

The future of vocational education and training in Europe

Synthesis report

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The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training, skills and qualifications. We provide information, research, analyses and evidence on vocational education and training, skills and qualifications for policy-making in the EU Member States.

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Foreword

This report was prepared as part of the Cedefop project *The future of vocational education and training in Europe*. Summarising 3 years of research involving researchers and VET experts all over Europe, the report synthesises the findings from a series of research papers and case studies that have already been published. Building on and taking forward the findings of the previous project (2015-18) on *The changing nature and role of vocational education and training in Europe*, the purpose of the research has been to understand better the overall health of European VET (do we experience marginalisation or expansion?) and how the current situation influences countries' abilities to respond to future challenges and requirements.

This report presents a comprehensive picture of European VET developments until 2020. The analysis shows that most VET systems evolve in a step-by-step manner, carefully building on existing traditions and responding to national circumstances and needs. Overall, and in the face of major external shocks like the fall of the Berlin wall in 1989, the economic crisis in 2008, the refugee crisis in 2014-15 and the 2020 pandemic, European VET systems are surprisingly stable and predictable. However, we can also observe shared and general trends influencing most or all national VET systems. These trends show how VET is responding to rapidly evolving technologies and to changing requirements from labour markets and societies.

Several key observations are significant. First, the institutions and structures supporting the delivery of VET are diversifying and expanding by increasingly addressing the need for up- and reskilling (lifelong learning) and by covering higher qualifications levels (EQF 5-8). Traditional VET at upper secondary level (EQF 3-4) is retaining a strong identity, helped by the reduction in the overall numbers of schools and an increase in their general size. While the number of VET qualifications has decreased in most countries, reflecting changes in tasks and occupations, the increasing emphasis on individual tailoring (for example through modularisation) and institutional autonomy (for example in relation to curricula) point towards more flexible VET systems responding to inevitably changing skills and

competence needs and requirements. Observing developments over the last three decades, the conception of VET in Europe is changing, increasingly emphasising the relevance of work-related and practice-based learning at all qualification levels and throughout life.

Second, the knowledge, skills and competences delivered by VET are changing, alongside the teaching and learning approaches applied by teachers, instructors, and individual learners. Our analysis demonstrates an increased focus on work-based and practice-oriented learning. This is reflected in the revision of national VET curricula, in the strengthening (and in some cases bringing back) of apprenticeships, and in the use of practice-based and authentic assessments. The focus on work-based learning is, in most countries, combined with integration of general subjects as well transversal skills and competences. Overall, this signals that VET cannot be reduced to the acquisition of narrow technical tasks but must address and combine a widening range of knowledge, skills and competences.

Third, the relationship between VET and the external world is changing fast. The expansion into higher levels and diversification for lifelong learning means that VET needs to go beyond initial preparation of young people for labour market entry. This is illustrated by the increasing number of adults in initial VET: while the proportions vary between countries, several countries now operate IVET systems where adults over 30 years of age form a majority. This forces institutions and systems to tailor teaching and learning to individual needs, with increased importance of modularisation, recognition of prior learning and individualised learning plans. The evolving character of IVET, as well as its changing relationship to continuing training and higher education, requires a rethink of established forms of coordination and governance. While the tripartite model of coordination and governance currently underpins most IVET systems, this is not the case when moving to higher levels or to continuing training aiming at up- and reskilling. A question for the future, also reflecting the priority given to practice-oriented learning, is how best to coordinate this expanded and diversified VET-system. For VET to stay relevant in the future it needs to be linked to occupations and the labour market in ways that ensure relevance and quality: 'future assurance' stands out as a key challenge for VET in the decades ahead.

Cedefop's work since 2015 provides an important basis for reflections on the future of European VET. Not only have the projects strengthened the basis for comparative VET research, they have also laid the foundation for a scenario-methodology directly supporting countries in developing

their institutions and systems. From the beginning our aim was to paint the big picture (to see the forest, not just the trees) and to analyse and better understand the longer-term development of European VET. While we hope to have succeeded in this to some extent, our work on the Future of European VET will continue in the years to come, deepening the insights already achieved.

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Executive summary

Background and methodology

Building on the findings of the previous Cedefop project (2015-18) on *The changing nature and role of vocational education and training in Europe*, the purpose of the research was to gain an in-depth understanding of vocational education and training in the 27 Member States of the EU as well as in Iceland, Norway and the United Kingdom. The project analysed how vocational education and training (VET) has changed since the mid-1990s and how this may influence future opportunities and challenges.

The research was divided into separate but interlinked themes:

- (a) changing content and profile of VET: epistemological challenges and opportunities;
- (b) delivering initial VET(IVET): institutional diversification and/or expansion;
- (c) the influence of assessments on vocational learning;
- (d) delivering lifelong learning: the changing relationship between IVET and continuing VET (CVET).

The aim of this synthesis report is to connect and synthesise the series of research papers and national or thematic case studies already published. It summarises 3 years of research involving researchers and VET experts across Europe, including data gathered by a European VET provider survey. The report includes a discussion of research findings related to the content and delivery of VET, to assessment practices and to the link between initial and continuing VET. It also includes a country-by-country analysis, a reflection on the use of scenarios in VET, and provides overall conclusions and suggestions for further research.

The study builds on the multi-perspective analytical model developed by the Changing nature and role of VET project. This model was further elaborated within this study and published as *50 dimensions of vocational education and training: Cedefop's analytical framework for comparing VET* (Cedefop, 2023, forthcoming). This approach acknowledges that a deep understanding of VET requires not only a focus on institutions and systems (an education system perspective), but also analysis of the relationship of VET to the labour market and society (socioeconomic or labour market

perspective) and a systematic attempt to understand how the content of VET is changing and what impact this has on teaching and learning (epistemological or pedagogical perspective).

