Brief Introduction on Entrepreneurship in Ireland

Entrepreneurship in Ireland is at an all-time high, with more than one in five individuals highlighting a desire to establish their own business within the next three years (Global Entrepreneurship Monitor, 2020). This research also highlighted that over 3,000 individuals per month established their own business in 2019.

Entrepreneurship in Ireland can be subdivided into two main categories: nascent entrepreneurs and new business owners. Nascent entrepreneurs can be characterised by individuals who are in the early stages of establishing their enterprise and have not yet received a salary from their work. On the other hand, new business owners have started their own business and have received a salary. Figures suggest that the rate of nascent entrepreneurs in Ireland in 2019 was 8.4% compared to 4.3% of new business owners in the same time period (Global Entrepreneurship Monitor, 2020).

Over the past number of years, entrepreneurship in Ireland has typically been associated with people over the age of 55 years. However, in 2019, there was a seismic shift in the amount of young people who sought to be nascent entrepreneurs and establish their own enterprises. With thanks to insight from previous economic downturns, entrepreneurs are adapting their business models to the changing circumstances, with an increased number of business owners selling online via social media.

Main Stakeholders in Your Country on Entrepreneurship-Related Areas

Three main stakeholders in Ireland in Entrepreneurship related areas include Enterprise Ireland, the Local Enterprise Offices and Leader Local Action Groups.

Enterprise Ireland is a government organisation which aims to support, develop, and grow Irish businesses across the world. Enterprise Ireland provide a wide range of support and advice in relation to funding opportunities; stimulating research and development within a company; networking with national and international stakeholders and competitive supports throughout Ireland.

Across Ireland, 31 Local Enterprise Office's (LEO's) work to provide support for those who are looking for advice on starting or growing a business in Ireland. Local Enterprise Office's provide financial assistance to micro enterprises who are looking to grow and expand their operations; provide advice on funding options available to business owners; and deliver education and training to business owners and staff. Through networking events arranged by the Local Enterprise Office, staff members arrange for mentoring and guiding an entrepreneur on their journey.

Social entrepreneurs across Ireland with a mission to improving the lives of those living in rural communities can apply for funding under the LEADER programme. As of May 2021, 29 Local Action Groups across Ireland grant funding to projects which can improve some of the major issues with living in rural and isolated communities, including economic and enterprise development, rural tourism, and local biodiversity. The LEADER programme supports job creation across Ireland; fosters and encourages individuals and community groups to



promote entrepreneurship in their communities; and support projects in their local community.

The Entrepreneurial Ecosystem

The entrepreneurial ecosystem in Ireland is highly competitive, and has a reputation for being diverse and expansive, and welcoming of businesses from across the globe. A wide range of supports are in place to promote entrepreneurial endeavours across Ireland, including financial supports; co-working spaces; enterprise centres; and competitions for start-ups, including the National Start Up Award.

Strengths

The Irish Entrepreneurial Ecosystem is characterised by a highly attractive business environment, with thanks to European Union and Eurozone membership. Limited trade barriers in place in Ireland has resulted in businesses from across the globe establishing operations in Ireland. One of the main incentives for this is the highly attractive and appealing rate of corporation tax. Currently, the corporation tax stands at 12.5% of trading income in comparison to the EU average corporation tax of 21.9%. This low rate of corporation tax supports the growth and development of entrepreneurial endeavours across Ireland, by allowing them to reinvest their profits back into their businesses, rather than lose out on important capital to tax.

Additionally, high levels of Foreign Direct Investment (FDI) currently provide at least 20% of private sector employment in Ireland (Department of Enterprise, Trade and Employment, 2021). FDI supports growth of entrepreneurial endeavours across Ireland as it enables businesses to attract highly skilled workers and respond to the growing marketplace trends and needs. FDI has enabled Ireland to be in a position to attract a highly skilled workforce and develop existing human capital further.

Weaknesses

Although the entrepreneurial ecosystem in Ireland promotes and attracts highly skilled workers into Ireland, VET provision needs to provide more entrepreneurial courses to school leavers and those within the VET remits. Opportunities are being missed by the youth of today due to a lack of knowledge of supports available to them, especially when trying to establish their own enterprise.

The low level of corporation tax has also been criticized throughout the years for enabling International Multi-National Companies to operate on Irish soil and funnel profits back to their home countries, rather than reinvesting profits back into Ireland. Furthermore, this low level of corporation tax has resulted in many multinationals choosing to operate from Dublin. This has resulted in expansion of the Greater Dublin Region in the past ten years. Although there is a high level of Higher Education courses available on demand in this area, there is a skills shortage for skilled workers availing of level 4- 6 NQF courses due to the lack of vocational education providers in this region (Solás, 2020).

Digital Skills in Ireland





Introduction to Digital Skills of VET Learners

There is high evidence to suggest that a digital divide is currently occurring in Ireland. Solas identified that in 2018, 52% of the population did not have the basic digital skills needed to succeed.

The All-Aboard project consortium (2015) identified that whilst younger learners often use technology in their daily lives, there is an assumption that they should possess the required digital skills in order to transfer this to their learning endeavours. Although learners are using technology on a daily basis, this does not mean that they possess the capacities in order to analyse the quality and context of information they are presented with.

One of the major challenges faced by Irish VET learners, especially those from rural communities is the lack of broadband infrastructures in place. Learners from these areas are at a major disadvantage due to being unable to access online resources, therefore, are not in a position to develop their digital skills on a daily basis.

Available Schemes and Resources for VET Provision on digital skills for VET educators

The National Skills Strategy 2025 highlights the urgent need for Irish Education and Training providers to provide the necessary skills and development opportunities to match the needs of learners and the Irish economy. Two Government backed initiatives are supporting workers to upskill and reskill to ensure they have the skill set required for the future.

The Skills to Advance programme is a Government initiative which aims to support employees with upskilling and reskilling opportunities, to help them to progress within their current roles. Offered through education and training boards across Ireland, the Skills to Advance programme offers learners the opportunity to advance in their careers. Courses provided under the Skills to Advance programme are recognised under the Irish National Qualifications Framework up to level 6.

Springboard, an initiative by the Irish Government and the European Social Fund, offers a wide range of further and higher education courses on levels 6 – 9 of the National Qualifications Framework. Courses offered through the Springboard initiative are financially sponsored by the Irish government to upskill and reskill workers to match the needs of society. Springboard offer a wide range of accredited programmes in Business, Engineering and ICT related subjects.

Intersection of Entrepreneurial Skills, Digital Skills and VET in Ireland

The COVID-19 pandemic highlighted the growing need for Irish VET educators and trainers to upskill and ensure that they have the digital skills required to educate learners in online and blended learning environments. CEDEFOP (2020) report that VET teachers and trainers need to be supported in developing their digital competences in order to create and deliver digital learning materials; supported in queries they may have over copyright and data protection.

Best Practices

A wide range of programmes are currently offered across Ireland to develop the entrepreneurial and digital skills of adult workers, including VET educators.



e-College

e-College (<https://www.ecollege.ie/>) is an online training facility funded by SOLAS, which aims to provide learners who wish to learn in their own time, with a wide range of training and development options. A wide range of courses available include project management; information technology; graphic and web design and software development. This online education provider offers learners the possibility to engage in practice exercises and quizzes in relation to their chosen topic, and are guided towards professional accredited exams, such as the ICDL and the Microsoft Office Specialist examinations.

All Aboard

All Aboard: Digital Skills in Higher Education is a national project which presents some of the core elements of digital media and digital skills through a visually appealing map, based on the London Metro Map. This interactive online tool provides learners and educators with learning materials that they can use to develop their digital skills.



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Spain

Overview of VET Provision in Spain

The Ministry of Education and Vocational Training is in charge of proposing and shaping the general policy. It establishes the basic legislation on the Initial Vocational Education and Training System, guarantees equality and equity throughout the State, sets the officially recognised qualifications and their basic curriculum, and recognises, validation, and approval of foreign studies.

The autonomous communities (Regions) also have responsibilities in Initial VET and are in charge of the legislative development and management of education in their jurisdiction. They have executive and administrative powers to manage the education system in their own territory.

Vocational Training in Spain offers more than 150 training cycles within 26 professional families, with theoretical and practical contents adapted to the different professional fields.

Within each professional family, the following are offered:

- **Basic Vocational Training Cycles**, which lead to the corresponding Basic Professional Degree and is a compulsory and free of charge education.
- **Intermediate Level Training Cycles**, which lead to the title of Technician and are part of post-secondary compulsory education.
- **Advanced Level Training Cycles**, which lead to the title of Advanced Technician and are part of higher education.
- **Specialisation courses.**

Dual VET also exists, which was launched in the 2012/2013 academic year, and alternates teaching and learning processes in the company and in the educational center. This type of training has a greater development in the advanced level training cycles, followed by the intermediate levels and very little in basic vocational training.

The diplomas obtained after completing a Training Cycle are official and have the same academic and professional validity throughout the national territory, regardless of whether the studies are carried out in an Autonomous Community or within the scope of the Ministry of Education and Vocational Training.

According to the Organic Law 2/2006 of 3rd May on Education (LOE) there are 26 professional families, included in Table 4 below.

Table 4: The 26 Professional Families Based on the Organic Law 2/2006





Physical Activities and Sports	Administration and Management
Agricultural	Graphic Arts
Arts and Crafts	Commerce and Marketing
Building and Civil Works	Electricity and Electronics
Energy and Water	Mechanical Manufacturing
Hotel and Tourism	Personal Image
Image and Sound	Food Industries
Extractive Industries	Computers and Communications
Installation and Maintenance	Wood, Furniture and Cork
Maritime-Fishing	Chemistry
Health	Safety and Environment
Sociocultural and Community Services	Textile, Clothing and Leather
Transport and Vehicle Maintenance	Glass and Ceramics

The training of VET providers and teachers in Spain

According to the Organic Law 2/2006 of 3rd May on Education (LOE), to enter the Corps of Technical Teachers of Vocational Training, you must have the following qualifications:

(a) be in possession of the degree of University Diploma, Technical Architect, Technical Engineer or the corresponding Degree or other equivalent degrees for teaching purposes.

b) be in possession of the pedagogical and didactic training referred to in article 100.2 of the Organic Law 2/2006, of May 3, on Education.

Article 100.2: In order to teach in the different areas regulated in the present Law, it will be necessary to be in possession of the corresponding academic qualifications and to have the pedagogical and didactic training that the Government establishes for each teaching.



In a few words, a university degree, a master's degree in teacher training and a mandatory internship training period in an educational center are needed.

It is important to point out that in those positions corresponding to Autonomous Communities with their own co-official language, when the knowledge of this language constitutes a requirement for admission or access to job positions, the appropriate procedures may be established to accredit their knowledge.

According to Royal Decree 276/2007, of February 23, Regulations for admission, access and acquisition of new specialties in the bodies of teaching officials referred to in the Organic Law 2/2006 of 3rd May on Education:

For admission to the Corps of Technical Teachers of Vocational Training, for the specialties detailed in Annex VI of these Regulations, those who, although lacking the qualifications required in general, are in possession of any of the qualifications that, for each of them, are also listed in the aforementioned Annex VI, may be admitted.

Specialisation	Qualification
Kitchen and pastry	<ul style="list-style-type: none"> ● Superior Technician in Catering ● Specialist Technician in Hotel and Catering Business.
Aesthetics	<ul style="list-style-type: none"> ● Superior Technician in Aesthetics ● Specialist Technician in Aesthetics.
Manufacture and Installation of Carpentry and Furniture.	<ul style="list-style-type: none"> ● Superior Technician in Wood and Furniture Production ● Superior Technician in Product Development in Carpentry and Furniture ● Specialist Technician in Industrial Wood Construction ● Specialist Technician Cabinetmaker ● Specialist Technician in Wood ● Specialist Technician in Foundry Modelmaker ● Technical Specialist in Design and Manufacture of Furniture.
Vehicle Maintenance	<ul style="list-style-type: none"> ● Superior Automotive Technician ● Specialist Technician in Automotive Mechanics and Electricity ● Automotive Technician Specialist ● Specialist Technician in Maintenance of Construction and Works Machinery and Equipment.



Machining and Machine Maintenance	<ul style="list-style-type: none">● Superior Technician in Machining Production● Specialist Technician in Machinery Assembly and Construction● Specialist Technician in Micromechanics of Machine Tools● Specialist Technician in Micromechanics of Instruments● Specialist Technician in Measuring Systems Instruments● Specialist Technician in Tooling and Mechanical Assemblies● Specialist Technician in Weapons Mechanics● Specialist Technician in Mechanical Manufacture● Specialist Technician in Machine Tools● Specialist Technician in Tooling and Moulds● Technical Specialist in Quality Control● Specialist Technician in Micromechanics and Watchmaking.
Pattern making and tailoring	<ul style="list-style-type: none">● Superior Technician in Industrial Clothing Processes● Higher Technician in Pattern Making● Specialist Technician in Industrial Manufacture of Outer Garments● Specialist Technician in Industrial Manufacture of Undergarments● Specialist Technician in Ladies' Tailored Clothing● Specialized Technician in Production in Garment Industries● Specialist Technician in Tailoring and Dressmaking● Specialist Technician in Tailoring and Dressmaking.
Hairdresser	<ul style="list-style-type: none">● Superior Technician in Personal Image Consulting● Specialist Technician in Hairdressing.
Graphic Arts Production	<ul style="list-style-type: none">● Superior Technician in Production in Graphic Arts Industries● Specialist Technician in Composition● Specialist Technician in Binding● Specialist Technician in Printing● Specialist Technician in Graphic Processes● Technician Specialist in Photomechanical Reproduction● Specialist Technician in Graphic Arts Composition
Catering Services	<ul style="list-style-type: none">● Superior Technician in Catering● Specialist Technician in Hotel and Catering Business.
Welding	<ul style="list-style-type: none">● Superior Technician in Metallic Constructions● Specialist Technician in Metallic Constructions and Welder● Specialist Technician in Welding● Specialist Technician in Welded Fabrication



	<ul style="list-style-type: none">● Specialist Technician in Structural Sheet Metal Fabrication● Specialist Technician in Naval Construction● Specialist Technician in Naval Tracing
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VET teachers also can spend training periods in companies, both in those located in Spain and abroad. The main objective of these placements is to strengthen the relationship between teachers, the labour market and the business world, and to improve the technical training of VET teachers by combining scientific and technical knowledge with knowledge of the different business techniques of production organization, personnel management, process analysis, etc.

Main stakeholders providing VET and Certifications

Regarding vocational training providers, the following types of centres can be distinguished:

1. Centres of the public character, private, may or may not receive public funding, and with authorization from the competent educational administration.
2. Integrated training centres that offer both initial vocational training of the educational system and vocational employment training.
3. National Reference Centers (NRCs), public institutions specialized in the different professional branches, are in charge of carrying out innovation and experimentation initiatives in vocational training.

All the centres can be found here: <https://www.todofp.es/que-como-y-donde-estudiar/donde-estudiar.html>

The NRCs are public training establishments at the service of the vocational training system (both in the fields of education and employment) to facilitate its competitiveness and quality and respond to changes in the demand for qualifications in the production sectors. They are distinguished by programming and executing actions of an innovative, experimental and training nature in the production sector assigned to them. They serve as a reference for the whole National System of Qualifications and Vocational Training to develop vocational training.

Their functions include analysing new training trends, experimentation and implementation, and promoting networks both with business and trade union organizations and with universities and technology centres. Located in the different Autonomous Communities (at least one in each region), they cover all the professional families into which vocational training is structured and promote the measures, projects and programs required to meet the needs of emerging and innovative sectors. Currently, there are 25 NRCs in operation, and the plan is to reach 52 (new NRCs are created according to the needs that arise in specific areas).



The value of VET Certifications for Employers in Spain

Companies prefer vocational training graduates over university graduates. The conclusion is drawn from a simple analysis of the unemployment figures: while for vocational training graduates, unemployment barely reaches 7%, for university graduates, this figure is close to 40% (data from January 2020). On the other hand, it should be taken into account that most of the available jobs are technical, so filling them with university graduates would mean overqualification.

For companies, participation in dual vocational training, which requires by law 33% of the educational time to be in the company, implies greater cooperation with the vocational training system to provide better adapted to their production and qualification needs. Large companies, business organizations and chambers of commerce are strongly committed to promoting this type of VET offering.

Large companies and organizations are betting on these professionals, among other reasons, because they work efficiently from day one with efficient training oriented to the real needs of companies. It is a way to attract talent and train them according to their policies and protocols. On the other hand, vocational training shows excellent room for manoeuvre, agility and flexibility when adapting and updating to the demands of the labour market.

Mechanisms and tools of quality assurance of VET

The first fundamental principle that presides over the Organic Law 2/2006, on Education, the Spanish national reference framework at the legislative level, proclaims the requirement to provide quality education to all citizens of both sexes, at all levels of the educational system. The Ministry of Education and Vocational Training aims to achieve quality vocational training that guarantees mobility, that supports the demands of innovation and the promotion of new emerging sectors and vocational training that is linked to local and territorial development and that, in short, becomes an engine of change, progress and welfare.

For several decades, educational centres have introduced quality management systems and models in their processes, thus recognizing their importance in vocational training in accordance with European standards. The public vocational training centres of several autonomous communities were forerunners in implementing such systems, and this concern has spread to the rest of the communities.

Each Autonomous Community has opted for implementing specific models or quality management systems under its own perspective, which has led to a high percentage of its public centres being certified or in the process of certification.



Being aware of the importance of Quality in Vocational Training in the 21st century and the need for coordination and a certain degree of homogenization at the state level, the Ministry of Education and Vocational Training began planning the national quality network in April 2007.

The General Directorate of Vocational Training of the Ministry of Education and Vocational Training, in collaboration with the Autonomous Communities, currently wants to promote a Quality Plan with the fundamental objectives of:

- The Spanish Quality Assurance Reference Framework for Vocational Training (following the European Quality Assurance Reference Framework).
- The launching of the Spanish Reference Network of Quality in Vocational Training of the educational system.
- The general objective of the Spanish Quality Assurance Reference Framework is to guarantee and improve the quality of Vocational Training in the educational system at the level of Systems (Administrations involved). Vocational Training Provider Centers, both in the area of competence of the Ministry of Education and Vocational Training and in that of the Autonomous Communities, responding to the needs at the national, regional and local level, to the European recommendations, and to those that may arise within the scope of the social partners.
- In this sense, strategic lines of action are proposed around the following axes:
 - To organize a quality coordination system that systematically safeguards and develops quality in teaching and educational services, both in pedagogical and administrative action.
 - To converge with the European recommendations regarding the European reference framework for quality assurance in Vocational Training in the educational system as established by the European Parliament and the European Council.
 - To implement the Spanish reference framework of quality assurance for Vocational Training in the educational system.

All these strategic lines are associated with specific actions and quality indicators that will contribute to achieving the objectives of the Spanish reference framework for quality management and the improvement of the vocational training system in Spain.

A critical review of the current needs and challenges of VET providers

VET providers are faced with various challenges and needs that urge to be addressed so that the VET sector develops further. The challenges of VET providers and the VET sector, in general, are as follows:



1. To continue to improve its image and social consideration.
2. To identify vocational training as an alternative and not a subsidiary educational system.
3. To provide a joint and planned training offer of VET according to the needs of the companies in the territory.
4. To design an orientation policy as part of the student's education and not limit it to informative talks.
5. Strengthen and cement the dual system as the basis of a VET that has in-company training with the help and guidance of the VET centre.
6. To establish policies that allow professionals to enter the classroom or that facilitate, in a sustained manner, the updating of teachers' knowledge. At this point, the collaboration of the company is essential.
7. To implement strategies that allow curricula to be updated quickly and dynamically.
8. To incorporate languages and transversal competencies in the curricula.\
9. To introduce the "culture" of digitalization as a mandatory competence.
10. To build a strong relationship between the University and VET.

A critical review of the current needs and challenges of VET learners

Two key problems need to be addressed to improve education: the sudden and significant drop in the access rate of intermediate-level training cycles recently and the persistent 40% of students who start these cycles and do not complete them. In the current situation of the health crisis, it is important to simplify and reduce the curriculum. It is important to learn less, but better. Reducing the curriculum significantly would leave time to work in the classroom on non-cognitive or transversal skills, as relevant as cognitive ones. A combination of online and face-to-face training, as well as the use of various methodologies (active and traditional), would also be interesting since the combined approach keeps students interested and at the same time exposes them to more beneficial learning methods, even more so for students who are lagging behind.

Table 5: SWOT Analysis of the VET Provision in Spain (2019 - Valencian Community)

Strengths	Weaknesses
<ul style="list-style-type: none"> • Vocational training in the Valencian territory allows students to participate in the productive fabric of their society • The existing offer is adapted in some territories to the existing needs with the complement of a 	<ul style="list-style-type: none"> • The catalog of degrees is not always adapted to the needs of the territorial areas (counties, functional areas); • Lack of resources (human and economic) and out-of-date equipment of the centers;



<p>growing offer of distance or blended learning courses;</p> <ul style="list-style-type: none"> • Some professional families stand out with cutting-edge scientific advances that have an impact on training and innovation capacity, with the Valencian territory having some centers of reference at a national level; • The existence of a multilingual training plan facilitates the creation of networks and relationships at an international and global level; • The development of internships in companies is positive, although there is room for improvement; • The teaching staff is open to searching for innovative solutions to improve the performance of the vocational training system. 	<ul style="list-style-type: none"> • Difficulty for the stabilization of staff; lack of professional experience of the teaching staff in the sector and weaknesses in their training in English; • Insufficient continuous training and constant updating of the teaching staff; • Difficulties in the design and management of in-company internships and Dual Training; • Lack of effective coordination between the Vocational Training of the educational system and other training modalities, especially training for employment; • Lack of aid for the mobility of VET students.
<p>Opportunities</p>	<p>Threats</p>
<ul style="list-style-type: none"> • Vocational training in the Valencian Region can benefit from the smart specialization strategy to articulate the medium-term training and labor needs of the territory; • The learning process of students and teachers can benefit from an updated business network in terms of resources, techniques and means; • There are training branches, such as cultural ones, which are in demand in the European environment; the possibility of establishing a network of centers in each professional family that could 	<ul style="list-style-type: none"> • The importance of VET is still not adequately valued in society and, in many cases, there is an unequal consideration of the different branches of vocational training, especially those of a cultural nature; educational agents are unaware of the strategy of intelligent specialization and the qualification levels and possibilities of VET; • Part of the business sector uses VET students as cheap labor and in some professional fields the corresponding Vocational Training





work together, with exchange of experiences, participation in inter-center projects, etc.	diploma is not required when hiring personnel.
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The Entrepreneurial Landscape in Spain

<https://www.todofp.es/profesores/formacion-innovacion/emprendimiento-en-fp.html>

Brief introduction on entrepreneurship in Spain

Recommendations and documents are currently available that appeal to public administrations, companies, educational centres and other interested parties to promote an entrepreneurial culture in education.