Trends in VET in Europe

Mega drivers and how change happens in VET: the pendulum effect

The research has shown that the development of VET does not necessarily follow an unbroken chain of developments leading in one direction but can be interrupted by changes of course and even reversals in policy and practice. From this perspective, it turns out that the longer the period of time considered, and the more detailed the analysis, the more likely it is that major movements of the pendulum will be observed. Equally, the study found that some of the changes we identified in the earlier study as developments in a specific direction turn out to be the paths of a pendulum magnetically attracted or repelled in a multidimensional space between economic, social and educational goals. It is, therefore, not necessarily to be assumed that existing trends, even those long taken for granted, will each continue. Recent events such as the COVID-19 pandemic, the war in Ukraine, the energy crisis and surging inflation confirm the validity of this perspective.

One area where a pendulum effect is clearly observable – where factors do not all pull in the same direction – is assessment. For example, whereas traditionally there has been a strong emphasis on summative assessment (with a focus on certification), we can also see an expansion of assessment functions and a strengthening of formative assessment in several countries, with a focus on learning support. In addition, while we can see an increasing focus on standardised and external assessments (to ensure high levels of reliability), we can also observe (perhaps as a countermeasure) an increasing use of competence demonstrations in the workplace (to ensure authenticity and validity of assessment). Both developments are often justified in policy as a way of strengthening the image and value of VET.

But how does this pendulum effect come about: why are developments – so it seems – withdrawn, reversed or steered in the opposite direction? This is partly related to the mega drivers shaping changes in VET: wider economic, social and environmental forces like globalisation, an ageing population and climate change. Such drivers change over time and so does the way they are interpreted by policy-makers and practitioners who are also influenced by wider (political and technical) perspectives. Depending on the

weight decision-makers attach to them, and against the background of the particular policy goals being pursued at any one time, the VET pendulum will be subject to changes in direction. Another factor causing the pendulum effect lies in the complexity and difficulties associated with change itself. Changing course in VET, as in education in general, can be compared to trying to change the course of a supertanker: it takes so long to turn around that by the time a new direction is taken, the weather conditions (the drivers) may have changed. It should also be borne in mind that changes in VET cannot be viewed in isolation from changes in the education system as a whole and associated debates, policy objectives and practices. Changes that appear as a change of direction in VET may be a consequence of developments in other education sectors. For example, the strengthening of standardised and external forms of assessment in VET can be seen as a measure to raise its status to match that of general education and thus expand the possibilities of access to higher education for VET graduates.

Some of these pendulum swings would need further research to elucidate the causes, drivers, push and pull forces for a strong swing in a particular direction or a change of course. Within this broad perspective of the nature of change, the following trends can be observed.

Fewer and broader IVET qualifications with strengthened general education components and transversal skills and competences

As already observed in the previous study, in many countries there has been a trend towards a reduction in the number of IVET qualifications, in some cases accompanied by a broadening of their profiles. From a content perspective, VET subjects dominate but many countries have strengthened the general education component of their IVET programmes, either by giving more space to these subjects or by better integrating them into the curricula. Similarly, transversal skills and competences are increasingly emphasised in VET policies. However, it has been difficult to determine to what extent they have been integrated into VET so far, as they are usually not specifically identified in VET qualifications and curricula. Transversal skills and competences are sometimes integrated into general subjects, but they are also included in vocational content. Even if some have their own dedicated subjects, they can still be more strongly associated with vocational content (such as entrepreneurship, career management or digital skills). The challenge of making a clear statement on this is further compounded by the fact that there are

different national approaches to defining and classifying transversal skills and competences, which makes comparability difficult.

Increasing diversification of VET provision

The number of VET schools has decreased in many countries, either due to demographic trends (fall in pupil numbers) and/or to increase the efficiency and effectiveness of provision (by merging schools). Hybrid education and hybrid schools combining general and vocational education remain rare in Europe as a whole, though they are becoming more common. VET at upper secondary level retains a strong identity of its own.

These developments are taking place in the context of increasing autonomy for providers in terms of curriculum design and delivery, albeit to varying degrees in different countries. Greater autonomy is being accompanied by increasing modularisation of qualifications, with elements that can often be chosen optionally and with the increasing use of methods for validating non-formal and informal learning. This, in turn, enables the design of individual learning pathways and flexible learning arrangements, which seems likely to continue into the future; it is also reflected in assessment, though it has not been possible to determine how common such pathways are or how frequently they are used.

Despite the fall in VET school numbers in many countries, we are seeing a diversification of VET provision, not only through greater autonomy in the curriculum but also in terms of learning sites and an increase in workplace learning. Unfortunately, due to the increasing autonomy and flexibilisation of educational pathways, it is becoming increasingly difficult to assess the exact extent of this development, though the emphasis on workplace learning is also reflected in assessment (and both are expected to increase further in the coming years): skills demonstrations conducted in real work environments are becoming more common, and employers or other labour market actors are increasingly involved in assessing VET learners.

It remains to be seen how increases in general educational content and workplace learning will develop and what the consequences will be. Both represent attempts to increase the attractiveness and quality of VET; although these approaches do not necessarily imply a contradiction, they could pull the VET pendulum in different directions.

Changing interaction of IVET with CVET and with higher levels of education

Adult participation in VET is an important differentiating factor between countries. In some countries VET is predominantly youth-centred (with more than 60% of learners being younger than 20); in others, VET is mainly adult-centred (with more than 60% of learners aged 20+). Other countries are a mix of both. Regarding IVET specifically, in all countries a significant proportion of adults aged 20+ participate in upper secondary or post-secondary IVET; although this share has traditionally shown wide inter-country variation, it is increasing for a variety of reasons. Research findings reveal that IVET has opened up to adults over the past 25 years: programmes have become more flexible (in terms of duration, choice of subjects, modularisation) and have a strengthened vocational component, which is likely to make them more attractive to adult learners. Moreover, the role of IVET providers in upskilling and retraining adults, while still limited, may evolve in coming years given the general direction of policy. Increased links can be observed between IVET and CVET, which are sometimes described as blurred boundaries between these two 'orientations' of VET. This is manifested, for example, in overarching national skills strategies that have emerged recently.

Many countries have also looked to strengthen the links to higher levels of education to make VET more attractive to young learners. Countries have taken different measures in this regard. Several have developed access pathways to higher education by adapting curricula for upper secondary vocational education, e.g. by providing additional modules or additional years of study that offer the opportunity to meet the entrance requirements of higher education institutions. Other countries have introduced additional VET programmes to bridge the gap between upper secondary and tertiary education (e.g. at EQF level 5) or have extended apprenticeship-like programmes to higher levels.

Previously observed trends continue, but so does inter-country diversity, and new trends are now visible

The findings summarised above indicate that the overall picture of trends identified in the previous Cedefop study can be largely confirmed by the research conducted here. At the same time, it is difficult to discern the extent to which we are seeing convergence or divergence among countries. The reason for this, in addition to different political (and ideological) choices,

could lie in differences in economic and social conditions which play out in different ways in different national – and sometimes regional – contexts.

The convergence between countries in terms of academic and vocational drift (based on enrolment data) noted in the previous study can only partly be further observe. In particular, the decline in enrolment in VET appears to have stalled in several countries, possibly reflecting a change in skills demand and a slowdown in the trend toward higher education.

What can be further observed is that school-based VET in almost all countries is increasingly moving towards broader vocational domains and qualifications that provide access to higher education, at the expense of more specific practical vocational training. However, there are a growing number of mixed VET systems in which work-based and school-based tracks coexist, indicating an increasing diversification of training pathways.

The research results of this project also point to tendencies of convergence between IVET and CVET. This is based on the idea of making VET a system that better supports lifelong learning but it is often motivated by considerations of (financial) efficiency, since, for example, opening up IVET courses to adults can lower the unit costs of course delivery.

Future VET research

Based on the research conducted during the last 7 years and the discussions in the research community, the following research needs have been identified:

- (a) improving comparative VET data and a research base on VET institutions (which, inter alia, would facilitate the exploration of historical institutional developments);
- (b) further development and re-examination of sector perspectives (including addressing gender segregation in the labour market and in VET);
- (c) further development of methods for and research on comparing VET curricula (including improving the conceptual basis for comparative curriculum research and access to VET curricula, exploring the development of a rudimentary monitoring system for curriculum change in VET, and focusing on the role of citizenship education);
- (d) researching VET teaching and learning methods (pedagogy and didactics);
- (e) examining the concepts of quality, excellence, and inclusion in VET, their interrelationships, and how they have changed over time;
- (f) exploring changes in VET by promoting transdisciplinary political science research conducted by international and transdisciplinary research teams.

CHAPTER 1.

Introduction

1.1. Context and aim of the study

This study marks the end of a 3-year Cedefop research project, *The Future of VET in Europe (2020-22)*, and a stopover in a research journey which began 7 years ago in which we have tried to gain a better understanding of the overall direction that European VET is taking and also to catch a glimpse of the future. At the beginning of the journey, we had no map at hand and did not know exactly where we were. Is VET something of the past, gradually being marginalised or is VET expanding? Worse still, the many individual technical studies by Cedefop and others, while valuable, reinforced the feeling that we were losing sight of the forest for the trees.

In the predecessor project *The changing nature and role of VET in Europe (2015-18)* we were not only able to draw a first big picture of VET in Europe, but also developed a map conceptually and methodologically that allows us to determine VET's current position and provides a tool for shaping the future. The present study can be read as a continuation of the final synthesis report of the previous project (Cedefop, 2020b), as a second volume so to say. It may be easier for the reader to understand the considerations and analyses of this study after consulting the previous one, and here and there it may be necessary to flip between the two.

The current study builds on four individual sub-projects, each of which was completed with its own report, and attempts to summarise and compare the most important findings of these reports across countries and country-specifically. It goes without saying that more details and evidence can be found in the individual reports and there are many cross-references to them. These four reports of *The future of vocational education and training in Europe* research paper series are:

- (a) *Volume 1: the changing content and profile of VET: epistemological challenges and opportunities* (Cedefop, 2022b);
- (b) *Volume 2: delivering IVET: institutional diversification and/or expansion?* (Cedefop, 2022c);

- (c) *Volume 3: the influence of assessments on vocational learning* (Cedefop, 2022d);
- (d) *Volume 4: delivering lifelong learning: the changing relationship between IVET and CVET*. (Cedefop, 2023 forthcoming).

The policy context in which the study needs to be placed is European cooperation in vocational education and training, which has an anniversary to celebrate with the signing of the *Copenhagen declaration* 20 years ago. The Copenhagen process set a common agenda for developing VET through intensive, wide-ranging voluntary cooperation between European countries, including social partners. It has resulted in a framework for transparency of qualifications and competences (EQF), cooperation in quality assurance in VET (EQAVET), work towards a credit transfer system for VET (ECVET), common principles for validation of non-formal and informal learning, and strengthened policies and practices for lifelong guidance. Two decades later, in 2020, the *Osnabrück declaration*, with its focus on resilience and sustainability, revived this spirit of cooperation and took up and incorporated many of the ideas and insights developed by Cedefop in this research. The *Opinion on the future of vocational education and training post-2020* adopted by the tri-partite Advisory Committee on Vocational Training (ACVT) by the end of 2018, explicitly refers to the findings of The changing nature and role of VET in Europe project. This study also complements the policy discussion on the future of European VET as reflected in the *European skills agenda* of July 2020 and the *Council Recommendation on VET for sustainable competitiveness, social fairness and resilience* of November 2020.