On the other hand, SMEs and the self-employed within the Spanish business ecosystem stand out for their quantitative and qualitative importance. Studies show that this type of company and entrepreneur precisely constitutes one of the main engines to boost the Spanish economy, given their ability to generate employment and their potential to create value.

The Law 2/2011, of March 4, on Sustainable Economic and Organic Law 4/2011, of March 11, complementary to the Sustainable Economic Law, has laid the basis for facilitating the path towards a new production model.

In this sense, there are several pillars where Vocational Training can act:

- increase work experience,
- manage to strengthen ties with the business fabric,
- align the needs of the business world with training in the educational centre,
- foster new skills
- boost the entrepreneurial spirit.

The entrepreneurial spirit is the transversal proposal to answer the need to develop education on entrepreneurship from the key competencies. Entrepreneurship education is the motor of future growth. It places in the hands of educational centres the responsibility of ensuring that new generations know how to evolve in this changing and uncertain world with versatile and flexible training that achieves a successful adaptation throughout their personal and professional career.

The Global Entrepreneurship Monitor (GEM) Spain Report indicates that the levels of entrepreneurial activity in Spain continue to be stable, although lower than the pre-economic crisis indices and still below the European average. The reality reflected in the GEM Report is that the motivation to undertake has changed. Spanish experts interviewed report that one



of the favourable factors for starting profitable businesses that add value to the market is entrepreneurial education and training.

Examples of entrepreneurship initiatives in Spain

IncuVET: the EU co-funded project IncuVET (2014-2016) envisages supporting and promoting an **innovative role for VET schools as local/regional hubs for entrepreneurship**, beyond the mere provision of start-up advice. VET schools are in a position to stir a multi-stakeholder process where local authorities, employers, start-ups, teachers and students come together to shape the way entrepreneurship education is embedded in the curriculum and collaboratively learn from each other, with valuable impact on the schools, the students, the market and the community as a whole.

Spain Skills: The Ministry of Education and Vocational Training organizes and promotes skills competitions that constitute a valuable, informative instrument of Vocational Training and a means to stimulate students, teachers and companies, as well as an exchange platform and a forum of debate on the evolution of professional standards, quality and innovation in the different productive sectors.

WorldSkills International and WorldSkills Europe are non-profit, non-governmental associations whose main activity is organizing biennial professional training competitions. Both organizations bring together leading professional training institutions, companies and professional associations from the various productive sectors, with the objectives of disseminating information and sharing knowledge on the evolution of professional skills, promoting quality, innovation and cultural exchange between competitors and experts from all over the world. Spain's membership of these organizations entails the biennial celebration of a national Vocational Training (Spainskills) championship, which serves to select the Spanish competitors who represent Spain in Europe (EuroSkills) and the world (WorldSkills) competitions.

Available Funding Sources and Schemes on entrepreneurship in Spain

Public administrations: some public institutions (e.g. municipalities, regions, and chambers of commerce) give support and advice to entrepreneurs. They help with the preparation of the business plan and resolve doubts regarding the financing that the startup needs. There are different items, grants and subsidies for entrepreneurs available.

Public and private banks: the Administration, through the Official Credit Institute (ICO), the European Investment Bank (EIB) and public banks, has implemented a series of financial support measures for SMEs with preferential loan lines with low-interest rates. Private banking has different financing plans for entrepreneurs.



Business incubators and startups accelerators: A business incubator is an organization designed to accelerate growth and ensure the success of entrepreneurial projects through a wide range of business resources and services that can include physical space rental, capitalization, coaching or networking (i.e. access to network contact). Business incubators are usually sponsored by private companies, government entities, or universities. Its primary purpose is to help create and grow young companies by providing technical and financial services.

Reciprocal guarantee companies (SGR): they are non-profit financial entities and specific scope of action (by regions or, to a lesser extent, sectors) whose purpose is to ensure access to credit for small and medium-sized companies and improve, in general, their financing conditions, through of the provision of guarantees before banks and savings banks, among others. SMEs benefit from these companies as they get the endorsement they need from the credit institution. The SGR responds, as guarantor, in case of failure, contributing to offering the study and monitoring of the operation's viability.

Available entrepreneurship teaching – stakeholders

The VET centers have outstanding competences when it comes to:

- promoting the entrepreneurial culture
- managing the employability of students by supporting and promoting self-employment as a possibility of insertion in the labor market,
- providing informations and advices to entrepreneurs,
- delivering a common professional module: Business and Entrepreneurial Initiative (EIE) in all the training cycles of medium and higher degree such as the creation and basic management of companies, self-employment, development of corporate social responsibility, promotion of entrepreneurial initiative, and innovation and creativity.

Following the recommendation to promote the practical methodology of entrepreneurial skills, a second professional module was implemented in all higher-level training cycles: the professional module of Project.

The professional module of Project following can be closely linked to the modules of EIE and Training in Work Centers. It requires the involvement of all the teachers who teach professional modules in the training cycle, especially in the second year.

This professional module aims to integrate the various skills and knowledge of all professional modules of the training cycle, considering the technological and organizational variables related to the degree in accordance with the characteristics of the specific work activity and with aspects related to professional practice. All this entails incorporating into the classrooms, with a high degree of innovation, the development of projects that can range from implementing processes or products, research projects, business creation and even critical



analysis of studies in the professional sector of interest or a bibliographic review among others.

Not only students must be trained. All VET teachers must also be prepared in the acquisition of values of the entrepreneurial spirit, offering common spaces in educational centers and establishing stable networks of collaboration with companies.

References: <https://www.todofp.es/sobre-fp/modulo-profesional-proyecto.html>

The Entrepreneurial Ecosystem in Spain

GEM Spain brings together more than 180 specialists in the field of entrepreneurship research from all over the country, who are integrated into an impressive national network of more than 1000 experts in entrepreneurship.²²

GEM focuses on individual entrepreneurs. Most companies in Spain start and are organized by a single individual, or a small group of individuals. This approach coincides with the socio-economic perspective of the GEM.

GEM employs a collection of primary data in a harmonized approach to measure entrepreneurship and the framework conditions believed to be conducive to entrepreneurship. This is essential for international comparisons

GEM understands the entrepreneurial initiative as a process. The GEM variables capture different elements of the entrepreneurial process, ranging from the recognition of opportunities and entrepreneurial intentions, to the characteristics of the nascent entrepreneurship and the consolidated company.

Strengths & Weaknesses of Entrepreneurship in Spain - SWOT Analysis

The Global Entrepreneurship Monitor (GEM) is an international observatory that analyzes the entrepreneurial phenomenon on an annual basis. It is the most important global network on entrepreneurship and aims to make high-quality information on entrepreneurship available to the widest possible audience.

The Global Entrepreneurship Monitor (GEM) Spain Report indicates that the levels of entrepreneurial activity in Spain continue to be stable, although lower than the pre-economic crisis indices and still below the European average

²² Observatorio del Emprendimiento de España (2020), Situación del emprendimiento en España ante la crisis del COVID-19. Análisis y recomendaciones, Available at: <https://www.gem-spain.com/wp-content/uploads/2020/06/Informe-GEM-Espa%C3%B1a-COVID19-2019-20.pdf>



The reality reflected in the GEM Report is that the motivation to undertake has changed. Spanish experts interviewed report that one of the favorable factors for starting profitable businesses that add value to the market is entrepreneurial education and training.

Digital Skills in Spain

From a Vocational Training perspective, the promotion of digitization for economic and social growth is proposed as a strategic line aimed at creating and maintaining a knowledge-based workforce. It is necessary to intensify the transformation of Vocational Training to facilitate the move towards a digital economy, the importance of which has become evident in this crisis.²³

To improve this situation, it is necessary to relaunch Vocational Training both in the education system and in continuous Vocational Training for citizens (before entering the labour market, during their stay in it and for their reincorporation in the event of loss of employment or reorientation of the career path). For this to happen, new technologies can be an effective tool and the need for training teachers and students how to use them, which has proved essential when education and training systems have had to shift towards resources technological. Intervention is needed in two areas, Vocational Training in the educational system and Vocational Training for employment, which is now beginning an integration process, in accordance with the assumption of competence by the MEFP.

In both areas, there is a common problem, the low rate of Vocational Training in Spain, both in the choice of these courses as a training itinerary, and in the investment of companies in training and individual participation in training and professional updating.

The levels of basic digital skills, according to the study “Spain 4.0. The challenge of the digital transformation of the economy”, are still lower than the EU average:

- Only 55% of people between 16 and 74 years old have basic digital skills (57% in the EU as a whole).
- The percentage of ICT specialists represents a smaller proportion within the workforce than that of the EU (2.9% compared to 3.7% in the EU).
- ICT graduates in Spain represent 3.9% of the total.
- Women ICT specialists only account for 1% of total female employment.
- In this situation, in 20% of the companies, no digital training is carried out, and in 62% of the companies that have offered it, less than 40% of their employees have received a course.
- Advanced skills such as digital culture (13%), web search optimization (11%) or open innovation (11%) are in the minority.

²³ <https://intef.es/>



Available schemes and resources for VET provision on digital skills for VET educators

The incorporation of digitization in the Catalog of Vocational Training qualifications acquires a determining role. This incorporation arises in two different planes of action: the digitization of the analog economy and the digital economy.

A) Digitization of the analog economy

We will focus on training for the automation of some production processes related to the treatment, transport and storage of information in sectors in which these activities are not the heart of the business. In these cases, the objective of digitization is mainly to increase productivity, essential in the process of economic and social growth. In these sectors, exponential innovation can be produced, if the appropriate training content is proposed to all students, basic technicians, technicians and higher technicians, and the appropriate instruments for the participation of workers are established, in parallel, to undertake training processes.

It is true that not all workers, especially older and less qualified workers, can be "re-qualified" for the new jobs required, which usually require very different training, skills or competencies, but many of them can be relocated in other activities within the company. These personnel adjustments are decisive to make economic reconstruction compatible with the social reconstruction of the country after the Covid 19 crisis.

Line 3.1. Incorporation of a training module on Digitization applied to the productive sector in all titles of the Professional Training Catalog, which guarantees the "added value" of the technician or senior technician in the company in this matter.

Line 3.2. Training offer of the Digitalization module applied to the productive sector for the unemployed and employed, within the framework of the new Vocational Training for employment competition. An action is proposed that will train 125,000 people annually for 4 years, through a 30-hour module of digitization applied to their occupation.

Line 3.3. Training plans "a la carte" for the digitization of company workforce. This "à la carte" Vocational Training offer and joint work with sectoral business associations will be essential to get this training to companies and their professionals immediately.

B) Digital Economy

It will include the productive part in which the main product that is exchanged is information. Digitization involves a deep transformation in processes, the ways of doing business, giving rise to disruptive technologies, to new ways of producing in a fully digitized environment.



Line 3.4. Offer of digital degrees in the next academic year 2020-2021 which will begin to offer the labor market, in the short term (less than a year), a relevant number of professionals trained in these subjects: Smart manufacturing / Digitization of industrial maintenance / Cybersecurity in production environments / Cybersecurity in IT environments / Signaling and railway telecommunications / Video games

Line 3.5. Design of new digital degrees. In the years 2020 and 2021, among other degrees, those already in design will be published: o Additive Manufacturing -3D- o Implementation of 5G infrastructures o Composite materials o Artificial intelligence and big data o Electric vehicles o Installation and maintenance of electrical infrastructures o BIM (Building Information Modeling)

Line 3.6. Modular offer of these specialization courses to the entire active population (unemployed and employed), linking with training and support for entrepreneurship and innovation.

Line 3.7. Design of a new Vocational Training plan for employment (as it affects the competences of MEFP), in the medium and long term, coordinated and evaluable, with the social partners, public administrations, companies, universities and institutes and Vocational Training centers. In its design and implementation, of maximum relevance in this period of economic and social reconstruction, all the actors involved (administrations, social partners, companies, unions, teachers, academics, ...) will participate and the combination of financing will be promoted. public and private, where possible.

Line 3.8. Training in digitization applied to the productive sector (specific to Vocational Training teachers) The improvement of Vocational Training teachings has the teachers as an essential lever.

The implementation of the training courses must have the support of the business community and the social partners. The participation of companies is essential to bring the cutting-edge technological aspects closer to the teaching staff in charge of teaching corresponding to the degrees in each productive area. In this sense, the training of teachers and trainers through company stays has to acquire a relevant weight. In addition, it is desirable that part of the training can be carried out outside the school itself, both within and outside our country, going to places where technology or service delivery is more advanced in a particular sector. It is also in this sense that companies, especially those with multinational implantation, play a very important role as partners in teacher training. It is planned to provide training to the 50,562 vocational training teachers in public centers, in a training module 30 hours.



References

https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/educacion/Documents/2020/220720-Plan_modernizacion_FP.pdf

For potential intersection between entrepreneurial skills, digital skills and VET, the following legislation is available:

- Organic Law 2/2006 of 3rd May on Education (LOE)
- Law 5/2002, of June 19, 2002, on Qualifications and Vocational Training
- Law 2/2011, of March 4, 2011, on Sustainable Economy.
- Royal Decree 276/2007, of February 23, 2007, which approved the Regulations for admission, access and acquisition of new specialties in the teaching specialties in the teaching bodies referred to in the Organic Law

<https://www.gem-spain.com/wp-content/uploads/2020/06/Informe-GEM-Espa%C3%B1a-COVID19-2019-20.pdf>

https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/educacion/Documents/2020/220720-Plan_modernizacion_FP.pdf

Interview Findings

Interview Questions

Introductory Question

1. **Could you please provide us with an overview of your work as a VET educator? For example, what are the subjects you teach, the age groups of learners, the current needs of VET learners, and the overall context of your classes' learning experience?**

Answer:

Interviewee 1:

Family: Community Service: Higher VET Child Education (18-30 years old) Modules: Self autonomy, health, and Communication.

Interviewee 2:

Family: Health: Modules Pharmacy and Para pharmacy) (upper-secondary VET) (16-20) formulation of pharmaceutical products, clinical biochemistry (higher VET) Clinical analysis (18-40)

Interviewee 3:

Module: Company and entrepreneurial skills in 2 families: Health and Community Service. Upper-secondary VET and Higher VET, ages from 16 to 50 years old.

Interviewee 4:

Family Administration and Management: Module "company in the classroom" (simulation of companies in the classroom and marketplace creation) Intermediate VET: 17-20 years old

**Interviewee 5:**

Family: Community Service: Communication support, internships, entrepreneurship. Age groups: From 16 years old to adults. Learners would need more exposure to the work life. This could be achieved by having several internships instead of just one.

Technology Use**2. Do you use technology when you teach? Give me an example. Do your learners use technology? How?****Answer:****Interviewee 1:**

Yes. Youtube, Kahoot, Socrative (gamified platforms), meet, google forms.

Interviewee 2:

For the Upper VET, we use power **point** and the classroom, whereas for Higher VET, we use mainly excel (office), youtube and video editing **programmes**.

Interviewee 3:

Yes. Google Meet

Interviewee 4:

Yes, specific software for accounting, invoicing and payslips. Office (manly excel).

Interviewee 5:

We all use google drive, meet, classroom and own school platforms.

Importance of Entrepreneurial Skills in VET (as defined in EntreComp)**3. What are some examples of learning activities you design for your students to promote an entrepreneurial mindset?****Answer:**

Interviewee 1: None

Interviewee 2: None

Interviewee 3:

It is vital, especially to promote pro-activity among learners. I use group dynamics to foster brainstorming of business ideas related to the student's fields.

Interviewee 4: The Module itself promotes an entrepreneurial mindset in students.



Interviewee 5: We all use, gdrive, meet, classroom and own school platforms.

4. How would training on entrepreneurial skills help VET learners? As a VET provider, do you think these skills are important in VET?

Answer:

Interviewee 1: They are essential for learners entering the labor market, however, students in this family not only lack entrepreneurial mindset but also dislike the entrepreneurial courses

Interviewee 2: These skills are very important; they would help learners to be better prepared for the labor market.

Interviewee 3: It is crucial, learners lack initiative and entrepreneurial spirit.

Interviewee 4: Learners would gain and boost self-confidence and self-esteem when entering the labor market. Very interesting.

Interviewee 5: Projects addressed to help dependent people: Setting up a company for in-home care, creating a nursing home for the elderly, or a day centre for dependents to come during the day.

Design and Development of Training Program

5. Have you developed a training program on developing the entrepreneurial skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Answer:

3. How would training on entrepreneurial skills help VET learners? As a VET provider, do you think these skills are important in VET?

Interviewee 1: No.

Interviewee 2: None.

Interviewee 3: We use already made questionnaires as a guide for students.

Interviewee 4: No. We buy a programmed from a VET provider, a foundation.

Interviewee 5: It will help learners to develop their personal autonomy, teamwork, proactivity, and innovation. These skills are necessary.



6. What are the main challenges you face when designing a new training program on entrepreneurial skills?

- **Do you feel that you have adequate support and resources to design and implement these programs?**
- **What would be 2 key characteristics of a good program to teach entrepreneurship? What would be some examples of activities that you believe will help learners build entrepreneurial competences?**

Answer:

Interviewee 1:

Yes. I lack the necessary knowledge. User-friendly, simple vocabulary, case studies with examples. Have entrepreneurs in their field come to school to talk about their experiences and alumni as well, creating an alumni network.

Interviewee 2:

No. The main challenges are my own entrepreneurial skills. We need a program adapted to the teachers for each area (the needs are different for someone doing VET in mechanics and health).

Interviewee 3:

Yes. The program needs to be easy and related to the specific family and the real labor market. Each learner writes a business plan with their idea.

Interviewee 4:

Yes. Adapted to the module, user-friendly. Present their business projects to the peer students and receive their feedback help them a lot. Also, the internships in companies.

Interviewee 5: No.

7. What are the main challenges you face when you perform training on building entrepreneurial skills?

Answer:

Interviewee 1: Time for preparation /studying, and appropriate knowledge.

Interviewee 2: It is too generic.

Interviewee 3: Availability, schedule, and they are usually too generalist.

Interviewee 4: I lack more contact and experience in a private company in order to better understand market needs.

Interviewee 5: I lack entrepreneurial skills.

8. Have you developed any online programmes? If yes, could you please explain how you developed it?

- **What format of delivery do you think is the best to build VET learners' entrepreneurial skills (face-to-face, blended learning, or online)?**

Answer:

Interviewee 1: I have worked with *kahoot* and *socrative* creating gamified activities. Blended learning.



Interviewee 1: No. Face-to-face
Interviewee 1: No. Face-to-face
Interviewee 1: No. Face-to-face
Interviewee 1: No. Blended learning.

VET Educators' Training

9. Have you participated in any training on how to develop VET programmes on building entrepreneurial skills?

- **If yes, how satisfied do you feel with the training?**
- **Do you have adequate support and resources to develop programs on entrepreneurial skills?**
- **If answering no, would you be interested in training in this area or on this topic into the future?**

Answer:

*Yes, yes, no, no.

*No, -, no, yes.

*No, -, yes, -.

*Yes, very satisfied, I receive support from colleagues.

* No, I would be interested in learning more about it.

Importance of Digital skills (as defined in DigComp) in VET

10. What are some examples of learning activities you design for your students to promote digital skills?

Answer:

* Recording and editing videos, themed Tic Tok videos, create questionnaires using gforms, and presentations using prize.

*Use of classroom, power point for presentations, video recording and editing, social media.

* Not my area, I do not design any.

* None. I use what is available in the market.

* We record a meeting and students need to edit the video with subtitles, music, etc. Make presentations, students are very autonomous and independent on that.

11. How would training on digital skills help VET learners? As a VET provider, do you think these skills are important in VET?

Answer:

* Very important, to find a better job, design a creative curriculum and as an asset for Life-long learning.

* Yes, they would increase their knowledge and narrow the gap between school and real world of work.

* They are necessary, not only for the labor market but for their own lives, we live in a digitalized world.

* Very important for learners these days. It would help be enter the labor market with better jobs.



* It would help students to stay up to date with market tendencies

Design and Development of Training Program

12. Have you developed a training program on developing the digital skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Answer:

* Yes, to create a blog using wordpress, blogger and other different existing platforms.

* I have not developed any programs, however for High VET courses we use mainly excel for graphs, charts and data.

*No.

*No.

*No.

13. What are the main challenges you face when designing a new training program on digital skills?

- Do you feel that you have adequate support and resources to design and implement these programs?
- What would be 2 key characteristics of a good program to teach digital skills? What would be some examples of activities that you believe will help learners build digital competences?

Answer:

*-, No, Easy to understand and adapter to the course, Technical know-how is the grates challenge.

* The space is one of the main challenges: we do not have enough computers and neither IT classrooms, the curriculum is too tight as well and we do not have a lot of freedom. A good program would be specific to the course and applying in real world situations what students are learning.

* Not my area, I lack knowledge.

* Not my area of expertise.

* It must relate to the subject content and must be easy to adapt to each group.

14. What are the main challenges you face when you perform training on digital skills?

Answer:

* The Help icon is not real help, there should be a chat and a good tutorials made by the providers not the end-users on youtube.



- * I lack basic knowledge myself.
- * I lack knowledge.
- * I have not done any.
- * I do not do training on digital skills.

15. Have you developed any online programmes on digital skills? If yes, could you please explain how you developed it?

- **What format of delivery do you think is the best to build VET learners' digital skills (face-to-face, blended learning, or online)?**

Answer:

- *No, blended learning.
- *No, Face-to-face.
- *No, Face-to-face.
- *No, Face-to-face.
- *No, blended learning

VET Educators' Training

16. Have you participated in any training on how to develop VET programmes on building digital skills?

- **If yes, how satisfied do you feel with the training(s)?**
- **Do you have adequate support and resources to develop programs on digital skills?**
- **If no, would you be interested in training to develop your own pedagogic and technical skills?**

Answer:

- *No, -, no,no.
- *No, _ , no, yes.
- *No, _ , yes, not my area of expertise.
- *No, -, no,no.
- * Yes, I have attended an online gamification course which was very satisfying.

Cyprus

Overview of VET Provision in Cyprus

Cyprus has started placing greater focus on VET throughout the years. The economic crisis of 2013 had significant consequences, among which is high unemployment. This has adversely affected Cyprus' lifelong learning strategy for 2014-2020, which included promoting the system of lifelong qualifications, increasing the attractiveness of vocational education, and offering more job placement to unemployed people (Cedefop, 2014). The lifelong learning strategy was approved in 2014 for the period 2014-2020, of which VET forms a significant part (DG EPCD, N.D.; Korelli, et al., 2019).

The National Qualifications Framework (CyQF or NFQ) has been created to recognise the academic and vocational qualifications gained in Cyprus. The NFQ was sent to the European Qualifications Framework (EQF) Advisory and was approved (Korelli, et al., 2019).

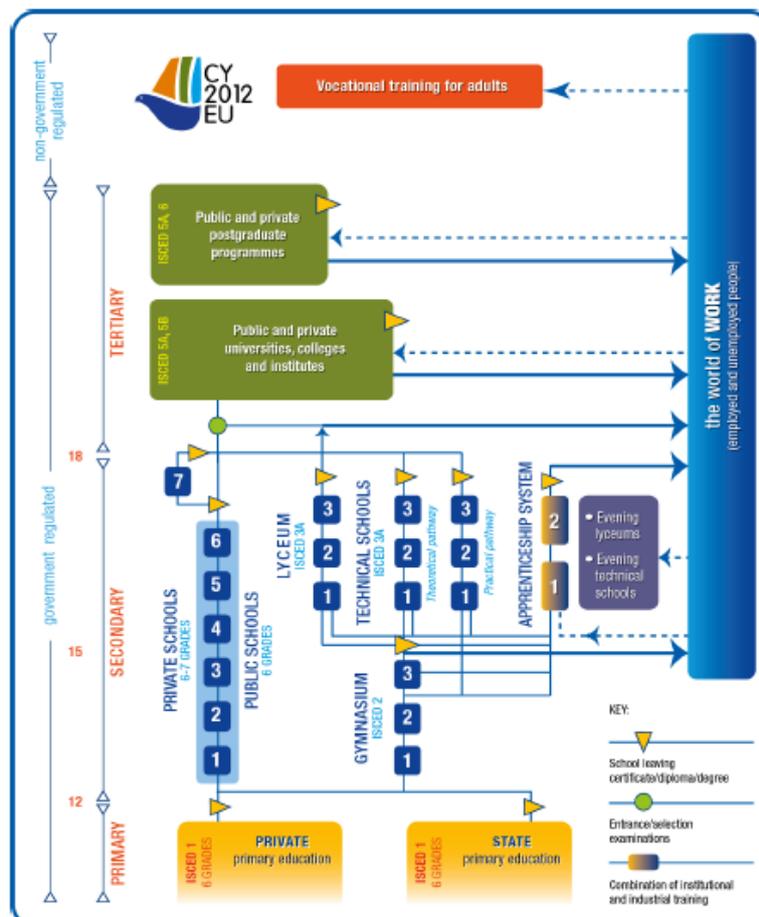


Figure 1: Education and Training System in Cyprus (Cedefop, 2012, p. 17)

VET can be found as early as upper secondary level through technical schools, including the evening technical schools. At the same time, apprenticeships are also offered for students of grades 8 to 10 who leave the formal education system (Cedefop, 2012). Finally, VET can also



be found at the tertiary level, provided by public and private institutes/colleges (Cedefop, 2012).

The Training of VET Providers and Teachers in Cyprus

The HRDA has adopted the System for the Assessment and Accreditation of Training Providers, which sets the criteria and procedures to assess and accredit vocational training centres and facilities, and trainers become certified through the System and based on the qualification “Trainer of Vocational Training” (HRDA, 2018). The development of the System for the Assessment and Accreditation of Training Providers took into consideration the European Quality Assurance Reference Framework for Vocational Education and Training (HRDA, 2018).

The Cyprus Pedagogical Institute also provides courses for appointed VET head teachers with one week courses (Cedefop, 2020). It also collaborates with the directorate of secondary technical and vocational education and offers training programs on different subjects (Cedefop, 2020).

Main Stakeholders Providing VET Education and Certifications

The provision of VET and certifications is mainly the responsibility of bodies such as the HRDA, the Ministry of Education, Culture, Youth and Sports, the Ministry of Labour, Welfare and Social Insurance, other ministries and public institutions, as well as private institutions (DG EPCD, N.D.).

VET opportunities exist for both people who have not completed secondary education and people who have. Those who have not completed secondary education have the option to attend evening technical schools. The program offered by evening technical schools is equivalent to the program offered in morning classes of technical schools, lasts four years, and provides a certification upon completion, which is equal to that offer by technical schools (DG EPCD, N.D.).

The evening schools also offer a one-year program to individuals who have completed secondary education. It helps unemployed people gain skills to help them enter the job market as specialized workers and offer them a certification (DG EPCD, N.D.). More VET opportunities for employed and unemployed people are offered by stakeholders included below.

Human Resources Development Authority (HRDA) (in Greek: ANAD)

A body that plays a significant role in the provision of VET education and certifications is CyHRDA (ANAD). It offers lifelong learning opportunities through training programs to people who are employed. The HRDA provides programs targeted to specific populations such as the unemployed, young graduates without job experience, and unemployed women. The HRDA



provides subsidies to those interested in taking part in its programs. It also conducts studies to identify the needs skills that the industry needs and identify trends and make predictions regarding employment (Cedefop, 2012).

Cyprus Productivity Centre (in Greek: ΚΕΠΑ)

The Cyprus Productivity Centre is under the responsibility of the Ministry of Labour, Welfare and Social Insurance (MLWSI), and it offers short programmes for people employed in technical and management domains and the HHIC that offers courses for those employed in the hotel and restaurant sector (Cedefop, 2018).

Participants who have attended at least 75% of the program are given Certificates of Attendance (ΚΕΠΑ, 2021). The Cyprus Productivity Centre is also offering free workshops on Europass through the National Europass Centre.

PSIVET (in Greek: ΜΙΕΕΚ)

Education and training at the post-school and pre-university level are offered through PSIVET programs (DG EPCD, N.D.). PSIVET is a co-financed project by the European Social Fund and the Republic of Cyprus, offering education and training programs that have a duration of two years (DG EPCD, N.D.). The programs take place at the facilities of the Technical and Vocational Schools of Education and Training in the provinces of Nicosia, Limassol, Larnaca and Paphos.

The programs provide education and training in different areas. For the year 2020-2021, ΜΙΕΕΚ provides the following programs: Bakery – Pastry Making, Electromechanical- Cooling Installations in Industry, Dairy Farming – Cheesemaking, Industrial and Home Automation, Culinary Arts, Purchasing and Procurement Management – Shipping, Organic Horticultural Crops, Computer and Communication Networks, and CNC Technology - Carpentry Industry (ΜΙΕΕΚ, 2021).

The Value of VET Certifications for Employers in Cyprus

Although VET is less attractive for young people, the number of those enrolled in VET has increased over the years. The percentage of students enrolled in upper secondary education pre-vocational, and vocational programmes have increased. For the year 2010-2011, the percentage of students enrolled was 12.7%, while for the year 2016-2017 reached an estimate of 16.7% (Korelli, et al., 2019).

Qualifications are important since they aid individuals to enter regulated occupations (Cedefop, 2012). As it was previously mentioned, the HRDA uses two systems for certifications. The System of Vocational Qualifications (SVQ) is relevant for employers in Cyprus as it falls under the National Qualifications Framework (HRDA, 2018).



Mechanisms and Tools of Quality Assurance of VET

In May 2017, the establishment of the National Qualifications Authority was agreed, as a means of improving the quality assurance systems in education and training (Korelli, et al., 2019) and the authority will undertake relevant activities to achieve this goal.

Vocational training programs need to be approved by the HRDA. The HRDA uses two systems for certifications, the System for the Assessment and Accreditation of Training Providers and the System of Vocational Qualifications (SVQ) (HRDA, 2018). The HRDA subsidises programmes and evaluates their quality at the approval stage, the programme implementation stage and the payment of subsidy stage (Korelli, et al., 2019).

The SVQ falls under the National Qualifications Framework (CyQF), and it uses the level descriptors of the EQF for comparison purposes (HRDA, 2018). From 2015 and onwards, it has been compulsory for those who want to collaborate with the HRDA on training activities to be accredited through this system. A total of 72 vocational qualifications have been developed until 2018 by the HRDA with the contribution of other stakeholders (Korelli, et al., 2019).

For secondary and tertiary education, an inspector is responsible for overlooking the implementation of the IVET curricula (Korelli, et al., 2019). The responsible bodies for accreditation, recognition and quality assurance of tertiary education in Cyprus are the [Cyprus Council for the Recognition of Higher Education Qualifications](#)²⁴ and the [Cyprus Agency of Quality Assurance and Accreditation in Higher Education \(CYQAA\)](#).

Current Needs and Challenges of VET providers

A study has identified the need for green skills in Cyprus for the period 2017-2027, and such a study can be useful to private and public bodies in the education and training sector in Cyprus, as well as those who are engaged with human resources or guide youth on vocational aspects (HRDA, 2018).

SWOT Analysis of the VET Provision in Cyprus

A SWOT Analysis of VET is possible based on EU reports and the strategic planning of VET by the Ministry of Education and Culture. Selected strengths, weaknesses, opportunities and threats are included in the table below. More detailed information and a SWOT analysis for all the programs that the Ministry of Education offers can be found in the Strategic Planning document (Ministry of Education and Culture, N.D.).



Table 6: SWOT Analysis of VET Provision in Cyprus

Strengths	Weaknesses
<p>Based on (Ministry of Education and Culture, N.D.):</p> <ul style="list-style-type: none"> • Successful entry of VET learners into higher education and the job market. • Learners obtain a high school diploma by studying at technical schools, which is equivalent to the Lyceums award. • Technical Schools have modern infrastructure, equipment and teaching material. • Education and training is targeted at specific professional knowledge, skills and abilities, but there is also a focus on horizontal skills. • Information and Communication Technologies (ICT) are extensively used. 	<ul style="list-style-type: none"> • Attracting people to engage in lifelong learning and increase their participation in VET (Cedefop, 2012). • Lack of systems/mechanisms to monitor employability and, more generally, the trajectory of graduates that would allow continuous improvement (Ministry of Education and Culture, N.D.). • Lack of improvement mechanisms would make Vocational Education Training programs more relevant to the labour market (Ministry of Education and Culture, N.D.). • Restricted ability to offer certain programs in some provinces or regions since the number of technical schools that operate there is too small (Ministry of Education and Culture, N.D.).
Opportunities	Threats
<ul style="list-style-type: none"> • Great focus on an EU-level VET can be inferred from the agenda (European Commission, 2020). • The society in Cyprus has started realizing the value of VET and the opportunities it offers for employment (Ministry of Education and Culture, N.D.). • A new platform is underway to enable IVET and CVET learners to be updated about job vacancies and many more (Theocharous, 2020). 	<ul style="list-style-type: none"> • The concentration of technical schools at city centres discourages learners from living in rural or other areas (Ministry of Education and Culture, N.D.).

The Entrepreneurial Landscape in Cyprus

Various initiatives have been proposed by the European Commission to boost the key competences of people in Europe. The European Commission set a proposal that builds on the Recommendation on Key Competences adopted in 2006 and emphasises building the entrepreneurial mindset (European Commission Representation in Cyprus, 2018).

According to the National Report 2017/18 on Entrepreneurship in Cyprus by the Global Entrepreneurship Monitor, Cyprus shows that 51% of adults consider that opportunities to start an entrepreneurial activity are favourable – a higher number compared to the previous



year (Centre for Entrepreneurship, 2018). In 2018, the average founding age of entrepreneurs island-wide was 36 years old (Doluay, et al., 2020). For 2013-2017, 19.9% of Cypriots were more likely to anticipate creating a business in the future compared to the EU average of 12.6% (OECD, 2018). However, for the same period, 58.1% of Cypriots said that an essential barrier for them is that they are feared failure, whereas the EU average was lower at 46.2% (OECD, 2018).

Cyprus has successfully attracted people with an entrepreneurial spirit, and it continues to offer an attractive environment for entrepreneurial activities as it offers a wide variety of incentives. Few notable ones include the corporate tax rate of 12.5%, one of the lowest in the EU, the rental office rates, which are among the lowest in Europe, and high protection for investment and intellectual property (Invest Cyprus, 2021).

Beyond the incentives available for Cypriots, many incentives are in place to attract talent from other countries. An incentive that attracts talent from non-EU (European Union) and non-EEA (European Economic Area) is the Startup Visa (Deloitte Innovation and Entrepreneurship Centre, N.D.).

Policies and Strategies on Entrepreneurship

According to OECD (2018), the Government of Cyprus adopted the “National Policy Statement for the Enhancement of the Entrepreneurial Ecosystem” in 2015 to increase the entrepreneurial mindset and reinforce the entrepreneurial ecosystem with a focus on five pillars:

- “cultivating the entrepreneurial culture;
- improving the business environment;
- enhancing the entrepreneurial innovation;
- facilitating access to finance;
- and improving access to markets.”

At present, no policies regulate the recognition or validation of the entrepreneurial learning that takes place in non-formal and informal learning (EACEA, 2021).

Main stakeholders in Cyprus on Entrepreneurship

The CYPEF is a fund set by the Government of Cyprus to support SMEs by giving them access to finance, and it is available from the European Investment Bank (EIF, 2021). The EIB has been working with Cyprus since 1981 and invested € 4.56 (EIB, 2021a). A currently available project is the Cyprus Entrepreneurship Scheme II, which involves a loan being offered to address the needs of SMEs and midcaps, aiming to increase their competitiveness and access to finance (EIB, 2021b). The approximate amount of 200 million EUR will contribute to the Cyprus Entrepreneurship Fund (CYPEF), and it will be administered through a selection of banks in Cyprus (EIB, 2021a).



The Cyprus Business Angel Network (CyBAN) is the only network in Cyprus that consists of angel investors and connects them with successful startups. CyBAN has reviewed 610 business plans and invested €4.75M up to this point (Cyban, 2021). Startups can also join incubators such as Idea and Aris.

Other activities include launching a scheme by the Youth Board of Cyprus that aims to increase entrepreneurship among young people aged 20 to 39 (Youth Board of Cyprus, 2021). The Cyprus Employers and Industrialists Federation (OEB) services and organizes activities that aim to increase the business opportunities of Cyprus-based companies both in Cyprus and international markets. Their activities include, among others, trade fairs, inviting delegations from other countries and organizing conferences in Cyprus and other countries (OEB, 2021).

There is no specific authority or organisation offering VET training on entrepreneurial skills. However, many nongovernmental organisations run projects that target this need. For example, Emphasys runs a project called [ENTRE@VETSCHOOLS](#), with a particular focus on career development. CARDET is also running projects on VET, such as AppHop, which develops training material that makes users engage with breakout challenges and helps VET tutors include the project's resources into their training. Another project is PromoVET that aims to modernize VET training for young, low skilled learners.

[Innoventer](#) is another initiative that brings VET and entrepreneurship together. It aims to create programs on social entrepreneurship in line with ECVET, and the Cyprus Chamber of Commerce is part of the partnership.

The HRDA subsidises any training programmes run by private institutions/organisations. The Cyprus Pedagogical Institute offers training on the entrepreneurial and communication skills of teachers.

The Entrepreneurial Ecosystem in Cyprus

As previously shown, Cyprus has many initiatives in place to attract both talents from Cyprus and other countries to undertake entrepreneurial activities. However, certain aspects of the entrepreneurial system are better than others. To provide an overview of the entrepreneurial ecosystem in Cyprus, a SWOT analysis is presented.

Table 7: SWOT Analysis of the Entrepreneurial Ecosystem in Cyprus

Strengths	Weaknesses
As stated in (Polyviou, et al., 2020):	As stated in (Polyviou, et al., 2020):



<ul style="list-style-type: none"> • The physical infrastructure in Cyprus is advanced • Commercial and Services Infrastructure • Government policies • Ease of entering new markets • Family Business • Digital Platform use 	<ul style="list-style-type: none"> • Entrepreneurial education and training • Government entrepreneurship programs • Financial environment for entrepreneurship • Cultural and social norms • Cost of new market entry • Research and Development (R&D) Transfer
Opportunities	Threats
<ul style="list-style-type: none"> • Gender-Smart Finance Initiatives InvestEU Program (Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, 2021) • European Social Funds Plus 2021-2027 (European Parliament Think Tank, 2019) 	<ul style="list-style-type: none"> • Cyber Risks for online business (World Economic Forum, 2021)

Digital Skills in Cyprus

Based on the Digital Economy and Society Index (DESI) 2020 Ranking, Cyprus ranks amongst the five lowest countries regarding performance (DG CONNECT, 2021). According to the Digital Scorecard of the European Commission, only 43% of those employed use computers at work (as a percentage of the total employment) in 2019, which is lower than the EU average (EC, 2019).

To respond to the shortage of digital skills in Cyprus, a National Coalition for Digital Jobs - Grow Digital CY was launched with actions targeted at education and training, certification and awareness, which will be overlooked by a Committee under the supervision of the Digital Champion (DG CONNECT, 2015).

The needs of the VET system in Cyprus will also benefit from the new industrial strategy for Cyprus. One of the pillars of this strategy is the digitalization of industry that will involve a technical review by various stakeholders. It will include statistical data, which will allow VET systems to adapt to the new demands (Theocharous, 2020).

Available schemes and resources for VET provision on digital skills for VET educators

PROMOVET, a project that brings digital aspects to learning, and offers VET training to low skilled young adults through ICT use (CARDET, 2020). A specific project that is targeted at VET and digital skills is Digital inclusion



Few schemes are found to be targeted at building the skills of migrants. However, they do not necessarily fall under the responsibility of VET centres.

The HRDA offers schemes on CVET, one of which is offering single-enterprise training programs where employees of the participating organisations get knowledge and skills that are important in innovation introduction, new technologies and more technical aspects (Theocharous, 2020). Among the priorities in the current schemes of HRDA are digital skills and ICT topics (Theocharous, 2020).

The intersection of Entrepreneurial Skills, Digital Skills and VET Provision in Cyprus

Although several initiatives are taking place in terms of entrepreneurial skills or digital skills in VET, their intersection is not usually found. The intersection of digital skills and entrepreneurship can be found in strategy reports. For example, the digital strategy for Cyprus that was put into practice in 2012 includes digital entrepreneurship among its targets (joinup, 2018).

Available Programs/Schemes for VET Educators

VET educators have the opportunity to attend trainings on developing their digital or entrepreneurial skills. Most of these programs are offered by the bodies mentioned in previous sections of this document. However, there have not been any trainings that target both entrepreneurial and digital skills simultaneously to our knowledge.

Certifications and Recognition

Certifications and Recognition are available for VET educators. However, to our knowledge, there are no certifications that specifically recognise VET educators' entrepreneurial and digital skills.



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Interview Findings

Interview Questions

Introductory Question

Could you please provide us with an overview of your work as a VET educator? For example, what are the subjects you teach, the age groups of learners, the current needs of VET learners, and the overall context of your classes' learning experience?

Informant 1:

The Productivity Center (KEPA) offers education / training in matters of Managerial Development (to executives and non-executives) and Technical Vocational Education / Training (to technical staff and mainly as continuing training). The learners / trainees at KEPA are adults. The current needs of VET trainees (in addition to the traditional professions) are mainly in matters of Green Development and Electronic / Digital Skills. And the general context of the learning experience of our classrooms is from absolutely basic to quite high. The subjects taught (although not with the same frequency) are Mechanical, Welding, Electrical, Building, Hydraulics and more...

Informant 2: There are two groups of programs: single-business or multi-business. Based on their regulations those who are allowed to be subsidized. The self employed are excluded and public authorities because they don't pay the fees for human development so they are excluded from these benefits.

They also offer opportunities to the unemployed. The age groups are 16+, those who can legally work. The programs depend on the needs of the businesses. The single-business ones are to satisfy the specific needs of the organisation. The multi-business programs are submitted by KEK (Κέντρα Επαγγελματικής Κατάρτισης – Centres for Vocational Training) that are certified by HRDA to provide vocational education training. This happens twice per year. A needs analysis of the economy of the country is done and then it is decided what programs will be subsidized.

Informant 3: The informant is responsible for various programs at his/her organisation. The majority of learners are under 25, but there are people who are around 28-29 and there are also people who are at the age of 40 or 55. Those of the latter age group are working at the same time in either another industry or in the industry they study, and the other group are those who just finished high school and they do not have experience.

Informant 4: The informant is a certified trainer by HRDA. He/she has also participated in a European program regarding learning outcomes. The informant is also in the VET field for many years.

Informant 5: The age groups vary. A project that the informant was involved in a VET project for smooth transition of people in the job market, the age group varied (20, 30, 40 years old). The greatest needs the informant has identified were the vulnerable groups, meaning the asylum seekers. Asylum seekers were the most willing to register to this project, although



the project was trying to address people of different types of third countries. However, when someone has access to shadow economy it is different. The amount of money they get (e.g. 1200, 1500) and then you tell them to join a vocational training and get 800. People who have official documents and a status, they have a community to help them. There are also language courses. However those groups have issues with the language, but they are not that concerned with entering the job market.

A challenge is identifying people, if the government cannot identify them cause they are asylum seekers and they don't receive an allowance and they do not have an official contact with the government, then the gov does not know where they live or giving them an incentive to show up. And these have effects such as thinking that it is not worth to be found for 500 euros.