Earlier policy debates on the role of VET often revolved around changes in future labour demand. However, the extensive research on how workplaces and work organisation are, or might be, changing and how they impact future skills demand has not been matched by a corresponding body of research on the supply side. We know surprisingly little about how the structure and content of VET curricula and programmes interact with changes in the wider economy and society, especially over the long term. The present study attempts to remedy this deficit by scrutinising changes in curricula, assessment, VET programmes and at the level of IVET providers, including their interaction with CVET.

In Section 1.2 of this introduction we set the scene by discussing the broader societal and economic context in which VET and this research is situated, draw on observations and conclusions of the previous project, and introduce the key topics and research questions which are discussed in more

detail in Chapter 2. Section 1.3 of this introduction summarises key figures on VET enrolment and demography which underpin the country analysis in Chapter 3. Section 1.4 briefly summarises our analytical approach, the methods applied and the research activities carried out. Chapter 4 provides our overall conclusions, a reflection on our use of scenarios in VET and suggestions for further research.

1.2. VET in a changing world: old and new challenges

The previous study on the changing nature and role of VET identified a range of factors that make up and shape the world in which VET sits. It showed how there is often a complex interplay between drivers leading to responses within VET and highlighted how difficult it can be to trace effects from individual drivers to individual policies and practices.

It also drew attention to what we might term the 'shape' of changes, both in external drivers and in the VET 'response'. Some changes are comparatively slow and incremental. At the same time, we can get sudden shocks, which push developments in new directions or appear to push existing trends across invisible thresholds into a new system 'state'. It may turn out that the pandemic has had such an effect on the use of digital technologies in workplaces and classrooms, helping to overcome resistance to the use of video-conferencing for example. We may also experience the emergence of new or intensification of existing developments, perhaps the most prominent being the green transition.

This study was able to shed more light on these interplays and highlighted that VET responds to a variety of factors but not in a straightforward or unidirectional manner: like a pendulum it can move in different directions at the same time due to different factors; or factors can reinforce one another. It has also shed a light on the potential direction of new trends. It has also made it possible to see the broad ways in which the VET we observe today reflects these factors in varying ways: in pedagogics and content, in systems and institutions and in the overall relationship between VET, society and the labour market.

In terms of the economy, the general picture since 1995 has been one of developing a globalised economy to an unprecedented degree, facilitated and driven by the technological advancements made possible by digitalisation. Increasingly integrated global supply chains have made it

possible for companies to ‘offshore’ production of goods and services and their associated jobs to low-skilled, low-wage countries outside Europe, with European nations increasingly focusing on higher-skilled activities, especially in sectors like technology and finance. At the same time, successive waves of digitalisation have brought about considerable turbulence in labour markets and are starting to impact on demand for middle level skills, with the replacement of cognitive work tasks by technologies based on artificial intelligence and machine learning. Changes in skills needs now take place more rapidly than ever before, requiring skills to be frequently updated. Thriving in such conditions means having a set of core or transversal skills that people can deploy across a wide range of occupations and sectors to ensure their continued employability. It also means being able to access training easily, frequently and in small volumes which can be completed quickly, which may partly explain the surge in the use of microcredentials in recent years.

Such broad trends were, of course, interrupted by major periodic systemic shocks, principally the financial crisis which triggered recession in Europe in 2008, the COVID-19 pandemic and now the war in Ukraine and the associated energy crisis, which has led to inflation and threatens recession again in Europe. But while such economic dips weakened the demand for VET along with employers’ capacity to participate in training, they did not deflect the broader underlying trends, at least so far; instead, the pandemic gave an unforeseen boost to digitalisation in workplaces and classrooms. Similarly the financial crisis and the incredibly high youth unemployment which followed resulted in new VET emphasis and a renaissance, and gave room for initiatives such as the European Alliance for Apprenticeships (1).

The demographic base of VET has also seen important developments in the last two decades. Key demographic trends in Europe have been the ageing of the population along with the movement of European citizens across the continent and the influx of third country nationals; this last factor mostly arises from the civil war in Syria in 2015-16 and in 2022 from Ukraine, though these ‘spikes’ in in-migration to Europe represent sudden surges on top of an existing and continuing flow of migrants from Africa, and west and south Asia especially. These demographic trends interact in complex ways which are also spatially and temporally varied. Some countries have been net losers of population, especially of young people aged 18 to 24; this is

(1) European Commission. European Alliance for Apprenticeships (EAfA).

traditionally the dominant group from which IVET draws its learners, though many countries which lost population up to 2020 are now seeing a reversal of this trend and vice versa (see also Section 1.3). In the labour market, falling numbers of young entrants throw the emphasis onto upskilling and reskilling older workers.

The influences of social trends on VET are perhaps the hardest to discern, perhaps because their effects are less direct. A notable effect of the economic downturns experienced since 2007 has been increasing inequality. Through its effects on unemployment and incomes the ‘great recession’ ⁽²⁾ widened inequalities both for the EU as a whole and across most Member States; and for the first time in decades concerns rose across the EU, citizens and governments that younger generations, and not just people on low incomes but also the middle classes, may have fewer opportunities for upward social mobility than their parents’ generation ⁽³⁾. At the same time, rising digitalisation in our everyday lives has already impacted how goods and services are bought and sold, with a major stimulus being provided by the COVID-19 pandemic, along with our social interactions. Such trends are potentially spilling over into general expectations in relation to individual choice and the realm of civic participation whose positive and negative consequences are still to be fully understood, with fake news and the potential for malicious interference in democratic processes perhaps the most high-profile manifestations of deeper trends. Related to this are other new phenomena like the ‘great resignation’, i.e. the elevated rate at which workers, not only in the U.S. but elsewhere, resigned from their jobs or ‘quiet quitting’, i.e. working-to-rule and quitting the idea of going above and beyond essential work tasks. Quiet quitting has been discussed as a direct resistance by the new Generation Z ⁽⁴⁾ to the hustle-culture that ‘work has to be your life’ of previous generations. Perhaps the phenomenon is overestimated, perhaps it is exclusively a phenomenon of our affluent societies, but it points to new demands and configurations of work-life balance, the fact that part-time work could become the new norm and that current skill shortages have become

⁽²⁾ The great recession was a period of marked general decline, i.e. a recession, observed in national economies globally that occurred from late 2007 into 2009. The scale and timing of the recession varied from country to country.

⁽³⁾ Eurofound. [Inequality](#).

⁽⁴⁾ Generation Z (or more commonly Gen Z for short), colloquially known as ‘zoomers’, is the demographic cohort succeeding Millennials and preceding Generation Alpha (Generation Alpha is the first to be born entirely in the 21st century). Researchers and popular media use the mid-to-late 1990s as starting birth years and the early 2010s as ending birth years.

increasingly complex. Together with the change in esteem that, at least in the short term, essential workers received during the pandemic (the brief applause to care workers, supermarket cashiers and harvest workers and others) it also shows that things we consider as unchangeable may change or change quicker than we expect them to. It is reasonable to assume such broad trends are already seeping into other areas of our lives, including VET, in terms of learner expectations.

The influence of the natural environment is arguably the newest driver on the VET scene. Environmentalists and scientists have long highlighted the damaging impact of human activities but it has only been in the last two decades that concerns have actually fed in to public policy in general – notably through the adoption of the UN Sustainable Development Goals which came in to force in 2016 ⁽⁵⁾ – and it is only within more recent years that the need for the ‘green transition’ has moved to the top of the VET agenda across Europe. Initial VET policy development focused on sectors and occupations most directly impacted by policies around climate change and environmental degradation – in ‘clean’ energy and waste management for example – with the identification of new skills and the development of new programmes/qualifications to support new occupations like solar panel installation (Cedefop, 2019g). Since then, it has become apparent that the skill needs of the green transition are not just about technical skills but about greener mindsets and behaviours for the whole population, with green competence frameworks being developed (Bianchi et al., 2022). This development means we are now beginning to see the green transition entering the VET mainstream with the adoption of policies and practices in all aspects of VET (e.g. Cedefop and OECD, 2022; European Commission, 2023 forthcoming).

VET is also likely to have been affected by broader trends in the management of public services. Perhaps the most notable trend in recent decades has been the absorption of ideas related to ‘new public management’ (NPM) which emphasised the devolution of responsibilities and decision-making within public administrations, accompanied by the use of indicators to measure and help ensure the achievement of performance goals. Rather than relying on top-down rules and regulations, the approach focused on giving more freedom to local managers of services to make decisions in line with local needs, which would improve efficiency and effectiveness, while an

⁽⁵⁾ United Nations. Sustainable development goals.

element of central control and direction would be achieved through the use of indicators; there are also connections here to the notion that teachers and school managers can influence policies even though that may not be the intention, see Chapter 5 of Cedefop (2023, forthcoming). NPM reached its heyday in the 1990s and 2000s and subsequently became criticised when its benefits failed to materialise fully (Van Dooren and Hoffmann, 2018). Nonetheless, notions of devolution and the use of indicators live on in public services, including in VET.

These trends have had important influences in the overall relationship between VET, society and the labour market, in systems and institutions, and in pedagogics and content identified in the preceding Changing role and nature of VET project; they have triggered new research questions we are trying to answer in this study.

From a socioeconomic and labour market perspective, we saw how VET has increasingly embraced broader goals, moving on from simply preparing young people for labour market entry around industry- and sector-based standards. Such a trend reflects the need for VET to ensure the development of broader, transversal skills, including for the green and digital transitions, and to support measures to combat social inequalities, since VET's key client base comprises those most adversely affected in recent decades by rising inequalities, the young and those with low and middle level skills. VET has also begun to meet the challenge posed by increasing demand for advanced VET skills in the context of falling demand for middle-level skills. We have also seen the evolution of skills intelligence systems which help to keep track of rapid changes in the labour market, such as using data analytics and big data. However, the previous study did not enable us to see how these issues play out at the level of providers. The assumption that some blurring has taken place between VET and general education upper secondary was obvious, but to what extent? And what kind of institutional solutions can be associated with this? Are hybrid programmes and schools that combine VET and general education the new normal? Are these assumed institutional changes the consequence of changes in skills demand or are they driven by other social or economic forces (see Section 2.1)?

From an education system perspective, we have, for instance, seen the development of VET systems that are more coherent and better integrated within overall education and training systems, rather than being what was in many countries a fragmented, low status 'Cinderella' service of the late 20th century. Tracks have been developed between education and training

subsectors to enable VET learners to progress, replacing programmes with educational dead-ends, and again responding to the growing demand for higher level skills in the labour market. Under the pressure of demographics, and of the need to upskill and reskill existing workers, VET has also started to evolve away from its traditional focus on young people by opening up its offer to adults. However, we were not able to assess the extent to which the various IVET subsystems are being opened-up to adults and how this affects programme content, pedagogies and assessment? Also, we were eager to find out to what extent and in which form national and regional policies are supporting a closer link between CVET and IVET, and which role the autonomy of IVET providers plays in this regard (see Section 2.4 for details).

From a pedagogical/epistemological perspective, it became evident that the observed broadening of VET goals was found to have been accompanied by a broadening of curricula and programmes since 1995, moving away from narrow and task-specific curricula and programmes and reflecting a need for wider skill sets in the labour market. At the same time, work-based learning – a key feature of VET that distinguishes it from other forms of education – has increased, enabling stronger tailoring of programmes to the needs of the workplace. There has also been a movement away from a focus on inputs to an orientation around outcomes and competences, and an increased acceptance of prior learning. The outcome focus again enables greater labour market relevance, while also opening up the possibility of greater individualisation and choice in learning, which is in line with general social trends. However, all these were assumptions were based on a VET stakeholder survey, the analysis of policy documents and sporadic interviews with practitioners. Only the current study allowed us to go deeper into historic comparisons of curricula, changes in VET profiles, qualifications and assessment practices. We can now confirm with some certainty that the number of IVET qualifications across Europe has decreased, although it's not always related to a broadening of the occupational focus. Certainly, we also have some better understanding of how the balance between occupation-specific skills, general subjects, and transversal skills evolved over time and how general and transversal skills are integrated into IVET programmes and qualifications (compare Section 2.2). We were further able to explore how these changes in the balance of skills has influenced assessment practices and what are the dominant assessment forms applied in IVET (Section 2.3); this crucial topic was largely absent in the previous study.