Technology Use

2. Do you use technology when you teach? Give me an example. Do your learners use technology? How?

Informant 1:

Extensive use of technology is made where and when needed / appropriate. Apart from the usual audiovisual means of lectures / presentations (projectors, computers, internet use, etc.), all KEPA laboratories are equipped with modern machines / devices for the implementation of the programs. For example, the welding workshop is a modern and well-equipped workshop for all types of welding and the trainees spend a large part of their training in it, for practical training. KEPA also has the only Virtual Reality Workshop on our island for education / training purposes.

Informant 2: There are thematic areas of the programs and one of them is technology and it has many sub-areas. Technology is integrated in other programs as well, eg.. marketing as digital marketing. They place an emphasis on digital skills since Cyprus ranks low on digital skills. They are trying to improve the digital skills of the workforce and they have programs that promote the digital skills of older people. There are specifically designed programs to increase the digital skills of people who are over 65 years old.

Informant 3: COVID-19 has helped them with distance online learning and it has worked well and the informant thinks that the changes will remain. They work with e-learning platforms, specifically Moodle, where they add resources such as papers, they can read announcements, the lecture notes, exercises, the do their midterms through Moodle. It is the major tool they use.

The informant conducts his/her programs completely online and work with MS Teams. They, as educators, are trying to adapt and their organisation is trying to train them. Not all are equally trained and maybe people who are not permanent staff and work part-time they might not be in a position to learn something entirely new. Students have also learned how to do online courses. They have adapted to it because if they don't then they cannot follow their courses. The informant thinks that both the educators and the students need further improvement. Before covid-19 technology was used much less.



Informant 4: Technology has been used for many years, e.g. powerpoint and to make their assignments. Due to covid-19, in 3 days they set up a system for online learning. They use Moodle and Teams to do the online courses. Some took it in a positive way while others not.

Learners now compulsory use technology. The informant brought an example of a learner who for 5 years has said that he/she does not know how to use technology. The informant mentions that although we use technology on a daily basis, when it comes to educational purposes technology is not used that much. Some are reluctant when it comes to online and some prefer face-to-face. However, the informant thinks that they were not adequately trained and the change came suddenly for them.

Informant 5: When the individual started working at the college most students did not know how to use the email, or they were trying to make social media accounts and they would forget the password. The college did not have infrastructure, they did not have Moodle. Students did not have the skills of making a ppt presentation, or perceptions of visual language to promote ideas. The informant then helped them set up an email. Students were hesitant and saw it as if they had extra work. It is usually young people who work at the same time and self-fund themselves.

The classes they offer are broken down into morning and afternoon classes. The other category of students they have are people who have professions that are more fixed such as firefighters, police officers, public officers, nurses etc and there is a trend where many do a business degree or an MBA and they receive credits and then are able to get a promotion. Thus time-constraint is a problem for them, their time is limited to be part of a program and also they have been out of the job market, they might have some contact due to public private relationships, but things might be different when they have a secure job. This might make them lack the reflective skills, the entrepreneurial skills, to be able to understand new methods, to have transferrable skills.

Importance of Entrepreneurial Skills in VET (as defined in EntreComp)

3. What are some examples of learning activities you design for your students to promote an entrepreneurial mindset?

Informant 1:

Where possible, Management Development programs include activities in real working conditions (eg workshops, or teamwork) or even internships in companies / organizations to gain work experience. In the Technical Vocational training programs aimed at the self-employed, there is usually some reference and discussion of topics of Entrepreneurship, Marketing and Sales and Quality.

Informant 2: Answer included in Question 4.

Informant 3: For example, there is a course about communication e.g. body language, shaking hands, having a conversation. The person who does this is a professional in the



space. They also have seminars about how to behave during an interview, or bringing an HR person in class to give advice.

Informant 4: For examples see question 4 and question 5.

Informant 5: N/A.

4. How would training on entrepreneurial skills help VET learners? As a VET provider, do you think these skills are important in VET?

Informant 1:

Business skills are included in the initial training programs offered by KEPA and, as mentioned above (Q.3), in programs aimed at the self-employed. These issues, we believe, are very important especially for young people who envision creating their own business. That is why they should be taught separately and not in the context of a short training program in another subject. As VET providers, we believe that the acquisition of such skills is very important for the development of entrepreneurship in Cyprus.

Informant 2: The informant does not define entrepreneurial skills as only the skill of starting and running a business. The informant has a broader definition and thinks that entrepreneurial skills involve personal skills such as communication skills, EQ, innovation, creative thinking, critical thinking. The informant thinks that all of these form entrepreneurial skills.

These programs are in all thematic areas. The informant mentions that in the horizontal or personal skills were not subsidized, such as communication, EQ, stress management, time management etc. but from now these are again included and are important as a basis for entrepreneurial skills. The informant thinks that these skills are needed for all educators and that entrepreneurial skills are the basis for every step in either professional or personal life. These skills are needed regardless of the rank and sector they are working or would like to work.

Entrepreneurial skills however might be needed more for people who are dealing e.g. with topics of innovation, creation of new products or services. These skills are needed for everyone but for certain people who are going to be the innovators and who are going to open horizons and pave ways, for those they are necessary. They have programs that have been mentioned that cover these skills. A category are the multibusiness vital programs. In this category of programs it is possible to say that entrepreneurial skills are present.

Informant 3: The nature of the program is for professional studies then the entrepreneurial aspect is directly related. The informant expresses that he/she is not certain about what entrepreneurial skills are and mentions that these skills might be different than professional skills. The informant thinks that entrepreneurial skills are skills related to management, organisation etc. The four year program they offer includes these to a greater degree.

Informant 4: The informant thinks these skills are needed. He/she notes that these skills can be built through classes. For example, there is a difference between being a good



aesthetician and being a good entrepreneurial aesthetician. Even if someone is a very good aesthetician, the individual might not have clients, whereas an entrepreneurial one might have marketing skills and work well.

Informant 5: The way the informant teaches his/her specialisation teaches business management not in a way that everyone will be an entrepreneur, but as a way of surviving in a job market. They might not formally call it entrepreneurial skills. For example, they might be concerned about economies of scale but that would imply moving the factory to another country and thus the person will be fired, then the individual must be in a position to understand that an employee would not benefit from such a decision but a manager would see it in a different way. Thus the individual would have to see what moves to do to survive in their environment. They teach entrepreneurial skills in this sense.

Those who did not have an initial exposure/experience with entrepreneurship, it is hard for them to understand what entrepreneurship is in its broad sense, not just opening a café because someone has 10k euros.

Design and Development of Training Program

5. Have you developed a training program on developing the entrepreneurial skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Informant 1:

Training program specifically and exclusively for the development of business skills of VET trainees, no we have not developed.

Informant 2: Answer included in question 6.

Informant 3: N/A.

Informant 4: They have a class of entrepreneurship but also during the informant's classes these skills are covered. They also have an apprenticeship during which they go and work which also helps them what happens in business. Or they participate in Erasmus+ programs and work abroad and they learn how a business operates.

During the informant's classes they discuss how they can open an institute, how to collaborate etc. This is why the informant prefers group assignments so they learn how to collaborate. A practice they do is having learners visit an institute and make an interview with the aesthetician and wait at the reception, observe the design of the room, observe the behaviour the receptionist and write down their observations. Also to see the behaviour of the aesthetician.

Informant 5: There is a course about governance networks. They use case studies from Cyprus, but this is hard due to lack of professional language. If people have the perception



that business in Cyprus is about knowing a few individuals and getting the work done, then they do not understand the value of having entrepreneurial skills.

Same goes with young people. They might think they can hire an influencer to help them out with their business. Then what is the point of knowing the value of having an identity and creating a product that has a personality? The individual needs to think that moves are not done without thought, and this is hard.

Historically in Cyprus, the notion of the job market in Cyprus took a while because of the Cypriot issue and relied on relief funds. After 90's and 2000's it was the generation of those who were inherited the businesses of their parents, and some lived abroad. The jobs that were initially created did not necessarily need entrepreneurial skills per se. The view of entrepreneurial skills that people would think of, for example in professions such as accountant and lawyer, was about getting along with people. The personal opinion of the informant that only in the last few years we, in Cyprus, started thinking of entering something and developing it.

They started setting up the Moodle slightly before the pandemic hit in, and the only thing they had to do is add channels of Teams into Moodle. Initially students did not even know how to write an email. They also learned how to select reliable sources from the internet and making and presentations.

Building entrepreneurial skills relies on other building blocks, and if the frame is missing you can build some parts but are not enough to build a comprehensive picture of how to move in the job market and taking decisions such as were to make sales, when an idea can be implemented or not.

6. What are the main challenges you face when designing a new training program on entrepreneurial skills?

- **Do you feel that you have adequate support and resources to design and implement these programs?**
- **What would be 2 key characteristics of a good program to teach entrepreneurship? What would be some examples of activities that you believe will help learners build entrepreneurial competences?**

Informant 1:

Challenges: N/A. Support: Yes. 2 Characteristics:

1. Design with and adapt to the specific needs of the participants.
2. Practice /contact with working conditions

Examples of activities: Presentation / discussion / analysis of real Case Studies and presentations of topics by Entrepreneurs. Also internships.

Informant 2: 2 key characteristics

The informat thinks that the educator plays a key role in this. The criteria for selecting educators/trainers are very tough. They need to make sure that the person has a very strong



cv regarding their involvement in projects that have been done in the consulting sector, in the professional sector and in the educational sector on the specific area he/she will teach.

The second aspect is the capability of using interactive techniques that will make learners get involved in the learning process. Speaking of entrepreneurial skills means that educators need to get involved in these kind of techniques and experiential workshops, utilising experiential learning. The informant thinks that entrepreneurial skills need to be based on these aspects.

Main challenges: The positive aspects mentioned earlier, the good practices, can be considered as challenges. It is important to be open to change, not to have resistance to change and to adopt something that is coming and for which we might have reservations. It is important to see things in a round way and with a positive way and not start seeing things in a negative way.

Informant 3: Challenges

In a program that has to do more with management, it is more about having to manage groups.

The informant shares that it is hard to find individuals that have both the expertise in pharmaceuticals and the managerial skills that are gained for example with an MBA. A challenge for teaching courses such as international business, costing, marketing, professional communication was to find educators, people who combine this dualism of expertise that they need to find. For the design of the courses that the informant is delivering, tools and more were provided by the college and the informant did not have to search for them, they had support.

Informant 4: The informant mentions that he/she tries to fulfil the needs of a program that is given. However, that program might not include certain tools. The informant can mention that it needs to cover skills such as entrepreneurial skills. Normally, because these are professional klladoi needs practice and workshops.

2 Characteristics: The first thing would be to teach them how to be good/right entrepreneurs and not how to be entrepreneurs. The informant thinks that all are entrepreneurs and they need to learn how to get new ideas. Opening a business and then it is the same as others and offering the same thing is not desirable. To do something different, to think about it and implement it.

Informant 5: Challenges: The greatest challenge is how a Cypriot perceives the entrepreneurial context, either if the person is in the public sector and just needs the degree or a young person who does not have much direct contact with the job market, the jobs they do is not representative of the jobs that are available once they graduate. This could have been filled through an internship. Moving for a barista position to a full-time position in an office is very different so having a perception of the job market is vital.

Another challenge is motivation. Some people want something but might not know how to put things down, and organise their thoughts and work on it. A last thing would be the familiarization with culture, with communication. The informant notes that his/her students



are facing difficulties in expressing and communicating ideas. An entrepreneur has to communicate his/her ideas.

Support: The informant does not feel support. He/she has designed a program but it has not been implemented yet. That program was very different. It included films, papers, theatricals, ethnographic type of processes. But to have these type of things into a program it is needed to have

who have motivation. Students mostly do not study ahead and the educator has to introduce the basics in class, and the educator cannot start a conversation they might not have something to say.

The college cannot really do anything/help because it needs students to survive, so it attracts people who do not want to much or do not have the motivation, and the educator has to find ways of communicating.

2 Key characteristics: Characteristics of workshops/internships and perception of technology. It might not be needed to have the latest version of technology but people might not know this. The individual needs to be aware that . They need to know that if they create a database and the organisation progresses in 5 years, they need to understand that they wont have to change technology 3 times. They need to know that the technology they choose will be compatible with that software. Even if they bring in a consultant to tell them what technology they need, they still need an individual within the organisation that has the same interests as the organisation.

7. What are the main challenges you face when you perform training on building entrepreneurial skills?

Informant 1:

A subtle and sensitive issue is the assumption and "execution" of a role in front of a group of (mainly) unknown participants. Also the results of the training are difficult to evaluate / measure, especially in the long run.

Informant 2: N/A

Informant 3: The informant mentions that perhaps there needs to be more collaboration with professional associations. Teaching needs to become more specialized, because vocational education and training is about giving a specialization to a given profession and not give general academic knowledge. A difficulty is to have these kind of collaborations but they are always willing to create them.

The informant thinks that people who are teaching entrepreneurial skills need first to have the background. It is also helpful if they are in touch with the external environment. An educator cannot be trapped in an office, they need to keep in touch with the evolving job market. In summary, combining both knowledge and skills which is hard, and contact with the job market.

Informant 4: A challenge is that some of them are only concerned about money. They should not see their next client as the next 50 euros. However, some learners say that they do it for



money and the informant tells them that first they need to see the individual and then the money will follow. And if the client understands that they are seen as money they will not choose them. The informant also thinks that entrepreneurial skills might be a given skill.

Informant 5: N/A.

8. Have you developed any online programmes? If yes, could you please explain how you developed it?

- **What format of delivery do you think is the best to build VET learners' entrepreneurial skills (face-to-face, blended learning, or online)?**

Informant 1:

First question: No.

Sub-question: Face-to-face.

Informant 2: See digital skills questions (questions 9-16).

Informant 3: The informant thinks that online learning upgrades the learning of learners and it also offers opportunities to people who might not be able to attend face-to-face learning. The informant is inclined to blended learning. The courses that the informant is teaching involves laboratory classes so something in between is preferred. For certain classes face-to-face lectures are needed, e.g. communication, they need role playing so they have to be face-to-face. Examples of activities include, role playing (e.g. a patient who is tough), case studies, powerpoint presentations, preparing scientific posters.

Informant 4: The informant says that personally he/she did not develop an online program for these skills, all the courses are now being developed online. There is a course in the program on entrepreneurship, but the informant is not teaching the course. The informant prefers blended learning. Face-to-face learning is good, so is online, but the informant insists that a combination of both is best.

Informant 5: Face-to-face delivery is preferred because it has more influence over people, because emotion is involved. Apart from technology, research also shows that there is shorter attention span, it is different, it is passive, interaction is harder. The ready made videos might be more helpful, but the live conversation cannot be met with the current technology.

VET Educators' Training

9. Have you participated in any training on how to develop VET programmes on building entrepreneurial skills?

- **If yes, how satisfied do you feel with the training?**
- **Do you have adequate support and resources to develop programs on entrepreneurial skills?**
- **If answering no, would you be interested in training in this area or on this topic into the future?**

Informant 1:



Participated in training: No. Adequate support: Yes. Interested in future training: Yes.

Informant 2: N/A.

Informant 3: N/A.

Informant 4: Participation in training: The informant has not had training on entrepreneurial skills but has participated in other types of trainings. For example, the training would cover broad areas and it could be one of them, but he/she did not participate in a training specifically on these skills.

Support: The informant expresses that he/she would like more support, meaning how to increase the skills of learners. Most probably more on digital skills because digital is here to stay. He/she would like to watch a webinar but also a handbook/guidebook. The informant has searched for handbooks/guidebooks online but it needs to be adapted to the data/context of a country, most guidebooks are brought from elsewhere.

Williness to attend training: The informant would be willing to attend training in this area. He/she expresses that enjoys attending seminars etc. in general.

Informant 5: Some resources would be helpful but it is structural, from the college you would expect to have students that have motivation for learning, not just receiving a degree. So half of it would be to have more resources, the other half would have to do with more structural aspects of education, for example why does the individual do this course? This is the first question the informant asks his/her students.

Importance of Digital skills (as defined in DigComp) in VET

10. What are some examples of learning activities you design for your students to promote digital skills?

Informant 1: We do not organize such activities for VET students.

Informant 2: See questions 10-16.

Informant 3: See questions 10-16.

Informant 4: They use many techniques. For example, they use role-playing. They use case studies where they identify an incident to discuss with a client. Also, the informant uses group assignments many times. These help them realize what might happen in a work environment. Group assignments are always done electronically. Same goes for their thesis.

Informant 5: The informant is not certain if powerpoint counts as digital skills. The informant said that when he/she arrived at the students did not know how to use powerpoint. The informant told his/her students that the aim is to teach them transferable skills, to know how to communicate knowledge. The informant wants them to search and read critically and read to write, and based on their argument to judge what needs to be included and what not.



They've learned skills how to use Word and with every essay to make a powerpoint presentation of their essay.

In this way they attempted to increase their confidence to use technology as a visual language and to be able to stand in front of an audience. In other words, combining digital skills with public speaking. They, however, could not tell what is a high quality image, and these were things the informant was considering common knowledge so he/she had to start from the basics and started building on previous knowledge.

11. How would training on digital skills help VET learners? As a VET provider, do you think these skills are important in VET?

Informant 1: Like the answer for Business Skills (Q. 4).

Informant 2: The informant says that these skills are very important and it is impossible to live nowadays without technology. Technology is a base for everything. "The human being cannot live without technology".

Informant 3: The informant thinks that regardless of whether it is VET or an academic orientation, digital competence is important and we lack it. Sometimes these skills are undermined in certain professions and have it at a second place. However, the informant thinks these skills are needed to keep up. For some professions e.g. a chef, the informant does not know for sure if these skills are needed but these skills can still be a plus.

Informant 4: The informant thinks that digital skills are very important, especially now in a digital era. These skills will help them in their own business later on, for example marketing, how to promote their work, how to find clients, to search for new treatments or new products. The informant also thinks that learners must want to participate in a program, e.g. on how to use the internet.

The informant also mentions that through the online lecture he/she is trying to share the screen with learners and show them how they can find information. The hard part is the interactive aspect. They are recording the lecture and the cameras are off. The informant also saw the performance of some learners dropping compared to other times.

Informant 5: The informant does not know because no one has come to tell him/her that they use X in their work. Apart from those who were already doing it in their work and it gave them more confidence.

Design and Development of Training Program

12. Have you developed a training program on developing the digital skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Informant 1: KEPA implements separate e-Government and Digital Skills programs in general for adults in collaboration with the Department of Electronic Communications (THE) but not exclusively for VET trainees.



Informant 2: They use a handbook/manual for distance learning, which is a complementary handbook for other programs. It also mentions what programs it complements. When it comes to methodology it has to be clear whether it is distance learning, face-to-face or hybrid.

Distance online learning should not be seen as a lesser learning opportunity next to face-to-face learning. It can be a standalone learning and sometimes it is more suitable to specific programs rather than face-to-face learning. The informant believes that we should not consider online learning as a poor variant of face-to-face learning. What they have realized is that every method has its advantages and drawbacks. The informant thinks that the future of education is blended learning, which combines face-to-face learning with distance online learning, with the latter including both synchronous and asynchronous learning.

Asynchronous learning is something they have not started doing yet. It was easy to transition from face-to-face to distance synchronous learning, but the asynchronous depends on funding. And then funding depends on proof that someone has indeed watched a program. They are planning to include components of asynchronous learning in either face-to-face learning or distance online learning but there are no current funds that can support such an initiative.

The informant adds that during the implementation of specific programs the advantages of synchronous online learning are revealed. For example, they have a long-duration program for training educators that helps people who want to be certified as VET professionals so they can run programs certified by HRDA. This program involves small teachings (e.g. presenting 40 minutes a part from a training program to be evaluated to what degree the person is able to perform an interactive learning). Another aspect is the evaluation of needs. The trainer needs to know how to evaluate needs before going into an organisation.

Informant 3: The informant tries to create interactive classes. They also have the rule that cameras need to be turned off during the class. The educator has the camera on but the student not and this is hard for an educator to know what the student is doing, or whether they understand or if they listen. This made the informant to make the lecture more interactive and do quizzes or exercises even if its not the nature of the classes. The nature of the informant's classes are more theoretical and the informant is trying to make it more interactive.

The informant thinks that learners have seen this in a positive way and it makes the class more interactive and less monotonous. It is also important to start from the basics first. Even doing a cv online, or writing an email, it would be helpful to teach them these things outside of the class in the beginning, so they are prepared to respond to the needs of classes afterwards. The informant says that tools such Kahoot and Moodle are helpful for educators to get feedback and understand what was assimilated by students. Because it is hard to understand when all cameras are off.



Informant 4: VET has also to do with workshops, so it is hard to find resources etc. The informant uses games etc. but thinks it is harder because of the workshops and it is harder to do workshops online, to almost impossible.

Informant 5: The tools that the informant learned from his/her own studies and the opportunities of learning how to teach. Motivation is again an issue and the informant notes that in Cyprus, compared to other countries, learners might think of the degree as something they can do and they have nothing to lose, since they are doing at the same time with work. In other countries, their motivation to study is created by various factors and not only the educator.

13. What are the main challenges you face when designing a new training program on digital skills?

- **Do you feel that you have adequate support and resources to design and implement these programs?**
- **What would be 2 key characteristics of a good program to teach digital skills? What would be some examples of activities that you believe will help learners build digital competences?**

Informant 1: Challenges: The age group to which (mainly) is addressed and the need for constant updating of the topics.

Support: Yes. 2 key characteristics: 1. Design with and adapt to the specific needs of the participants. 2. Practice / contact with working conditions.

Examples of activities: Continuous contact with technology and practical training.

Informant 2: 2 key characteristics: To use Interactive techniques. A trainer should make group activities, role playing, to apply a case study, to use the possibilities that the online tools offer, to do brainstorming utilising the tools e.g. whiteboard. An advantage of brainstorming in distance online learning vis a vis face-to-face learning is the fact that in face-to-face learning the educator or a learner writes on a flipchart and then a discussion takes place. A tool of online distance learning, whichever it is, once a topic is set, everyone can write their ideas on the board and the educator can map them together. This is an example where online distance learning has an advantage over face-to-face learning on a specific practice such as that of brainstorming, and there are many examples like this one.