Within these broad trends, each country has, to some degree, its own trajectory, reflecting its own mix of economic, social, demographic and environmental factors and its own distinctive mix of structures, institutions and processes of VET policymaking and delivery. Differences in these conditions means that apparently similar countries may show different responses to the same drivers. Equally, all countries probably show some degree of what is termed path dependency, wherein a country's trajectory (its approach to VET, its programmes and qualifications, delivery structures etc.) remains unchanged despite changes in external drivers. The structures and processes within existing VET systems, policies and practices can inhibit or open up possibilities for change, and it is also important to bear in mind that choices are always possible: VET is not simply the passive responder to external forces and is subject to political debates just like other public services. It is also prone to effects within the chain of implementation from policy to practice caused by the actions of stakeholders within the system – teachers, school leaders and employers – which can alter how policies actually turn out 'on the ground' (see Chapter 5 of the Analytical Framework for comparing VET (Cedefop, 2023, forthcoming)).

What of future trends? Forecasting what may happen next is, of course, risky, as the pandemic and the war in Ukraine have highlighted clearly. Nonetheless, we can be reasonably certain that we are already starting to see the beginning of another wave of economic and social transformation shaped by the digital economy, big data analytics, crypto-currencies, and artificial intelligence, while the effects of climate change already seem to be intensifying, demanding a response from VET systems. As for the broader economy, it is possible that we are entering a new era where the certainties of the age of globalisation are weakening. The globalised economy has already been disrupted by the pandemic's impact on global supply chains and is threatened by long-term trends such as China's rising labour costs and looming demographic crisis; and Russia's attempted invasion of Ukraine has severely unbalanced global energy markets and grain supplies, with no clear resolution in sight. Apple's recent relocation of production out of China ⁽⁶⁾ may become emblematic of a more general shift of production amongst western companies into new countries: we may be moving into a new age of de-globalisation (Zeihan, 2022). With regard to demographics, Europe's ageing population issue will likely become more acute, and migration into

⁽⁶⁾ The Economist (2022). *The end of Apple's affair with China*. 24 October 2022.

Europe is likely to intensify given the threats to lives and livelihoods caused by factors like climate change and the disruption of global grain supplies caused by the war in Ukraine, for example in North Africa and the Horn of Africa. Very recent history has taught us that thinking in scenarios both for the global context ('How will the war in Ukraine end?') as well as in local, regional or national contexts ('What will that particular VET institution or system look like in the future?') is more relevant than ever.

1.3. Key figures on trends in VET in Europe

Monitoring long-term developments of VET in Europe requires examining its qualitative and quantitative indicators and changes which impact it. Throughout the project we have been using a comprehensive analytical model to approach changes in VET which has brought together and structured such indicators (see Chapter 2). While the emphasis has been on new and hard to measure changes, such as how the extent of transversal skills has changed in curricula, it is also worth looking at some of the easily available key figures which help to sketch out our picture of VET. Several indicators can be used for this purpose, but we do not have the space here to go into detail on all of them. For instance, we could look at educational outcomes of VET students such as young VET graduates in further education and training, or the share of IVET students with direct access to tertiary education as a percentage of all upper secondary IVET; we could also look at employment outcomes such as the employment rate for recent IVET graduates. The rate of early leavers from education and training, and of NEET, also provide important insights into the functioning of a country's VET system. However, we content ourselves at this point with a few key references to the relevance and structure of IVET, the role of adults in IVET, and demography, which help to sketch out some of the main dimensions of VET across Europe.

In the previous project we classified countries' VET systems both according to their conception of VET (Cedefop, 2017c) as well as according to the set-up of their upper secondary sector (Cedefop, 2018a). For the latter, two key indicators can be used: the share between vocational and general upper secondary education and, within vocational education, that between

apprenticeship ⁽⁷⁾ and school-based vocational education. Hanushek et al. (2011) have used such an approach and the country groupings emerging from this also bear a close resemblance to the classifications proposed by Green and Pensiero (2016). The positions of countries in these groups (Table 1), have not changed much in the last 5 years, but some small adjustments needed to be made.

Table 1. Countries according to the share of students in VET at upper secondary level and the relationship between school-based and apprenticeship tracks

	School-based	Mixed system	Dual systems
Low share of VET	Cyprus, Greece, Ireland(A), Lithuania, Malta		Iceland(A)
Medium share of VET	Belgium, Bulgaria, France, Estonia, Hungary, Italy, Latvia Luxembourg, Poland, Portugal, Romania, Sweden, Spain	UK, Norway	Denmark(A), Germany
High share of VET	Czechia, Croatia, Finland, Slovenia, Slovakia,	Austria, Netherlands	Switzerland

Source: Based on Eurostat and Cedefop data for 2019, Countries in which of IVET learners are 20 or older can be considered adult-centred (see Section 2.5).

Using data from the school year 2019/20 we can distinguish the following groups.

- (a) Switzerland, which is the only country where the percentages of IVET students and of IVET work-base students are high.
- (b) Germany and Denmark, with equally high or even higher shares of apprentices having fallen out of this group due to academic drift in the past year.
- (c) In the Netherlands and Austria, the percentage of IVET students is high (20 to 30 percentage points higher than in Germany or Denmark), but the percentage of work-based students is at medium level, i.e. roughly half of the VET students are in apprenticeship programmes and half of them are

⁽⁷⁾ Apprenticeship is defined as systematic, long-term training alternating periods at the workplace and in an education institution or training centre.

in school-based VET programmes. This is why we also speak of mixed systems, while Germany, Denmark or Switzerland are considered dual system countries.

- (d) Countries where the percentage of IVET students and the percentage of IVET work-based students is medium, such as UK and Norway.
- (e) Countries where the percentage of IVET students is low, i.e. Cyprus, Greece, Lithuania, Malta, Ireland and Iceland, with the last having high shares of apprenticeships.

What is not articulated by this grouping is the extent to which IVET is youth-centred. We therefore indicated in Table 1 those countries with a high share of adult learners in IVET ISCED 3 and 4, which can also be seen in Figure 3.

The scale and direction of population change has differed widely across countries in Europe, as revealed in Figure 4 which shows the percentage change in the number of those aged 18 to 24 between 2000 and 2020 in various countries. As the figure shows, some countries, typically northern ones, have experienced population growth. Migration above the natural rate of increase has played a significant role in the population growth observed in these countries (Eurostat, 2021); without it, the population in more countries would have declined or stagnated or will do so in the future.

Figure 5 goes on to show that there are also significant differences in the size of the 18- to 24-year-old population projected over the period to 2030, indicating that the future population trajectory for some countries will be different from the past. Several countries which experienced population growth in this age group over the 2000 to 2020 period are projected to experience a decline in the period to 2030, including Denmark, Cyprus, and the Netherlands.

Comparing the growth rates in the number of 18- to 24-year-olds and the share of upper secondary students in vocational education over time, it is possible to obtain an indication of the ability of vocational education to sustain its position as a source of skills supply (Table 2). In the lower left cell of Table Y are those countries where there has been a decline in the number of those aged 18 to 24 in recent years and a fall in the share of upper secondary students in vocational education, such as in Greece, Italy, Portugal or Romania. This may suggest that IVET occupies a weakening position in the education and skills systems of these countries.

Table 2. Changes in the share of upper secondary education accounted for by vocational orientation (2013-19) and changes in the number of 18- to 24- year-olds (2000-2020)

Increasing youth and decreasing VET Denmark, Sweden, Iceland, Belgium	Increasing youth and increasing VET Cyprus, Spain, Malta
Decreasing youth and decreasing VET Italy, Portugal, Greece, Romania	Decreasing youth and increasing VET Poland, Slovenia, Estonia, Hungary

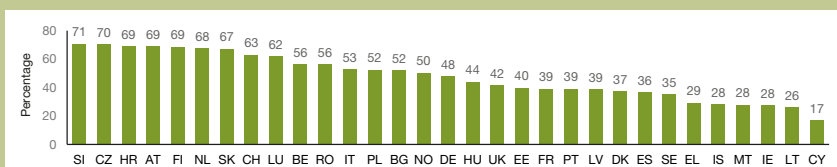
NB: Germany, Austria, Finland, France have been relatively stable in both indicators; Latvia, Lithuania, Bulgaria, Slovakia have had a shrinking youth, but stable shares of VET; Ireland shows an increasing share of VET students but stable youth cohort.

Source: Based on Cedefop 2022c.

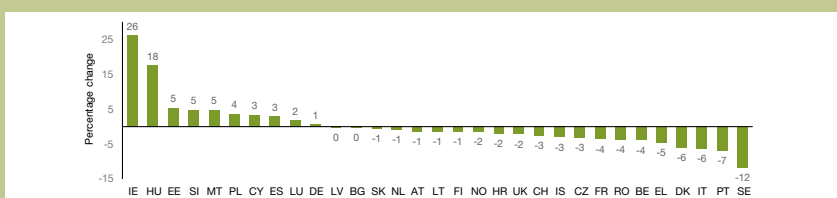
The upper left cell shows those countries where there has been an increase in the number of 18- to 24-year-olds but the share in vocational education has been falling. This suggests that the position of VET may also be relatively weak, albeit in a variable demographic context, such as in Denmark, Sweden and Iceland, as well as Belgium and partly the Netherlands. In the lower right cell are countries where the share of upper secondary students has been increasing but the number of 18- to 24-year-olds has been falling, which may well suggest a strengthening of the IVET system in a potentially unfavourable demographic context, such as in the post-communist central and east European countries Estonia, Hungary, Poland and Slovenia. In the upper right cell are those countries where both the share of vocational students and the number aged 18 to 24 has been increasing, indicating that VET is in a strengthening position albeit in a favourable demographic context, such as Spain, Cyprus or Malta. Other countries such as Germany or Austria, have been relatively stable in both these indicators, with others relatively stable in at least one of the indicators. The EU-27 average share of IVET students as a percentage of all upper secondary students has remained very stable at around 48% in the last couple of years.

Box 1. Selected key indicators for VET in Europe

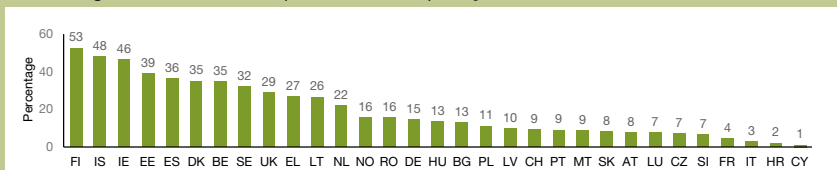
IVET students as % of all upper secondary students, 2019



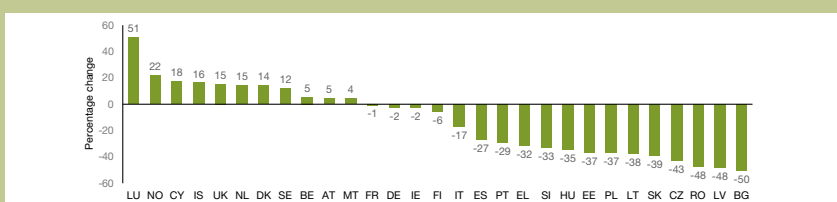
Change in the share of IVET students as % of all upper students, 2013-19