Informant 3: The organisation has employed an educational officer for the training of educators of the organisation, on how to make a course specifically on teaching and how they can have transmissibility, but also on digital skills. Recently they had a seminar on tools and quizzes and how to enrich the lesson to make it more interesting. The informant is positive about the changes that the pandemic has brought but stresses the importance of these change to remain and to progress further.

2 key characteristics: The informant thinks that those who come directly from high school lack basic knowledge for example to write an email. The informant organises seminars outside of the scope of classes. For example, next week the informant will make a seminar on how to write a good email.



Informant 4: The informant thinks he/she might be able to design it, but the audience might not be in a position to follow. For example, there are people who do not have a laptop. The informant thinks that Cyprus was not ready for distance working as other countries. So even if they have the resources to design it. If they had students of an greater age it gets easier. If it is a seminar perhaps it is easier to make something online.

The informant says does not feel ready yet and thinks that Cyprus is lacking yet. The informant says that there should be programs for organisations, how to support their employees first and then employees. Organisations need first to gain tools and resources, and then share them with their employees and then employees to everyone else.

Support: They had training by the organisation. And they also had a program through Zoom on how to increase their skills. So a total of two. And the informant feels enough support and also notes the importance of the individual to want to learn.

2 characteristics: It has to be innovative first. It has to differ compared to other programs and to develop to learners their creativity. Those who do it need to feel that they gain knowledge and skills. Such a program should have real-time exercises where the educator helps the learner in real time.

Informant 5: Challenges: A challenge is that the college does not have extensive library. This makes it harder to get the right edition, for example not having the 8th edition and they get the 5th. There could be more support, given that they want to follow the syllabus as they have been submitted to the accreditation body of Cyprus. The extra things the informant wants to add beyond those is hard, there is no much room for that.

2 Key Characteristics: More time is needed, some things need more practice and there might not be enough time for that. And also more fragmentation. For example, powerpoint. Explaining to them what is a high quality image could mean giving many examples, telling them to download images, learn about copyright, what is free what not. The informant suggests compartmentalization. Instead of having a lecture on powerpoint it would be helpful to have 5 different seminars about different aspects of powerpoint. This is something that universities are doing. There could also be a counsellor who gives direction to the skills they receive. The learner might think "I am learning this skill to learn how to do this assignment", but might not be thinking how that skills might help them. A career counsellor might be in a position to help individuals develop that motivation they have in class and take it further.

14. What are the main challenges you face when you perform training on digital skills?

Informant 1: In the case of the specific programs mentioned above, mainly the (old) age of the participants.

Informant 2: N/A.

Informant 3: A challenge is that it takes more time for educators than making a traditional class. The informant thinks that the challenge is to get a response from students, because



they might be hesitant because it is something new. For example, the informant has shared a paper with students and some of them were having resistance saying that they cannot download it because they use their phone and not their laptop. The informant thinks that these aspects might be due to the type of students they have. Their students are people who follow a two-year program, people who are working at the same time, people with a low standard of living.

Informant 4: This depends on the group. A group might not be of the same competency. If one group is very good and a group has varied capabilities it is harder. So it is about creating based on the level of the learner, e.g. beginners, etc.

Informant 5: Learners might lack what the informant considers as common sense, e.g. not knowing what is cc, what is powerpoint and what is its role. So the conversation is not about content but about form.

First it is needed to explain what digital skills are and then developing them. The informant is first trying to explain why they need those skills and how they would help them. The informant is getting mixed results.

15. Have you developed any online programmes on digital skills? If yes, could you please explain how you developed it?

- **What format of delivery do you think is the best to build VET learners' digital skills (face-to-face, blended learning, or online)?**

Informant 1: Development of online program: In collaboration with the speakers and THE (Q.12).

Form of delivery: Face-to-face.

Informant 2: See Question 2 for programs.

Due to the changes brought by COVID-19 they had to adapt. They were forced to do it in a short period of time but their response was quick and they managed to implement the changes to the programs. The informant notes that they did not know what tools they had to use etc and in a short period of time, they had to search what tools are acceptable and what not, the characteristics that the tools need to have, whether it is acceptable to synchronous or asynchronous learning.

The programs run with distance learning, and at the moment as well.

They think that the future is hybrid learning, which offers the opportunity to benefit from the advantages of the face-to-face learning and of online learning, and also synchronous and asynchronous learning. The informant says that they need to learn to design the standards based on this. They have to decide which part of the program can be offered in a better way through which method, and then the program needs to be developed based on these data.

Any disadvantages present are due to the fact that they are not ready yet to offer these programs on trained trainers. It is a new situation that they need to make sense of. They (their organisation) is sometimes demanding towards trainers to provide proof that they are capable to perform with specific techniques. For example, a trainer might say they want to



do a group activity, without however clarifying whether Zoom will be used and that breakout rooms will be used. They will not accept an application that just says they will do a group activity, they need to be convinced that they can implement all the techniques that the standards set through a distant online learning then they will accept it.

How it is practiced though it is not something they can control beforehand but during the implementation. They monitor it not so much with qualitative aspects but more with whether the program is run, if cameras are on, if participants are present etc. The informant shares the concern that it is hard to check with qualitative indicators and it is a disadvantaged. And there are also trainers who have not been trained to run distance online learning. Once the standard is introduced later on this year and a significant percentage of trainers get involved in this program, the informant thinks that things will get better.

Informant 3: In one of the programs they have a module that mainly teaches learners how to use a software that is important in their work. So they added a module that lasts a semester and takes place three times per week and learners learn how to use this software. They also have a module in the first semester during which students learn Excel, Word etc. They also have seminars on how to use Microsoft Teams. The informant thinks that the benefits of distance online learning cannot outweigh even if tools are well designed and thus thinks that blended learning is the future.

Informant 4: The informant has not developed an online program specifically for digital skills. These skills are being developed through particular courses. However, the informant notes that when everything moved to online delivery it was a situation of panic, but the informant notes that in one week everything was set and they explained to students how to use it. Their response was quick. The informant thinks that for VET it is not possible to have only online distance learning. A blended learning approach is preferred. Even education that is not VET then the online learning gets people lost a bit, even the informant.

Informant 5: The informant believes that face-to-face learning is more effective. The informant teaches Cypriots but if it includes other groups such as refugees, more levels need to be introduced. For example, language, insecurities, etc. The individual from a third country might not be losing in motivation, but might lose from other things. For example, the individual might only be used to phone screens, not comprehend a big screen.

VET Educators' Training

16. Have you participated in any training on how to develop VET programmes on building digital skills?

- **If yes, how satisfied do you feel with the training(s)?**
- **Do you have adequate support and resources to develop programs on digital skills?**
- **If no, would you be interested in training to develop your own pedagogic and technical skills?**

Informant 1: Participation in training: No. Adequate support: Yes. Interest in training: Yes.



Informant 2: Any challenges present have been discussed above (Question 15).

The informant says that an educator needs to be able to perform distance training. The educator needs to have very good digital skills in general and it is also important for the person to have digital skills, but most importantly the skills of the tools that are used in synchronous and asynchronous online learning.

So far there was only one standard for the educator, the VET educator level 5, based on the NQF and EQF. Now there will be the option of the educator for lifelong learning that covers more things, and there will be the levels 5,6, and 7. There will be a standard at level 7 that will be for online learning. Those who are already trained still need to be trained now that they use tools such as Zoom etc and learn systematically how to manage the process so that learning is enjoyable and interactive as it was with face-to-face learning, through online learning.

How do VET educators improve their skills?

There are programs specifically targeted for educators which are for digital skills of educators, the program for online learning educators. These break down further based on the duration of the program. All programs follow the following guidelines and they also apply to the program of educators doing online learning.

There are three types.

1. The short duration program is for educators who have experience and want to refresh their memory. This is 7-14 hrs.
2. The medium duration program is 35-49 hours for those who need more preparation to also become certified and pass the exam.
3. The long duration 70-100 hours is available for people who have no experience can get engaged and then get into the process of getting certified as educators.

Similarly, the program for educators of online learning follows the previous three format types. There is the short program , 35-42 hrs and the long duration ones that combine two programs: educators of online learning and digital skills for education.

“This way these two will form the long duration program, which educators will be able to access all the tools that are being offered today in synchronous and asynchronous learning, so that learning remains interactive, energetic, and participatory.”

Informant 3: Educators get invitations to attend webinars and there also vocational programs available for adult educators to attend. The informant seemed satisfied.

Informant 4: The informant is satisfied. See question 13.

Informant 5: It has to do with someone’s motivation, but also having training, but because the informant is on a part-time basis cannot access certain things and can pay them himself/herself and also does not have much time. So even if the informant wants, he/she will have to sacrifice certain things and is not in a position at the moment to do this. An environment that gives security at this college and you have this amount of money for training it would have been better.



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VETENTRE





Greece

Overview of VET Provision in Greece

Making VET more attractive for young people and adults is still at the heart of many EU and national policy initiatives, including Greece. Over the years, and despite the great challenges it faced during the financial crisis, Greece has remained focused on the five priority areas for VET that were agreed within the Copenhagen process, aiming to enhance vocational education and training. Special attention has been paid to apprenticeships to make them an equitable education choice for VET learners according to their skills and interests.

Apprenticeships produce graduates with work experience, helping the reduction of youth unemployment and alleviating social inequalities. Greece is also focused on ensuring quality, developing a holistic approach that responds to education and socioeconomic needs, increasing VET awareness and attractiveness. Regarding access to VET and qualifications, Greece has produced the Hellenic qualifications framework, a comprehensive national qualifications framework. Efforts are being made to increase the share of key competences in the curriculum framework and to take them into account in assessment practices. Regarding VET teacher development, Greece has prioritised strengthening the current legal framework and programmes and introducing coherent educational and pedagogical policies, systematically upgrading training methods.²⁵

The attractiveness of vocational education and training is low, although graduates have better employment prospects. The proportion of upper secondary students enrolled in vocational education and training was far below the EU average (28.8% compared with an EU average of 47.8% in 2017) and has been decreasing since 2013. Following the adoption in 2016 of the national strategic framework for upgrading vocational education and training, including through apprenticeships, significant steps have been taken to improve the training content and the quality of teaching, as well as to expand dual learning, which combines learning at school with working as an apprentice. In 2018, the employment rate of recent vocational education and training graduates was 5 percentage points higher than that of graduates from general upper secondary education. There is still significant room to better align vocational education and training with labour market developments, including by updating the occupational profiles (setting out the required skills) and using the outputs of the national mechanism for diagnosing labour market needs.²⁶

²⁵ CEDEFOP'S Magazine, 'Skillset and Match', Publications Office of the European Union, Luxembourg, September 2020, https://www.cedefop.europa.eu/files/9149_en.pdf

²⁶ Foundation for Economic and Industrial Research – IOBE, 'Factsheet on Skills and Employment in Greece', European Semester e-Conference on Greece 2020, European Commission, http://iobe.gr/EC_Conference2020/Factsheet_Skills%20and%20Employment_Greece%20July%202020.pdf

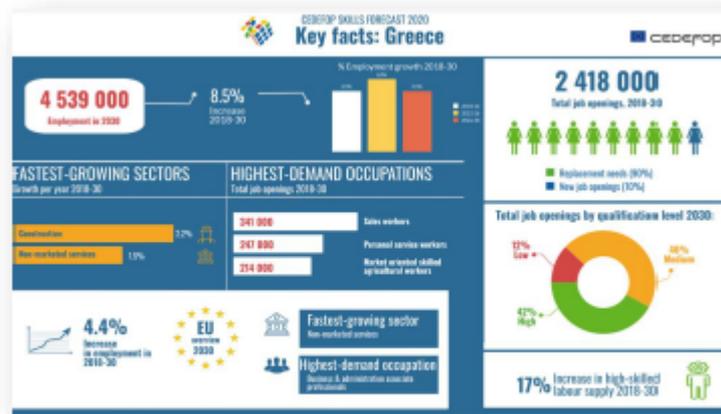


Figure 1 CEDEFOP SKILLS FORECAST 2020 / Key facts: Greece

Source: Cedefop (2020) Skills forecast2020: Greece. Cedefop skills forecast.²⁷

As seen in the graph above, the employment growth in Greece seems to have an upward trend between the years of 2018 to 2026. In particular, employment rises by 0,5% during 2022 to 2026, while there is a drop in the job figures in the last four years before 2030. Indeed, 2,5% is the rate with which employment opportunities expand after 2026 and until the end of that decade.

On the other hand, the fastest growing sectors per year, starting in 2018 and ending in 2030, consist of construction jobs and non-marketed services. At the same time, the occupations with the highest demand for the same years are related to sales workers, personal service workers, and market oriented skilled agricultural workers. The total job openings that depend on the individual qualification level present the following proportionate percentages in human resources by year 2030:

- people with low qualifications who can find a job represent a 12%,
- people with medium qualifications constitute 46%, and
- people with high qualifications are considered to be 42% of the total population.

There is also a significant increase in high-skilled labor supply by 17% between 2018 and 2030.

The Entrepreneurial Landscape in Greece

This skills mismatch, that several Greek entrepreneurs may have to confront during the setting of their start-up, requires policy actions which are up-to-date and can have an impact on the current trends in the market. According to the 2018 Skills Forecast by Cedefop, employment growth in Greece is expected to surpass the EU-28 average (4.6% to 2.6%) during

²⁷ CEDEFOP, '2020 skills forecast - Greece'
https://www.cedefop.europa.eu/files/skills_forecast_2020_greece.pdf
https://www.cedefop.europa.eu/files/skills_forecast_2020_greece.pdf



the next 5 years, and stagnate afterwards.²⁸ However, a greater percentage compared to the EU average of this job growth will be about jobs that need low qualifications (17% to 11%). Hence, there are mixed expectations in the job growth front.

The research made by CEDEFOP (2018) shows that a greater percentage of skill supply will remain of low qualification for Greek employees in comparison with the EU average, while the opposite will be valid for medium qualification jobs. In the upcoming ten years, it is possible that the supply of high qualified workers is expected to exceed the demands of the market, which will be around 40%. This is also true for the low qualified workers, who will be over the 24% of the available job positions in Greece. Nevertheless, a shortage in human capital is foreseen to occur for medium qualification jobs, for which CEDEFOP (2018) suggests that there will be a job demand of 46% and a human resource supply of 35%.

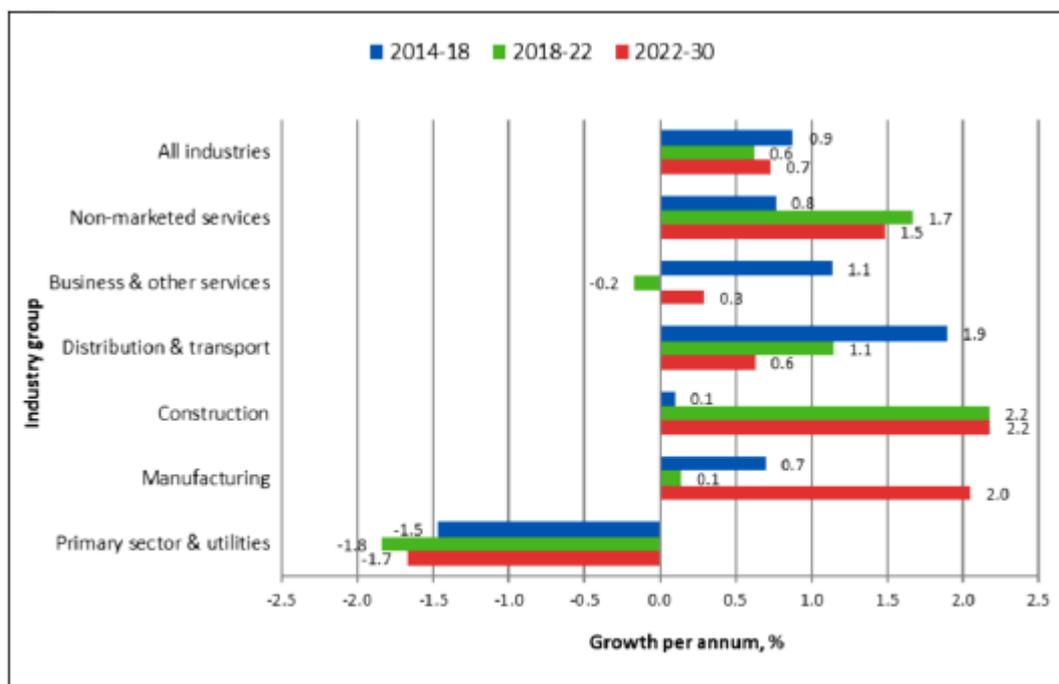


Figure 2 Job opening by broad occupational group, 2018-2030

Figure Citation

In the context of comparing six different occupational sectors (non-marketed services, business & other services, distribution and transport, construction, manufacturing, primary sector & utilities), it is important to note that business and other services lack behind in employment, when examined from the short-term perspective (the years between 2018 to 2022) and the longer term (from the year 2022 to 2030). The strongest employment growth

²⁸ Foundation for Economic and Industrial Research – IOBE, ‘Factsheet on Skills and Employment in Greece’, European Semester e-Conference on Greece 2020, European Commission, http://iobe.gr/EC_Conference2020/Factsheet_Skills%20and%20Employment_Greece%20July%202020.pdf



is expected in construction which, however, was hit particularly hard during the financial crisis in Greece.²⁹

Within the business and other services sector, telecommunications is expected to see strong growth, while architectural and engineering is expected to see a decline, leaving the sector as a whole stagnating across the forecast period. The strong growth in manufacturing in the long term is explained by rising employment growth in other manufacturing, outweighing declines in optical and electronic equipment and rubber/non-metal mineral products.³⁰

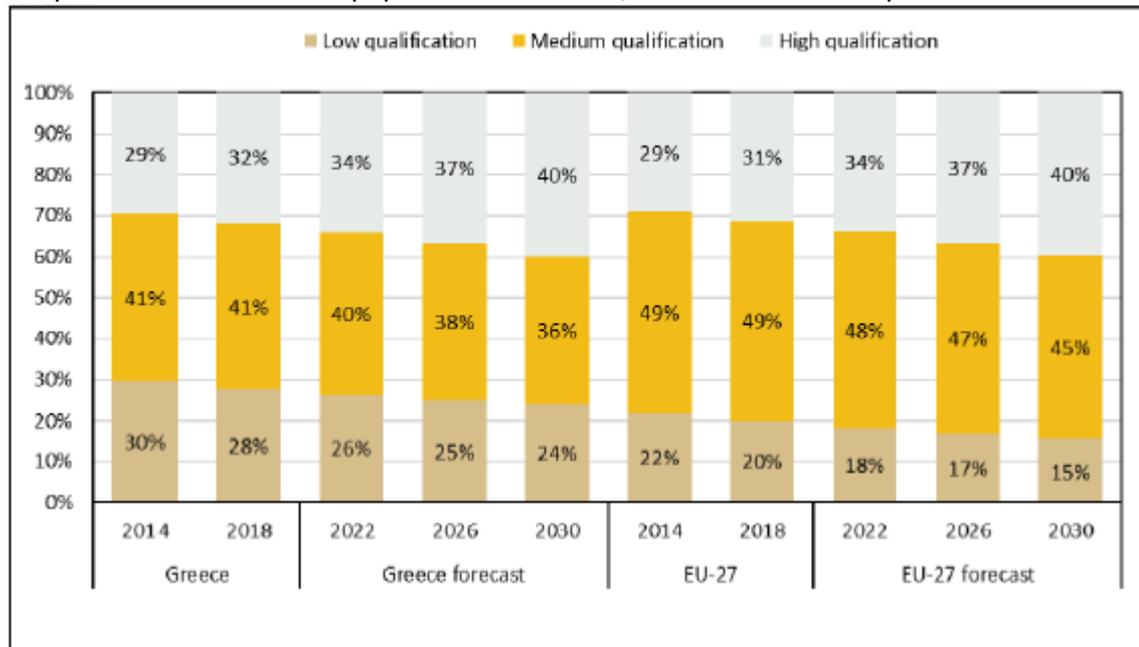


Figure 3 Labour Force share by level of qualification, 2014-2030

Figure Citation

The development of qualification shares in the labor force in Greece and the EU-27 shows that Greece is rapidly increasing its share of higher qualified employees in the labor market. While the share was at 32% in 2018, it is expected to increase to 40% by 2030. The increase in the share of higher qualified employees is expected to come from the outflow of older workers, both low and medium qualified. The share of medium qualified workers is expected to decrease from 41% in 2018 to 36% in 2030, while the share of low qualified workers is expected to decrease only slightly over the same period.

When Greece is compared to the rest of the qualification mix presented in the other EU countries, the country seems to continue to have a lower share of medium qualified and a higher share of lower qualified employees. There is, thus, a direct need to reinforce the entrepreneurial skills of unemployed individuals in order to trigger more opportunities in the labor market. In this context, some key VET stakeholders in Greece can support young

²⁹ CEDEFOP, '2020 skills forecast – Greece' https://www.cedefop.europa.eu/files/skills_forecast_2020_greece.pdf

³⁰ CEDEFOP, '2020 skills forecast – Greece' https://www.cedefop.europa.eu/files/skills_forecast_2020_greece.pdf



entrepreneurs through flexible and innovative teaching methods for sharing some of the best practices with the experts of the field. A list with the VET Educational Centers providing respective career opportunities in the entrepreneurship sector in Greece is included below:

1. [IEK EUROTRAINING](#)
2. [IEK METAMORFOSI](#)
3. [IEK METAXOURGIO](#)
4. [IEK NEAS SMYRNI](#)
5. [IEK KIFISSIA](#)

Digital Skills in Greece

Digital awareness is especially important nowadays due to the outburst of COVID-19 and the school closure that shut down all educational institutions around the globe. For this reason, teachers and trainers have had to rapidly adapt to a learning environment that uses digital classrooms and invites the students to interact by participating in creative workshops and lectures that are based on online resources.

While education requires personal interactivity and proximity, digital skills help ease the social distancing imposed by the Greek government and set a new operating ground for VET teachers and trainers. That being said, educational institutions created online learning environments which have automatically requested from the teachers to apply high quality digital delivery skills in order to deliver the courses in an efficient manner and to transmit the knowledge to the students. This process was demanding from the early phase, because some teachers were rather likely to lack the necessary digital skills, while they also had to be vigilant for increased cyberbullying phenomena against their students during their online navigation.

Moreover, VET trainers also had to engage online with the society as a whole in order to share the experience of teaching, to provide recommendations for improvement and policy adjustments, and to establish the use of digital learning techniques and communication tools with the school community. According to the European Commission's 2020 Digital Economy and Society Index (DESI), only 51% of people aged 16-74 appeared to have at least basic digital skills in Greece in 2019, a figure that remains below the EU average of 58%.³¹ In addition, Greece is also underperforming in comparison with the EU average, since only 23% of individuals residing in Greece possess basic digital skills, while their EU counterparts correspond to 33% of relevant knowledge acquired.

Furthermore, the research made by the Foundation for Economic and Industrial Research (IOBE) reveals that the share of ICT specialists in total employment continues to improve with the same pace as the last three years, but remains low (1.8%) compared to the EU average of 3.9%. Such performance weighs negatively on the country's growth prospects, as shortages in advanced digital skills weigh on productivity, as they delay the uptake of advanced digital technologies, which are all the more pertinent in the post-pandemic recovery.

³¹ Foundation for Economic and Industrial Research – IOBE, 'Factsheet on Skills and Employment in Greece', European Semester e-Conference on Greece 2020, European Commission, http://iobe.gr/EC_Conference2020/Factsheet_Skills%20and%20Employment_Greece%20July%202020.pdf



The intersection of Entrepreneurial Skills, Digital Skills and VET Provision in Greece

The digital skills advancement in the field of entrepreneurship and VET Education faces an unprecedented challenge in the post-2020 era when COVID-19 has made an impact on almost all sectors of training. There is currently a direct need for policy initiatives which can ensure the sustainable development of VET education in line with the transformation of the economy that inevitably will accompany the unfolding crisis and the following recovery.

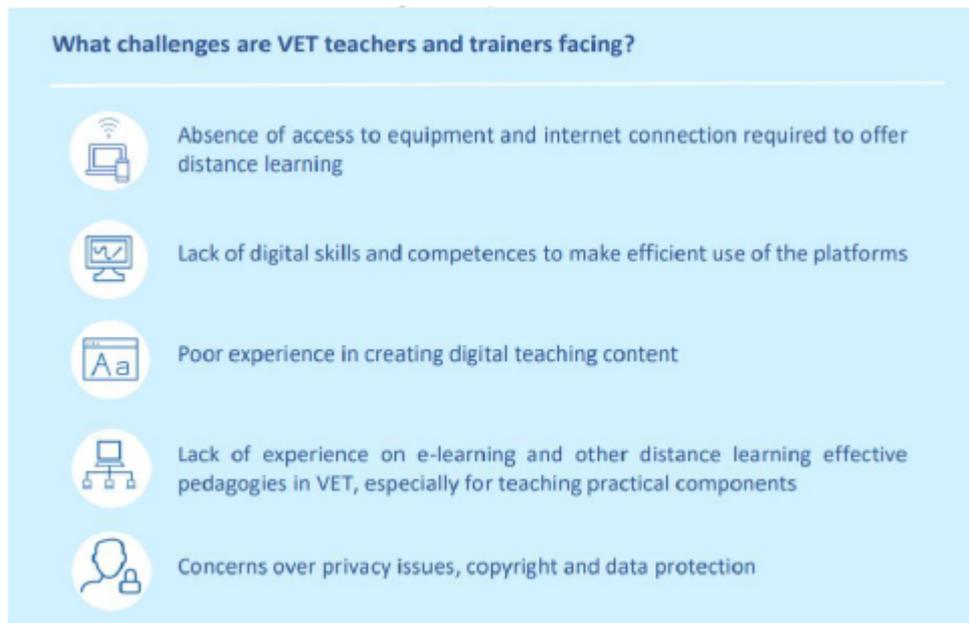


Figure 4 Challenges faced by VET teachers and trainers

Figure citation

According to CEDFOP's magazine promoting learning for work, investing in VET is today the best option to inspire confidence in European citizens.³² The continuity of learning in Greece has been hit severely in its traditional form and political leaders make an effort to grant educators more autonomy, and promote public-private partnerships. Teachers, on the other hand, have the opportunity to develop soft skills, such as flexibility, adaptability, social empathy and responsibility, along with the technical and pedagogical skills for integrating digital devices in instruction.

The suggestive measures for tackling potential challenges arising in the learning process of VET students. For the purposes of making VET more resilient and digital, VET institutions shall focus on the curricula they teach, and especially on the inclusion of new courses that are appealing to young entrepreneurs. There is, in other words, a need for VET providers to increase courses related to skills intelligence and adjusted to the labor market transitions. In this way, prospective entrepreneurs can access all educational material and search for

³² CEDEFOP'S Magazine, 'Skillset and Match', Publications Office of the European Union, Luxembourg, September 2020, https://www.cedefop.europa.eu/files/9149_en.pdf



information online for the jobs of the future. These actions would prove to be essential for the changing environment of education as a whole, and particularly for the adult population which seeks opportunities for upskilling or reskilling.

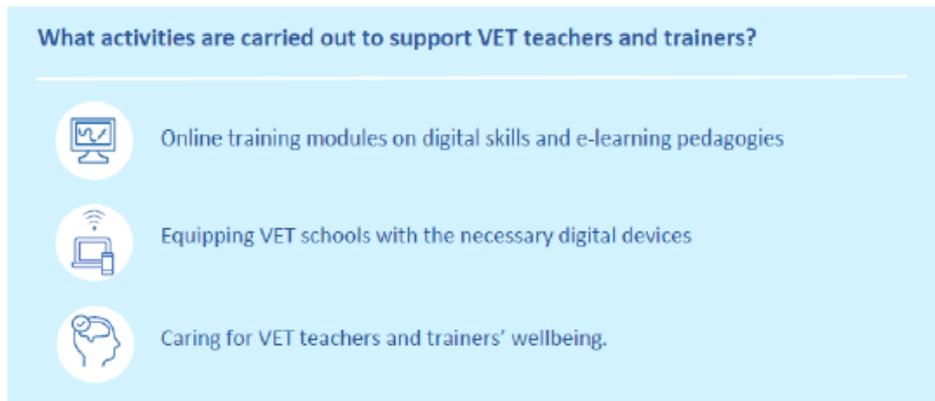


Figure 5 Initiatives to support VET teachers and trainers

Figure Citation

Finally, some other indicative actions for the promotion of establishing skills intelligence and VET responsiveness for stakeholders are presented in the figure above. This list, although is not exclusive, it comprises the three main aspects of professional advancement.³³ More specifically, CEDFOP (2020) shows that e-learning pedagogies need to be trained and VET schools need to acquire the digital devices that allow the implementation of online courses and training programmes. In the same direction, VET teachers' wellbeing should be set as a priority in the process of distance learning, since various underlying conditions of personal health might be not be obvious in the digital world.

³³ CEDEFOP, 'Digital gap during COVID-19 for VET learners at risk in Europe', June 2020, <https://www.cedefop.europa.eu/en/publications-and-resources/presentations/digital-gap-during-covid-19-vet-learners-risk-europe>



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4. CEDEFOP'S Magazine, 'Skillset and Match', Publications Office of the European Union, Luxembourg, September 2020, https://www.cedefop.europa.eu/files/9149_en.pdf



Interview Findings

Interview Questions

Introductory Question

17. Could you please provide us with an overview of your work as a VET educator? For example, what are the subjects you teach, the age groups of learners, the current needs of VET learners, and the overall context of your classes' learning experience?

Interview 1: The interviewee mainly teaches subjects related to commerce and marketing to adult that are over 49 years old and often unemployed. Most of them have experience in the retail and marketing industry and wish to find ways to become freelancers or entrepreneurs.

Interview 2: The interviewee works within the implementation of EU funded projects while she also has experience as a trainer. The usual target group of her learners are young people, 16-29 years old. The subjects she has experience in are courses tackling the issues of equality, inclusion, visual arts, new technologies and entrepreneurship. The current needs of the VET learners seem to be focused around the acquisition of practical skills that will be relevant in the labour marker. These include digital skills as well as people skills or soft skills. Her classes' learning experience can overall be characterized as practical and interactive with a lot of team building activities.

Interview 3: The interviewee is specialised in teaching subjects in social entrepreneurship, social economy, soft skills development, conflict resolution as well as organisational behaviour. He usually teaches adults 20-26 and 35-55 years old. Their main needs are to receive information on what they do not know. They are usually low-skilled adults with no entrepreneurial skills. They have the need to be immersed in the concept of entrepreneurship and learn how to deal with different scenarios of entrepreneurship.

Interview 4: The interviewee teaches mainly subjects in logistics, supply chain management, marketing and social media. The target learners are usually vulnerable groups, unemployed people with low skills or employees who wish to upskill and enrich their knowledge. The age of the learners usually falls in the 30-49 and 29-60 age groups. Their main needs are to receive a valuable certification that will boost their career and in case they are unemployed, to benefit from a training that will make them more competitive in the labour market and at the same time, in case the training offers a stipend, will offer them a source of income.

Interview 5: The interviewee teaches neurolinguistic programming as well as coaching techniques. The training programmes she is involved in include people with no skills wishing to work as freelancers and entrepreneurs as well as professionals of health sciences and NLP wellbeing experts. The trainings she offers focus on personal development programmes and experiential learning techniques. The target group of learners is quite broad, ranging from



21- to 57-year-old learners. The learners' needs are usually to learn themselves, start or expand their own business or become coaches in their fields.

Technology Use

18. Do you use technology when you teach? Give me an example. Do your learners use technology? How?

Interview 1: During the pandemic, the interviewee delivered the classes entirely online through the use of online platforms. Even trainees with no familiarity of e-learning platforms, responded well and make great use of this equipment. In normal circumstances, the interviewee uses equipment such as projector, videos and power point presentations to facilitate her classes.

Interview 2: Depending on the nature of the class and course, the technology used varies. Usually, OER's are used including Moodle as well as Microsoft Office applications either for the acquisition of digital skills by learners or for the facilitation of learning. Learners usually use technology as means of gaining access to complementary resources and independent learning. For certain classes, learners even had use drones as hands-on experience and learning is often required in VET education.

Interview 3: When he teaches, he uses the internet as well as different e-learning platforms. Learners also need to log into e-learning platforms or use their mobile phone. They also need to use the internet to find information and complete group exercises.

Interview 4: The main technology used is Power Point presentations, videos and e-learning platforms. Learners may be asked to log into an e-learning platform or use the social media and internet.

Interview 5: The trainer uses blended learning techniques and some of her preferred techniques are Zoom, power point presentations, smart boards, videos and e-learning platforms.

Importance of Entrepreneurial Skills in VET (as defined in EntreComp)

19. What are some examples of learning activities you design for your students to promote an entrepreneurial mindset?

Interview 1: Case studies, role plays as well as experiential learning activities.

Interview 2: Usually, role playing is used in the classroom especially with regard to the acquisition of entrepreneurial skills. For instance, in role play and simulation activities, students are often asked to play the role of employee and angry customer so they develop relevant soft skills. This activity actually seems to be one of the students' favourite activities as it gives them a glimpse into their future as entrepreneurs or business employees. In other cases, students are presented with case studies and they are asked to analyse business models in simple terms. This is an important step towards understanding the steps they need to take into entrepreneurship.



Interview 3: Role plays are the most important activities. Learners have the opportunity to develop soft skills such as attentive listening and conflict management. At the same time, they cultivate their entrepreneurial spirit and learn how to build effective teams. Turn-taking is used in role plays so participants experience and develop different behavioural attitudes according to their position.

Interview 4: Role playing and team work activities promote self-awareness in learners as they can realise which roles in the team are more suitable for them as well as how to realise their vision through teamwork. Through interactivity and experiential learning, learners develop entrepreneurial mindset as role plays allow them to assume different roles.

Interview 5: The activities designed aim at profiling, body language and team work promotion. One of the most effective strategies identified are role plays based on real work-based scenarios. All trainees are asked to assume all the roles in rotation so all of them perform as leaders, team members, managers etc. This way it is possible to detect patterns of behaviour and generate new patterns of behaviour in the workplace. Initiative taking is promoted while trainees have the opportunity to identify which leader traits they have while they will also realise the dynamics of the team.

20. How would training on entrepreneurial skills help VET learners? As a VET provider, do you think these skills are important in VET?

Interview 1: In VET education, these skills are very important. Especially when it comes to previous experiences of the learners, experiential learning and exchange of experiences help them contextualise the knowledge they already have. They can also relate to different situations, how they have dealt with them in the past as professionals and how they will be able to deal with them in the future after their training.

Interview 2: These skills are of utmost importance. According to the interviewee, nowadays, entrepreneurial and social skills are some of the most important skills for VET learning wishing to become entrepreneurs.

Interview 3: Entrepreneurial skills are of utmost importance for the interviewee. Experiential learning activities can contribute to the development of those skills. The main reason is that such activities can enhance inherent soft skills of some people or develop them in people who do not have them inherently.

Interview 4: Entrepreneurial skills are very important in VET courses which need to be directly connected with the job market. Participants may have some of the entrepreneurial skills inherently such as motivation, perseverance and communication skills but training can help them further enhance them and connect them with the realisation of their entrepreneurial vision.



Interview 5: The interviewee thinks that entrepreneurial skills help VET learners with special emphasis on soft skills such as compassion and empathy, critical thinking, creativity, behavioural flexibility, vulnerability and empowerment.

Design and Development of Training Program

21. Have you developed a training program on developing the entrepreneurial skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Interview 1: The tools and the material developed varies according to the team. This trainer places great emphasis on the role of experiential learning for the development of entrepreneurial activities.

Interview 2: As each training programme depends on the needs of the target group, the interviewee always proceeds with the needs analysis of her learners. Following that, she uses tools such as Digicom and Dacum educational tools in order to organise trainings that help her learners develop the necessary skills and competencies each time.

Interview 3: The main tools used are internet research, presentation and analysis of case studies as well as bibliography. Apart from that, the main methodology used is related with the identification of the target group. It is important to identify the background of the target group and develop activities that are relevant to them.

Interview 4: In the development of a training programme the interviewee answered that he uses bibliography, mostly American and German, activities such as role plays and the presentation of case studies from the business world.

Interview 5: The usual tools used are internet research and recognized platforms such as PubMed, the NLP global library and international bibliography.

22. What are the main challenges you face when designing a new training program on entrepreneurial skills?

- Do you feel that you have adequate support and resources to design and implement these programs?
- What would be 2 key characteristics of a good program to teach entrepreneurship? What would be some examples of activities that you believe will help learners build entrepreneurial competences?

Interview 1: The greatest challenge is to make learners feel interested and believe in themselves and in the fact that they will finally manage to realise their entrepreneurial skills. There is support however things will be better if trainers had the opportunity to visit actual enterprises, organise study visits to enterprises, conference and info days in entrepreneurship. A good idea would also be to invite entrepreneurs as speakers more



frequently. However, as most seminars and training programme, are not quite flexible, opportunities like the ones mentioned above are quite limited.

Interview 2: The interviewee mentioned as main challenge the smooth integration of the training program on entrepreneurial skills with the overall courses and area of specialisation for the learners. She feels that she is supported in that by the careers office of her organisation so she is always up to date regarding the labour market needs while she always manages to find relevant material for courses. For her the most important aspect of an entrepreneurial training program is to offer learners practical skills such as communication and social skills.

Interview 3: The interviewee believes that he has adequate support in preparing and designing a training programme. He finds adequate resources through bibliography and the internet while at the same time he is knowledgeable and in contact with the labour market to understand its needs each time. Learners better assimilate knowledge through experiential exercises and role plays where they can assume different roles as part of entrepreneurship.

Interview 4: According to the interviewee, when a trainer designs a training programme, he also learns. It can be a quite risky process especially when a trainer needs to design material for a subject, he is not familiar with as more research is required. Another challenge is to keep the material highly practical and dedicate as little time to theory as possible. He feels happy with the number of resources available as he can always find the information he needs. An ideal programme is practical and interactive, with a lot of case studies, role plays and brainstorming for new ideas.

Interview 5: The main challenges faced are related to the fact that trainees of various backgrounds may not have the same needs and interests for the development of certain entrepreneurial skills. Therefore, she believes that a pre-education course may be important to help trainees realise which are the exact skills they need to develop. Moreover, it is important before each entrepreneurship course, to include an introduction on what it really is to be an entrepreneur. It is also important, to speak the trainees' language and be connected with them and prepare a training programme that is practical and also relevant to them.

23. What are the main challenges you face when you perform training on building entrepreneurial skills?

Interview 1: The main challenge is to ensure that all trainees are equally interested and involved in the learning process. This trainer usually teaches people coming from different cultural, educational and social background, therefore it is important to ensure that they understand at all times and all are on the same page. For an effective training, team building is important so all trainees feel to belong in the same team so they can express themselves freely.



Interview 2: During the training, the main challenges were identified as: teaching a new subject as well as the target group demographics. Based on age and cultural background, communication style and methodology may have to be adjusted.

Interview 3: The main challenge is to keep everyone engaged and present content that is relevant and offers insights to the trainees. The ultimate goal of the interviewee is to contribute towards changing the lives of the trainees through the training offered. It is also a challenge for the training material to be concise so all important topics are covered in minimum time and also to be connected to the learners and their needs.

Interview 4: The main challenge is to keep everyone engaged. In order to keep everyone's attention, he places emphasis on eye contact and on group exercises.

Interview 5: The main challenges can be summarised as follows: identifying the needs of the target group so as to keep them engaged all the time and overcoming potential extreme convictions that keep them from adopting an entrepreneurial mindset. Most people the interviewee teaches are new to the concept of entrepreneurship and entrepreneurial skills and concepts such as ethical and sustainable thinking in business.

24. Have you developed any online programmes? If yes, could you please explain how you developed it?

- **What format of delivery do you think is the best to build VET learners' entrepreneurial skills (face-to-face, blended learning, or online)?**

Interview 1: During the pandemic, the trainer had to adapt and organise online trainings. However, this was quite limiting for the experiential activities that she does in class. At least participants managed to work in teams especially through breakout room that certain platforms work so they could work collaboratively. According to the trainer, face-to-face learning cannot be substituted for online learning. Online learning can only be supplementary to face-to-face. So, in some cases, blended learning can be useful.

Interview 2: Blended learning seems to be the most efficient way of learning nowadays.

Interview 3: The interviewee answered that he has mostly developed blended learning or face-to-face programmes. According to him, the best format to build the learners' entrepreneurial skills is face-to-face teaching. An e-learning platform could function as complementary resources in case someone wants to study further, do additional exercises or delve deeper into some topics discussed.

Interview 4: He believes that the best format of delivery is face to face. However, in certain cases, an e-learning platform with extra material could be helpful.



Interview 5: The interviewee believes that blended learning is key in learning. However, especially in the era of Covid-19, online learning has opened up new markets, allowing the involvement of people from different parts of Greece in the trainings and also changed the duration and content of trainings. For instance, through online learning, the duration of courses is shorter as participants cannot stay concentrated online for a long time.

VET Educators' Training

25. Have you participated in any training on how to develop VET programmes on building entrepreneurial skills?

- If yes, how satisfied do you feel with the training?
- Do you have adequate support and resources to develop programs on entrepreneurial skills?
- If answering no, would you be interested in training in this area or on this topic into the future?

Interview 1: The trainer has participated in many trainings and seminars on social entrepreneurship. She generally feels that she has enough information and access to resources in order to organise her trainings and develop new material.

Interview 2: The interviewee has participated in relevant trainings to make sure that her knowledge remains up to date.

Interview 3: He has participated in training programmes focused on adult education, teaching VET learners and adult learners and microlearning techniques in the classroom. When it comes to training on entrepreneurial skills development and entrepreneurship in general, he believes that the best way is for him to constantly evolve through research and contact with the labour market instead of attending a seminar. In case he finds training in entrepreneurship that will truly enrich his knowledge, he would be open to attending this. He would prefer to have better logistical support for certain training activities.

Interview 4: He is not very keen in participating in training in the field as work experience and research is the best way for him to enrich his knowledge. However, he participates in trainings focusing on teaching methodologies.

Interview 5: At the beginning of the interviewee's career, she felt that she spent time and money in training programmes that were not of high quality. However, now the trainer is able to find suitable training programmes to cover her training needs. She usually participates in 3-4 high quality trainings per year to be constantly updated in her field.



Importance of Digital skills (as defined in DigComp) in VET

26. What are some examples of learning activities you design for your students to promote digital skills?

Interview 1: She places great emphasis on the development of digital marketing skills. It is important for participants to grasp the opportunities that this media offer for networking and business growth. Case studies and presentations of the different features of social media marketing is usually presented in class.

Interview 2: Hands-on activities are preferred while the type of activities included depend on the age. Older learners may need more assistance in the use of certain technologies while younger learners get more fascinated by gamification and learning games that feature avatars and are interactive.

Interview 3: Digital skills are usually developed through hands-on activities and project-based work. One popular activity is to separate learners in groups and then ask them to research information on a certain topic of interest through the internet and create a short presentation. This way they can enhance their skills and gain deeper understanding of what the digital means are.

Interview 4: When it comes to acquiring digital skills, storytelling is a good technique. Learners may be asked to create short videos regarding a certain topic, edit them and then promote them on the social media. This way they acquire new digital skills with great demand in the market.

Interview 5: First of all, since digital skills are the prerequisite for participating in most of the courses she teaches, she offers short demonstrations and webinars to her students so as to ensure that they are familiar with platforms such as Zoom and Skype and are also familiar with virtual learning environments.

27. How would training on digital skills help VET learners? As a VET provider, do you think these skills are important in VET?

Interview 1: These skills are very important especially for the learners that this trainer usually works with. They are usually people with low level of digital skills that need to be further enhanced with the support of the trainer.

Interview 2: N/A.

Interview 3: Digital skills are the future and it is important that VET education places great emphasis on their development.



Interview 4: Digital skills are important in VET because VET is supposed to prepare students directly for the labour market. Digital skills and especially when it comes to digital marketing skills, can truly make learners stand out from the competition for a job offer.

Interview 5: Digital skills are very important in VET according to the interviewee. She also focuses on courses on the online presentation of professionals such as how to present themselves on the social media, during online lectures and sessions. Especially in the field of health sciences, many health professionals ask for training related to the etiquette of offering their services online.

Design and Development of Training Program

28. Have you developed a training program on developing the digital skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Interview 1: Based on the experience of the learners, the trainer adapts the training content with emphasis on digital marketing such as social media campaigns and Google analytics as well as basic Microsoft office applications.

Interview 2: Digital skills that are in high demand in the labour market and are also relevant to the learners' background and future career wishes. Blackbox seems to be a valuable tool for this trainer.

Interview 3: Bibliography and resources of the internet are mostly used. In case he wants to integrate digital tools such as AR tools in the training, then he makes sure that it is well-integrated in the lesson.

Interview 4: He mostly develops training programmes on digital marketing through the social media. His approach is to integrate theoretical background with case studies. Showcasing different digital marketing tools to the learners through demos is also quite important.

Interview 5: In her trainings she usually uses e-learning platforms, Zoom or skype as well as tools such as Miro board. This way team work is possible even remotely and students also learn how to use office automation applications and e-learning tools.

29. What are the main challenges you face when designing a new training program on digital skills?

- **Do you feel that you have adequate support and resources to design and implement these programs?**



- **What would be 2 key characteristics of a good program to teach digital skills? What would be some examples of activities that you believe will help learners build digital competences?**

Interview 1: N/A.

Interview 2: The main challenge is to design material that corresponds to the background knowledge of all participants. Practical activities and practice with the specific software each time, be it Microsoft office or for instance a graphic design software, through a course project is always beneficial.

Interview 3: The training programme needs to be up to date. When it comes to digital skills, the trends change constantly. He needs to research a lot and always add relevant material. It is also important to create material that corresponds to the level of knowledge and familiarity with new technologies of each student.

Interview 4: The most important is to offer an updated training programme as digital skills demands and needs change constantly. He believes he can find enough information and support through the internet. A good programme should be practical, limiting theory to a minimum, and also to be combined with a short project that needs to be developed by the students. This way, they will be able to put the knowledge they have gained to great use.

Interview 5: The main challenge with digital skills training programmes is that they need to be constantly updated as the state of things changes constantly. She feels though that she can always find enough resources to design her trainings. Participants acquire digital skills through project-based activities such as collaborating on tasks through digital tools.

30. What are the main challenges you face when you perform training on digital skills?

Interview 1: The main challenge is always to make the participants feel interested. The internet offers a wide range of tools to use for the development of digital skills such as case studies and demos that simulate the real-life campaigns and reporting that a digital marketer will do such as the Google Analytics Demo Account.

Interview 2: The main challenge is to conduct a comprehensive needs analysis to ensure that the material covered addresses the needs of the students. This way the material is not too difficult for some learners and too easy for others.

Interview 3: Some learners may find it challenging to transition from the traditional classroom with computers to acquiring digital skills exclusively through online classes. The teachers need to be able to realise their difficulties and aptitude and support them accordingly.



Interview 4: The greatest challenge is to deliver training that is easy to understand by all participants. Another challenge is to be able to have an answer to all their questions.

Interview 5: The main challenge is to ensure that all trainees have the support they need and feel that they always follow what is going on in the training. In digital skills training it is important that all participants have enough background knowledge to understand and progress in their digital skills acquisition.

31. Have you developed any online programmes on digital skills? If yes, could you please explain how you developed it?

- **What format of delivery do you think is the best to build VET learners' digital skills (face-to-face, blended learning, or online)?**

Interview 1: The active participation of all trainees is always the greatest challenge. Blended learning is ideal for the development of digital skills. Usually, face to face with computers and complementary material available online is ideal for such trainings.

Interview 2: Face-to-face teaching in a classroom environment is ideal for the development of digital skills as there is the possibility to provide assistance when needed.

Interview 3: Yes, through the use of the Zoom platform and an e-learning Moodle platform. For him, face-to-face is the best delivery mode.

Interview 4: Face-to-face delivery in classrooms with enough equipment is the best way so the trainer can easily support the students.

Interview 5: The best format is blended learning.

VET Educators' Training

32. Have you participated in any training on how to develop VET programmes on building digital skills?

- **If yes, how satisfied do you feel with the training(s)?**
- **Do you have adequate support and resources to develop programs on digital skills?**
- **If no, would you be interested in training to develop your own pedagogic and technical skills?**

Interview 1: She has participated in many trainings as the requirements in digital marketing skills constantly change. She feels happy with the support and available trainings at the moment.



Interview 2: Yes and was satisfied with the quality of knowledge. It would be good to have more trainings also focused on the teaching and development of digital skills.

Interview 3: He attends trainings at least twice per year. Given the popularity of digital skills training programmes, it is easy for him to find high quality seminars for trainers.

Interview 4: He attends training once or twice per year to enrich his knowledge and have a clearer picture of the labour market demands.

Interview 5: She usually participates in at least 3-4 trainings per year. She is very satisfied with the quality of trainings available.



Survey Results and Analysis

To achieve the main aim and objectives of this output, it is necessary to examine the needs and challenges of VET learners, as well as their motivation to participate in training and the ease and satisfaction with such training. The results of the survey, together with the desk research and interviews conducted, form a necessary first step towards creating a practical and relevant toolkit for VET educators.

The insights of VET learners were gathered through an online survey that was administered electronically through Google Forms. The survey was sent to VET learners in the five countries of the consortium, namely Germany, Ireland, Spain, Cyprus, and Greece. The survey included four sections. The first section included general introductory questions, the second section included questions regarding entrepreneurial skills, the third one included questions regarding digital skills, and the final section included questions regarding the VET provision in each country and the potential intersection of VET provision on entrepreneurial and digital skills. The survey included multiple-choice questions, open-ended questions and questions on a Likert scale. The exact questions that were included in the survey can be found in Annex 3 of this report.

The survey was filled by a total of 96 VET learners across all five countries. The specific number of VET learners are 17 for Germany, 15 for Ireland, 17 for Spain, 22 for Cyprus and 23 for Greece. The 94% of responses is divided across three age groups: 18-22, 23-30, and 31-50. The highest number of responses was collected for the age group 31-50 (35%), followed by the age group 18-22 (32%) and the age group 23-30 (27%). Only 6% of respondents were in the age group 51-60, and no respondent was above 60 years old. The distribution of responses based on the age group are included in the pie chart (Figure 1) below.

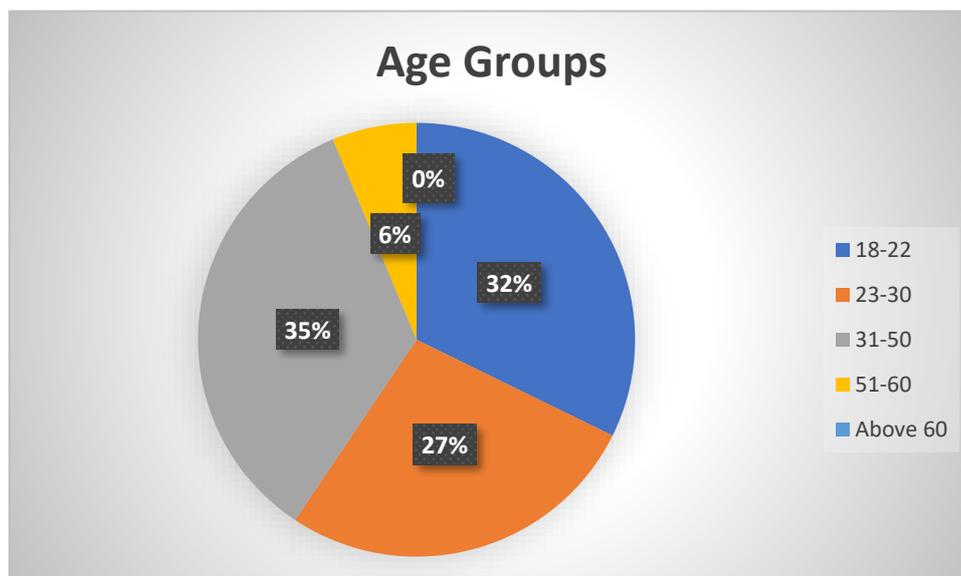


Figure 1. Age groups of VET learners

To understand whether VET learners participated in training programs for entrepreneurial and digital skills, they were given four choices: “Only training on entrepreneurial skills”, “Only



training on digital skills”, “Training that focused on both entrepreneurial and digital skills”, and “Not at all”.

The majority of respondents (38.5%) expressed that they have not participated in training, followed by 23.9% of respondents who participated in training on digital skills, 19.8% of respondents answered that they participated in training on entrepreneurial skills, and only 17.7% of respondents participated in training that was focused on both entrepreneurial and digital skills. For more specific information, the figure below shows the participation rate in training programs per country.

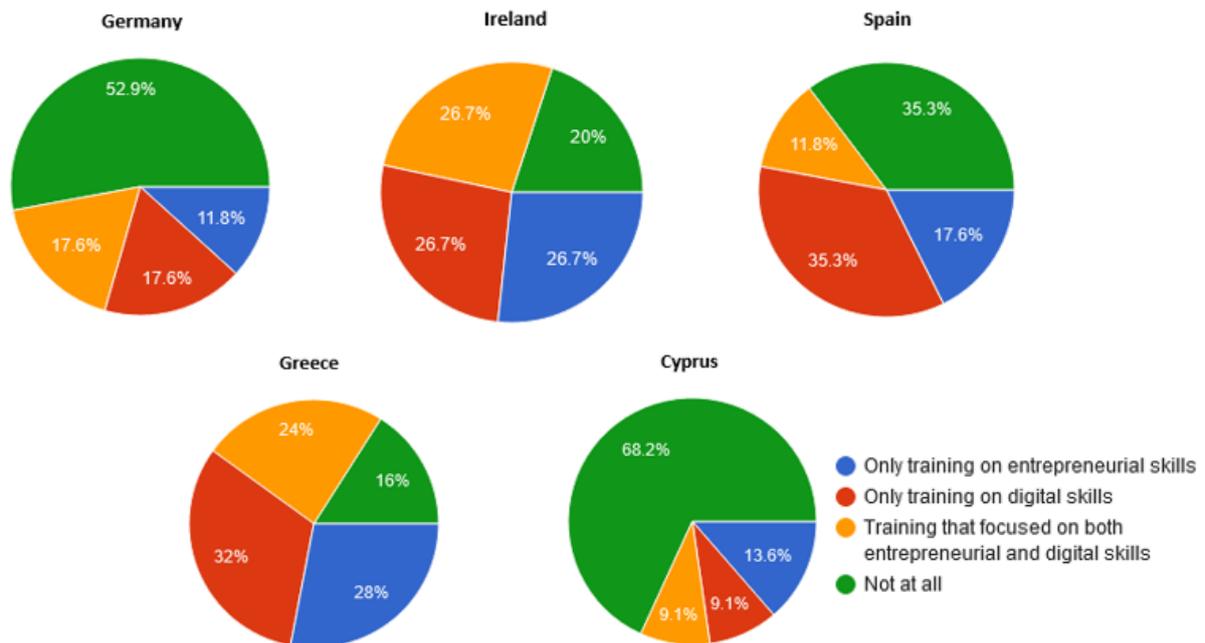


Figure 2. Training participation per country

However, the rate of participation could also depend on the availability of such training in the first place. Therefore, the survey included a question regarding the ease of finding training on entrepreneurial skills and digital skills. It is apparent that it is harder to find training on entrepreneurial skills compared to digital skills.

Approximately 72% of VET learners expressed that it is “Easy” or “Very Easy” to find training on digital skills and 28% responded “Difficult” or “Very Difficult”. In contrast, 61% of VET learners expressed that it is “Easy” or “Very Easy” to find training on entrepreneurial skills, and approximately 40% of respondents expressed that it is “Difficult” or “Very Difficult”. These numbers show that it is easier for VET learners to find training on digital skills compared to training on entrepreneurial skills.

The same question was also included in the final section of the survey, asking VET learners how easily they can find VET programs in general. The answers gained for this question are similar to the ones received for training on digital skills, with approximately 73% of respondents claiming that it is “Easy” or “Very Easy” to find such training programs, and around 27% claiming that it is “Difficult” or “Very Difficult”. All these numbers are broken down per answer and country in Figures 3, 4, and 5 below.

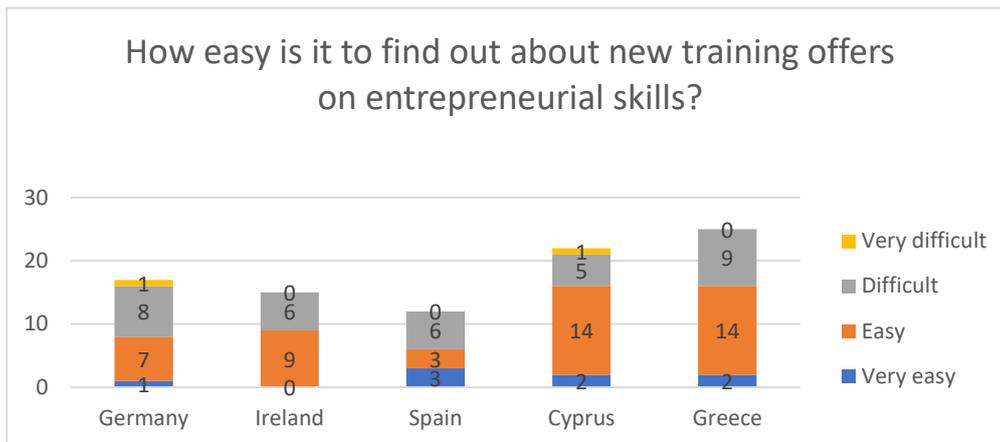


Figure 3. Ease of finding training offers on entrepreneurial skills

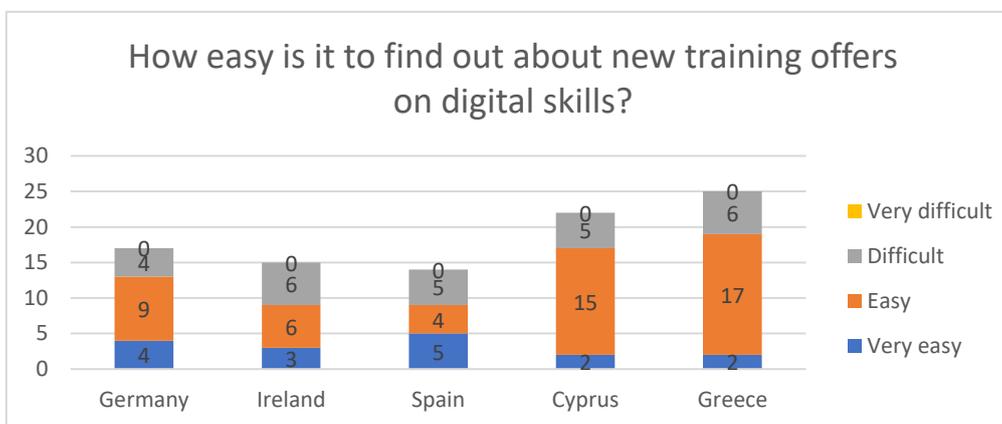


Figure 4. Ease of finding training offers on digital skills

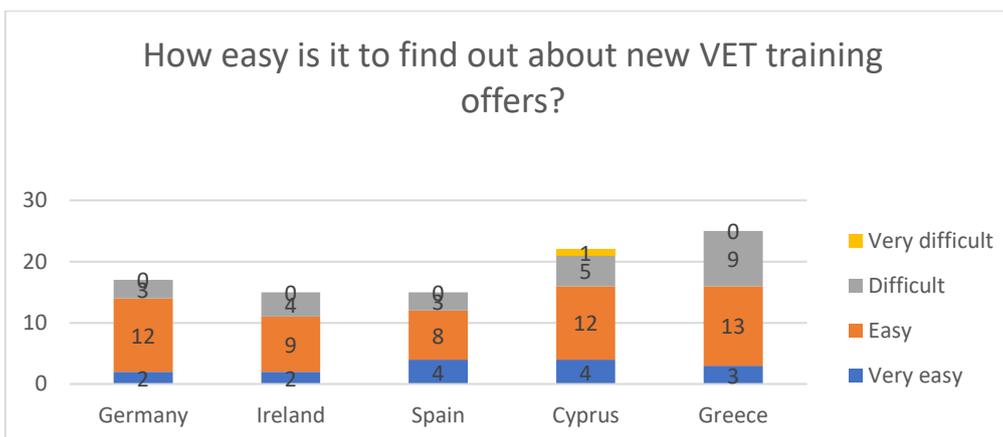


Figure 5. Ease of finding VET training offers

The next step has been to identify the satisfaction of VET learners with the training programs they have participated in. To achieve this, VET learners were asked whether the training on entrepreneurial skills has offered them enough opportunities to find a job or progress in their current job. The same question was asked regarding training on digital skills.



The results for the question on entrepreneurial skills are similar to those on digital skills. Approximately 31% and 34% of VET learners have not participated in training on entrepreneurial skills and training on digital skills respectively. Only around 11% of respondents acknowledged that the training they received did not help them at all. The remaining responses are divided among the answers “Definitely” and “Slightly”, which shows that there is still much room for improvement regarding training on entrepreneurial skills and digital skills and the impact it can have on the career progress of VET learners. The percentages for the question on entrepreneurial skills are summarised in Figure 6, and the percentages for the question on digital skills are summarised in Figure 7.

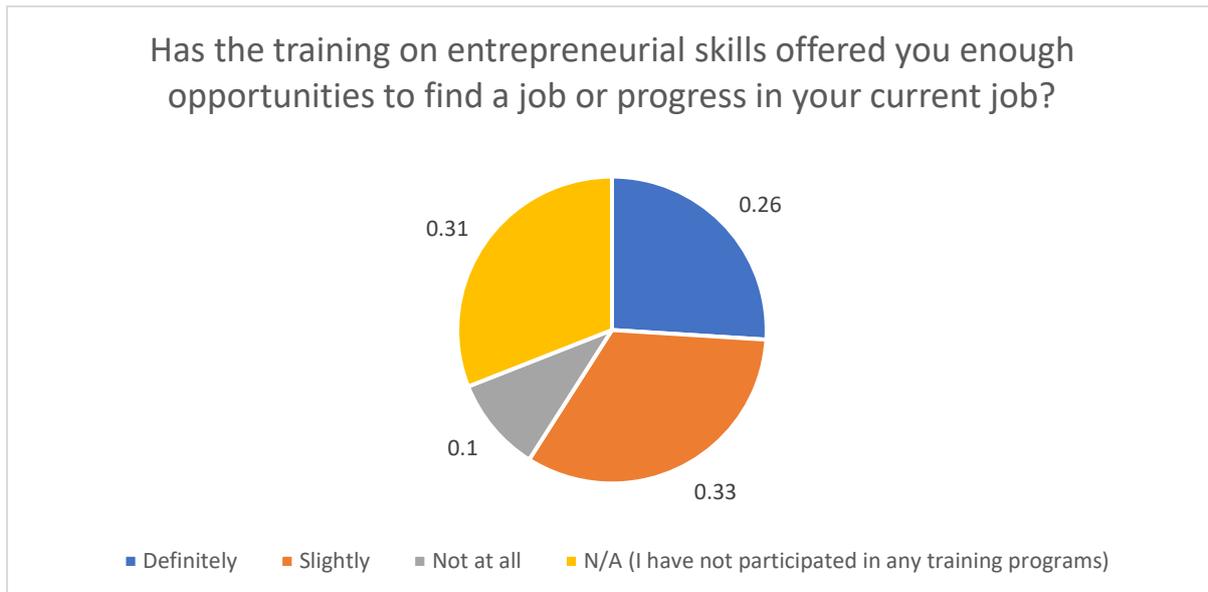


Figure 6. Entrepreneurial skills training and job benefits

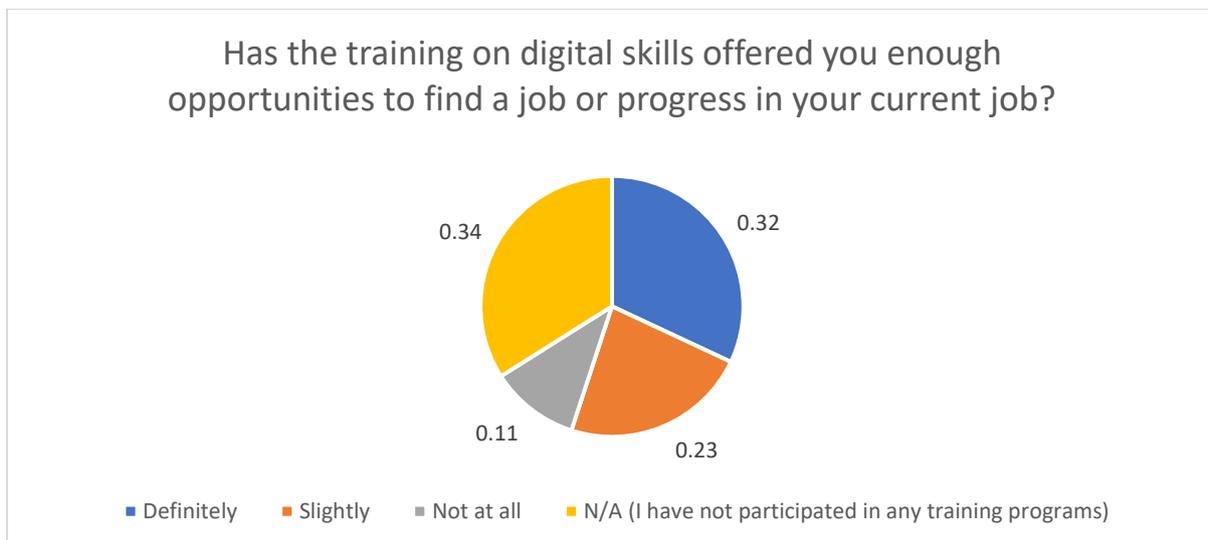


Figure 7. Digital skills training and job benefits

Moreover, the survey included an optional open question after the question on entrepreneurial skills and the question on digital skills that was asking VET learners to express why they have not chosen “Definitely” in the previous section. Regarding the entrepreneurial skills, respondents expressed they did not select “Definitely” due to planning and time



management, there was little practical training, and the need to finalize/realize their entrepreneurship in a more strategic form. A respondent also claimed that it is hard to turn such experience into something employers need, because these skills are mostly relevant to those who want to start something on their own.

Similar answers were received for digital skills. Respondents expressed that there was lack of practical experiences, there is a need for training to become more individual, the training was not very relevant to VET learner's needs, and the content was generic and could not satisfy them. There was also a positive response saying that this type of training is helpful as it increases the knowledge of tools that can be used on a daily basis and in different jobs.

For VET educators to better develop training programs, it is necessary that the challenges VET learners face are identified. A significant finding has been that in all countries, except of Greece, the greatest challenge faced regarding training on building entrepreneurial skills is the fact that more than 40% of VET learners acknowledged that they have never thought of participating in a training program on building entrepreneurial skills. The top three challenges regarding training on entrepreneurial skills per country are included in the table below.

Table 8: Top Three Challenges Regarding VET Training on Entrepreneurial and Digital Skills

Country	Entrepreneurial skills		Digital skills	
	Challenge	%	Challenge	%
Germany	I never thought of participating in a training program on entrepreneurial skills.	41.20%	I never thought of participating in a training program on digital skills.	29.4%
	Other.	35%	Other.	23.5%
	My employer does not value this training.	11.80%	The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).	17.6%
	The length of these programs.	11.80%	The length of these programs.	17.6%
	There are not many jobs that need these skills in my country.	11.80%		
Ireland	I never thought of participating in a training program on entrepreneurial skills.	46.70%	The location of these programs is not convenient.	33.3%
	The time of the training is not convenient.	33.30%	The time of the training is not convenient.	33.3%
	The location of these programs is not convenient.	26.70%	The material and sources that these programs offer are not up-to-date.	26.7%
Spain	I never thought of participating in a training	53.30%	I never thought of participating in a training program on digital skills.	33.3%



	program on entrepreneurial skills.			
	The time of the training is not convenient.	20%	The time of the training is not convenient.	20%
	The content of the training does not address my current needs.	20%	The content of the training does not address my current needs.	20%
	My employer does not value this training.	13.30%	The material and sources that these programs offer are not up-to-date.	20%
Cyprus	I never thought of participating in a training program on entrepreneurial skills.	59.10%	I never thought of participating in a training program on digital skills.	54.5%
	There are not many jobs that need these skills in my country.	18.20%	The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).	18.2%
	The content of the training does not address my current needs.	13.60%	The location of these programs is not convenient.	9.1%
			There are not many jobs that need these skills in my country.	9.1%
			The content of the training does not address my current needs.	9.1%
			Educators are not well-trained to offer these programs.	9.1%
Greece	The location of these programs is not convenient.	28%	The time of the training is not convenient.	20%
	The time of the training is not convenient.	24%	The length of these programs.	20%
	The content of the training does not address my current needs.	24%	I never thought of participating in a training program on digital skills.	16%
	The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).	16%	The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).	16%
	There are not many jobs that need these skills in my country.	16%	The location of these programs is not convenient.	16%
			The content of the training does not address my current needs.	16%

Note: The percentages reflect the number of times the given statement was chosen divided by the total number of responses to the specific question. The top three challenges were included in this table. More than three challenges were included for each country in case of ties.

To better understand the challenges VET students face when it comes to VET, VET learners were asked about the challenges they face when accessing training programs in general, and they could chose the options that apply in their case. The three main challenges per country were:





Germany

1. The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).
2. Other.
3. I never thought of participating in a training program.

Ireland

1. The location of these programs is not convenient.
2. The time of the training is not convenient.
3. The frequency of classes.

Spain

1. The length of these programs.
2. I never thought of participating in a training program.
3. The frequency of classes and the content of the training does not address my current needs.

Cyprus

1. I never thought of participating in a training program.
2. The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).
3. The time of the training is not convenient.

Greece

1. The length of these programs.
2. The time of the training is not convenient.
3. The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.).

As it can be deduced from these results, training on entrepreneurial and digital skills had more to do with the content of the training and the fact that VET learners have never thought of participating in such training. In contrast, when asked about VET in general, VET learners acknowledge that they have not thought of participating in training programs, but the challenges they face are more concerned with practical aspects (e.g. time and length of programs, location, medium of delivery etc.) rather than the content of the training.

A necessary next step was to identify the willingness of VET learners to participate in training. Approximately 73% of respondents claimed that they would be “willing” or “very willing” to participate in training focused on entrepreneurial skills. The same percentage was found for digital skills. Finally, when asked how willing VET learners would be to participate in training focused on both entrepreneurial and digital skills, 70% of VET learners responded that they would be “willing” or “very willing”. As the numbers show, there is little variance regarding the preference of training on digital skills, entrepreneurial skills or both. The willingness of VET learners to participate in training is high, with more than half of respondents giving a positive response.



As to the preferred channel of information, VET learners were asked how they prefer to find out about training programs. The choices “Social media” and “Email” were the most frequently selected choices, with a significant preference compared to other choices such as “tv”, “radio”, “employer”, and “post”. “Social media” were chosen 61 times out of a total of 171 selections ($\approx 36\%$) and “Email” was chosen 56 times out of a total of 171 ($\approx 33\%$). These were followed by the choice “Employer”, which was chosen 23 times out of 171 ($\approx 13\%$).

Finally, the survey included open questions that were optional (see Annex 3). Those who chose to provide answers, expressed that a challenge they face is the cost of the programs, the need of certifications that have practical and immediate impact on their work, and are not just one part of their CV that will be unnoticed.



Conclusion and Recommendations

This transnational report provided an overview of the VET system and entrepreneurial landscape in each partner country (Germany, Ireland, Spain, Cyprus, and Greece). It provides helpful and relevant information to VET educators and other interested bodies/individuals who aim to understand the VET and entrepreneurial systems in each one of the five countries, to identify the relevant opportunities and stakeholders when it comes to VET provision and entrepreneurship, and understand the challenges and needs that VET educators and VET learners face.

The desk research has offered a general overview of each country, which can be a point of reference for those who want to access general information and identify the similarities and differences across different European countries. The field research, which comprised of 25 interviews with VET educators and 96 survey responses from VET learners, offered a deeper and contextual understanding of what is the current situation regarding entrepreneurial and digital skills in VET and what VET educators and learners need to move forward.

The research conducted by the seven organisations of the consortium has stressed the need of improving the image of VET. Both the desk and field research have shown that VET needs to become more attractive and its benefits need to become more apparent. It was shown that getting a university degree is a more attractive career choice compared to a VET qualification. This was proved to be the case even in the partner countries where the employability prospects of VET graduates are better compared to university graduates.

When it comes to VET learners, many of them have expressed that they have not previously thought of participating in training on entrepreneurial skills or training on digital skills. A major challenge is that entrepreneurship is not always included on VET curricula. The desk research combined with the interview findings show that there is a scarcity of VET programs that are focused on entrepreneurial skills, whereas entrepreneurial skills are mostly seen as the skills of creating and running a business and not in a broader sense as the one offered by the ENTRECOMP Framework of the E.U. It was noted that this definition of entrepreneurial skills make training on these skills not be adequately valued by employers.

However, VET educators have noted that their definition of entrepreneurial skills is more aligned with the ENTRECOMP Framework rather than the narrower definition of creating and running a business. They attributed this fact to the nature of the programs they teach and the nature of the VET field in general, since its purpose is to offer practical education and training to its learners. When it comes to digital skills, VET educators noted that a major challenge is the different level of digital skills that VET learners have, and the need of VET educators to identify the levels and find ways to make the training relevant to each level.

Following the previous line of thought, VET programs need to become more targeted to the specific needs of learners. VET learners have expressed that the training programs they attended were too general and they were not targeting their actual needs, and they were not completely satisfied to their lack of practical experience. It is thus needed to move from a general to a targeted and practical approach when designing and implementing VET programs on entrepreneurial and digital skills.



In addition, VET educators expressed the need of direct contact between VET providers with the job market and ensuring the relevance of training programs. They also expressed they need programs on entrepreneurial skills specifically on the area they work in, since needs differ across areas.

Another significant challenge that was identified from the research analysis is the need to make training on entrepreneurial skills more interactive, particularly when training takes the form of blended or online learning. Given the various measures taken on national levels regarding the COVID-19 outbreak, this meant that training had to be distant and online. This made VET educators and VET learners adapt to the new reality and find new ways to increase the interactivity in online environments, especially when cameras are off.

VET educators mentioned various good practices, however, they acknowledged that in certain occasions they do not have adequate resources and tools to design training programs or learning activities to develop the entrepreneurial and digital skills of their learners. VET educators expressed that they consider face-to-face and blended learning as the most appropriate formats to deliver training on entrepreneurial skills and on digital skills. They also emphasized the important role of activities that promote creativity and problem-solving, and activities that are more interactive. For the development of entrepreneurial skills, they showed great preference to role-playing, case studies and group work.

Based on the research conducted by the consortium and the previously mentioned conclusions, the following structure is suggested for the toolkit of the VETEntre project.

Number	Section Title
1	Overview and framework for VET & Entrepreneurship Education
2	Methodologies and approaches for integrating entrepreneurship education in VET
3	Strategies for integrating entrepreneurship education in VET
4	Integration of digital tools in entrepreneurial skills training
5	Building the entrepreneurship competences of VET educators
6	Assessment of Digital Readiness of VET Providers
7	Development of Digital Competences of VET Providers



Annexes

Annex 1: EU Information about VET

For EU-level information, the European Commission provides information on their website (https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en) on how VET is promoted by the EU. You can find the links of each action below:

- [European Credit system for Vocational Education and Training \(ECVET\)](#)
- [European Quality Assurance Reference Framework \(EQAVET\)](#)
- [Council Recommendation on a European Framework for Quality and Effective Apprenticeships](#)
- [European Alliance for Apprenticeships](#)
- [European Apprentices Network](#)
- [European Vocational Skills Week](#)
- [ET2020 Working Group on VET](#)

Vocational Education and Training in Europe available at:

<https://www.cedefop.europa.eu/en/tools/vet-in-europe/systems/cyprus>

General overview and latest developments in VET in Europe available at:

https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en



Annex 2: Interview Questions for VET Educators

Interview Questions
Introductory Question 1. Could you please provide us with an overview of your work as a VET educator? For example, what are the subjects you teach, the age groups of learners, the current needs of VET learners, and the overall context of your classes' learning experience? Answer:
Technology Use 2. Do you use technology when you teach? Give me an example. Do your learners use technology? How? Answer:
Importance of Entrepreneurial Skills in VET (as defined in EntreComp) 3. What are some examples of learning activities you design for your students to promote an entrepreneurial mindset? Answer:
4. How would training on entrepreneurial skills help VET learners? As a VET provider, do you think these skills are important in VET? Answer:
Design and Development of Training Program 5. Have you developed a training program on developing the entrepreneurial skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples. Answer:
6. What are the main challenges you face when designing a new training program on entrepreneurial skills? <ul style="list-style-type: none">• Do you feel that you have adequate support and resources to design and implement these programs?• What would be 2 key characteristics of a good program to teach entrepreneurship? What would be some examples of activities that you believe will help learners build entrepreneurial competences? Answer:



7. What are the main challenges you face when you perform training on building entrepreneurial skills?

Answer:

8. Have you developed any online programmes? If yes, could you please explain how you developed it?

- What format of delivery do you think is the best to build VET learners' entrepreneurial skills (face-to-face, blended learning, or online)?

Answer:

VET Educators' Training

9. Have you participated in any training on how to develop VET programmes on building entrepreneurial skills?

- If yes, how satisfied do you feel with the training?
- Do you have adequate support and resources to develop programs on entrepreneurial skills?
- If answering no, would you be interested in training in this area or on this topic into the future?

Answer:

Importance of Digital skills (as defined in DigComp) in VET

10. What are some examples of learning activities you design for your students to promote digital skills?

Answer:

11. How would training on digital skills help VET learners? As a VET provider, do you think these skills are important in VET?

Answer:

Design and Development of Training Program

12. Have you developed a training program on developing the digital skills of VET learners? What tools, resources, and methodologies did you employ? Please give us a few examples.

Answer:



13. What are the main challenges you face when designing a new training program on digital skills?

- Do you feel that you have adequate support and resources to design and implement these programs?
- What would be 2 key characteristics of a good program to teach digital skills? What would be some examples of activities that you believe will help learners build digital competences?

Answer:

14. What are the main challenges you face when you perform training on digital skills?

Answer:

15. Have you developed any online programmes on digital skills? If yes, could you please explain how you developed it?

- What format of delivery do you think is the best to build VET learners' digital skills (face-to-face, blended learning, or online)?

Answer:

VET Educators' Training

16. Have you participated in any training on how to develop VET programmes on building digital skills?

- If yes, how satisfied do you feel with the training(s)?
- Do you have adequate support and resources to develop programs on digital skills?
- If no, would you be interested in training to develop your own pedagogic and technical skills?

Answer:

Annex 3: Questionnaire for VET Learners

VETEntre Questionnaire

Thank you in advance for the support you are offering by filling the following questionnaire. This questionnaire has been designed to better understand the intersection of entrepreneurial and digital skills and VET education in different European countries. The purpose of this questionnaire is to identify the challenges and needs of VET learners when it comes to building entrepreneurial and digital skills.

Consent Form

This questionnaire is sent to you by the organisations that form the consortium of the Vetentre project (CEFE International, ACQUIN, CARDET, Innovade LI, FIPL, Con Valores, and Eurotraining). The purpose of this survey is to better understand the needs and challenges of VET learners. You are invited to participate in this survey if you are a Vocational Education and Training (VET) learner or if you are planning to become one.



The participation to this survey is voluntary and you can withdraw any time. If you decide not to participate in this study or if you withdrawal from participating at any time, you will not be penalised. This survey will take approximately 20 minutes. Your responses will be confidential, and we do not collect identifying information such as your name, email address or IP address.

Clicking on the "agree" button below indicates that: you have ready the above information, you voluntarily agree to participate, and you are at least 18 years of age. If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

- Agree
 - Disagree
1. Please select your country below:
 - a. Germany
 - b. Ireland
 - c. Spain
 - d. Greece
 - e. Cyprus
 2. What is your age group?
 - a. 18-22
 - b. 23-30
 - c. 31-50
 - d. 51-60
 - e. Above 60
 3. Have you participated in any training in the last five years on building entrepreneurial and digital skills?
 - Only training on entrepreneurial skills and mindset
 - Only training on digital skills
 - Training that focused on both entrepreneurial and digital skills
 - Not at all
 4. Which of the following statements applies to you?
 - a. The training I participated were offered by my employer
 - b. The training I participated were offered by a VET provider
 - c. Both
 - d. Other

Section 2: Entrepreneurial Skills and Mindset

The following questions are focused on training on entrepreneurial skills and mindset.

1. How easy is it for you to find out about new training on entrepreneurial skills?
 - a. Very Easy
 - b. Easy
 - c. Difficult
 - d. Very Difficult
2. What are the challenges you face regarding training programs on building entrepreneurial skills? (Select the choices that apply in your situation)



- I have never thought of participating in a training on entrepreneurial skills
 - The location of these programs is not convenient
 - The time of these programs is not convenient
 - The means of these programs are not convenient for me (e.g. they are face-to-face, online, blended learning etc.)
 - The length of these programs
 - The frequency of classes
 - My employer does not value these trainings
 - There are not many jobs that need these skills in my country
 - The content of the training does not address my current needs
 - Educators are not well trained to offer these programs
 - The material and sources that these programs offer are not up-to-date
 - Other
3. Has the training on entrepreneurial skills offered you enough opportunities to find a job or progress in your current job?
- a. Definitely
 - b. Slightly
 - c. Not at all
 - d. N/A (I have not participated in any training)
4. If you have not selected 'Definitely' in the previous question (question 3), could you please explain why and make a few recommendations?
5. If more training on entrepreneurial skills and mindset specifically were available, how willing would you be to attend?

Section 3: Digital Skills

The following questions are focused on training on digital skills.

1. How easy is it for you to find out about new training on digital skills?
- Very Easy
 - Easy
 - Difficult
 - Very Difficult
2. What are the challenges you face regarding training programs on building digital skills?
(Select the choices that apply in your situation)
- I have never thought of participating in a training on entrepreneurial skills
 - The location of these programs is not convenient
 - The time of these programs is not convenient
 - The means of these programs are not convenient for me (e.g. they are face-to-face, online, blended learning etc.)
 - The length of these programs
 - The frequency of classes
 - My employer does not value these trainings
 - There are not many jobs that need these skills in my country
 - The content of the training does not address my current needs



- Educators are not well trained to offer these programs
 - The material and sources that these programs offer are not up-to-date
 - Other
3. Has the training on digital skills offered you enough opportunities to find a job or progress in your current job?
- Definitely
 - Slightly
 - Not at all
 - N/A (I have not participated in any trainings)
4. Optional Open Question. 4. If you have not selected 'Definitely' in the previous question (question 3), could you please explain why and make a few recommendations?
5. 5. If more training on digital skills specifically were available, how willing would you be to attend? (From 1 to 5. 1 =No, 5=Definitely)

Section 4: General VET Provision

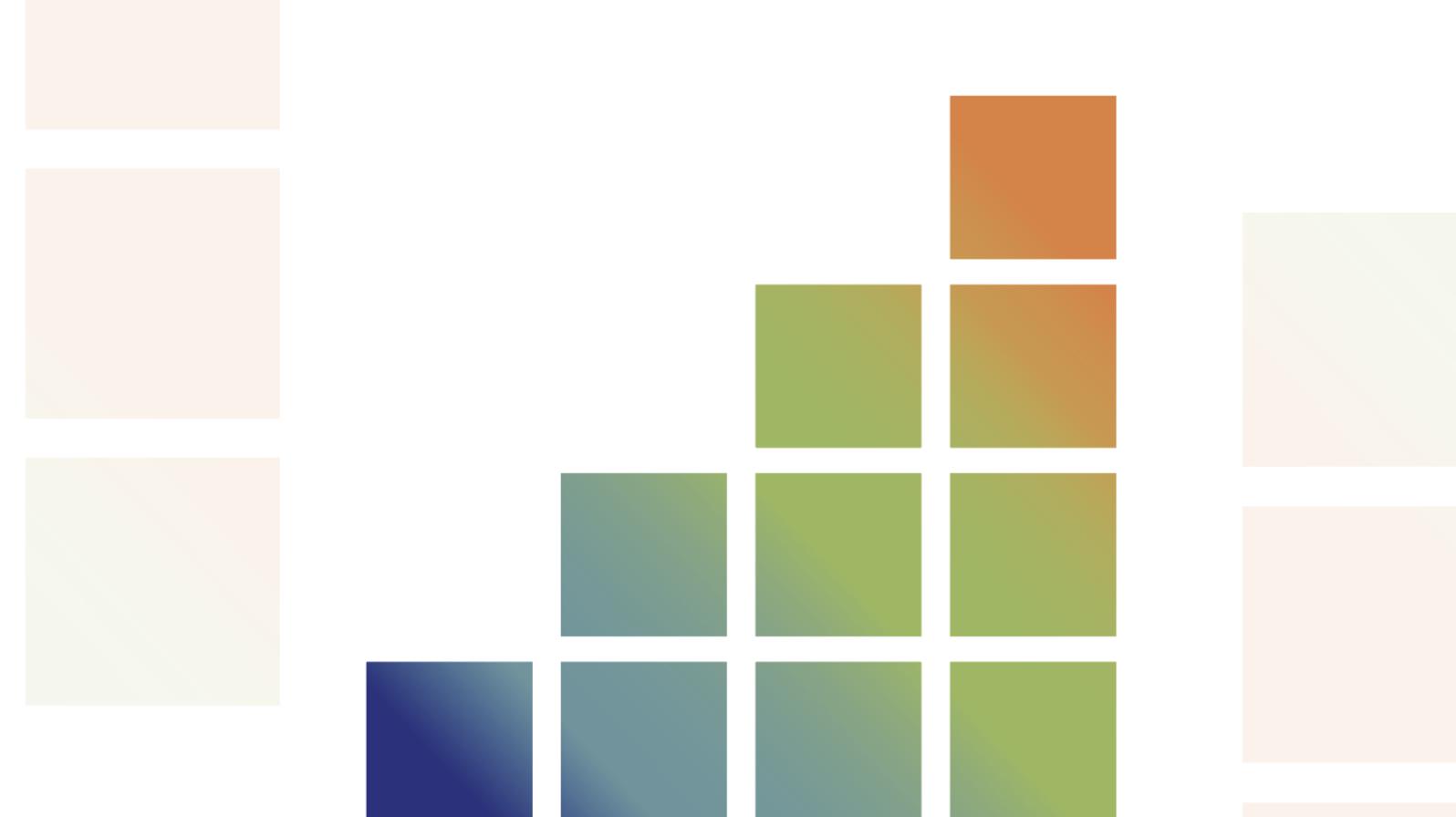
1. 1. How easy is it for you to find out about a new training program?
- Very Easy
 - Easy
 - Difficult
 - Very Difficult
2. What are the challenges you face regarding training programs? (Select the choices that apply in your situation)
- I have never thought of participating in a training program
 - The location of these programs is not convenient
 - The time of the training is not convenient
 - The way the training is delivered is not convenient (e.g. they are face-to-face, online, blended learning etc.)
 - The length of these programs
 - The frequency of classes
 - My employer does not value these trainings
 - There are not many jobs that need these skills in my country
 - The content of the training does not address my current needs
 - Educators are not well trained to offer these programs
 - The material and sources that these programs offer are not up-to-date
 - Other
3. If more training programs on both entrepreneurial and digital skills were available, how willing would you be to attend? (From a scale of 1 to 5)
4. I prefer to find out about training on entrepreneurial and digital skills through:
- E-mail
 - Social Media



- Television
- Radio
- My employer
- Post
- Other

5. Optional Open Question: Are there any other needs and challenges you face? Please share them below and add any recommendations you may have.

Thank you very much for completing this survey!



VETENTRE

Building VET Trainers Entrepreneurial Competences



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