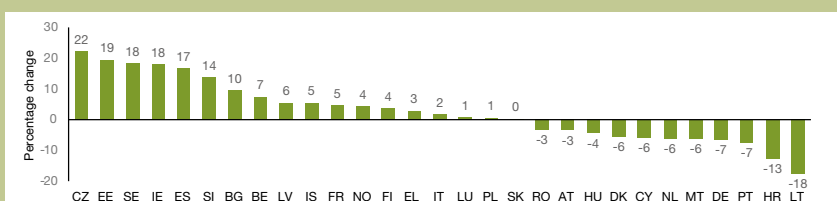
Percentage of VET students (ISCED 3 and 4) 25 years or older, 2019



Percentage change in the number aged 18 to 24, 2000-20



Projected percentage change in the number aged 18 to 24, 2020-30



Source: Eurostat, educ_uoe_ens05, educ_uoe_ens08, proj_19np, demo_pjan.

1.4. Research approach and methodology

‘Looking back to look ahead’ has become the unofficial motto of Cedefop’s research journey that began in 2015 and that has aimed at analysing past and future VET developments in all European Member States, Norway, Iceland and the UK ⁽⁸⁾. For this purpose, an analytical framework was initially designed to analyse conceptions of VET across countries and their changes over time.

In this framework, we have distinguished three, partly overlapping, perspectives: an epistemological and pedagogical perspective; an education system perspective; and a socioeconomic or labour market perspective (compare Figure 1 below and also Cedefop, 2017c; 2020b).

The epistemological or pedagogical perspective is the view usually taken by educationalists, psychologists and philosophers with a focus on issues of VET pedagogy, and hence the learning and development of individuals including their learning environment. From this perspective, it can be argued that the identity of vocational education is rooted in distinctive modes of production, representation, use and transfer of knowledge, which can be associated with particular ways of teaching and learning.

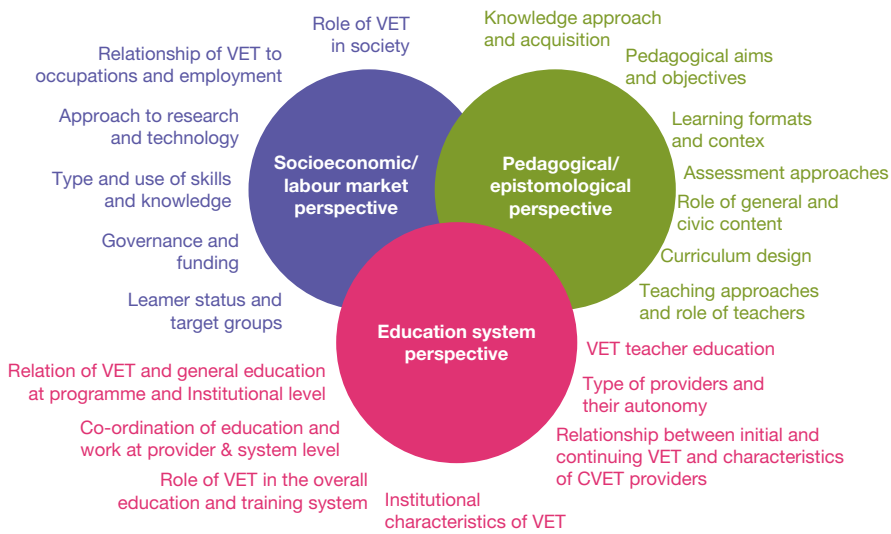
An education system perspective is the view usually taken by people in education administration, sociologists of education and education statisticians. It looks at the way VET as an institution has evolved and continues to evolve over time. It focuses on system and VET provider characteristics and is reflected in the way VET is represented in international statistics or country reports, the sort of ‘VET at a glance’ reports. In this perspective, the variety of forms of VET, types of providers, levels, pathways and the nature and scale of VET in the initial (compulsory) phase of education and for adults, the relationship with other sectors, such as general education and VET teacher status, education and qualifications, are of particular interest.

Using a socioeconomic or labour market perspective, the wider societal functions of VET are considered. This is the view often taken by economists, labour sociologists, political scientists and historians, who will be interested in, for instance, the ways in which VET contributes to social stratification by providing access to particular career pathways and to the skills, competences and attitudes demanded by companies and their work systems. It is the

⁽⁸⁾ Cedefop (2017). *Briefing Note: Looking back to look ahead: preparing the future of VET in Europe 2020-30*.

status of learners, their employment and education outcomes, the funding sources and mechanisms as well as the types of governance which are of specific interest here.

Figure 1. **Three-perspective model**



Source: Cedefop.

These three perspectives were further developed and consistently applied in all research activities, as well as combined with other analytical tools and models where appropriate. For instance, with the classical distinction into analytical levels and actors, i.e. micro level (e.g. teacher/classroom), meso level (local/regional providers) and macro level (national ministries or social partners) or with process models of the curriculum (intended, assessed, and learned).

The geographic scope of the study comprised 30 countries, including the EU-27 plus Iceland, Norway and the United Kingdom. Apart from extensive desk research, literature analysis and secondary analysis of statistical data, the following research activities were carried out:

- (a) qualitative survey among Cedefop's ReferNet network ⁽⁹⁾ in 2020 using a WORD questionnaire/template specifically drafted for the purpose of supporting the project;
- (b) quantitative online survey among European VET providers in 2021 addressing managers, heads or directors of VET provider institutions as well as teachers with at least 10 years of experience (using the EU survey, see details in the box below);
- (c) ad hoc research conducted by country experts to verify and complement the data from the two surveys;
- (d) comprehensive thematic or national case studies prepared by experienced researchers from the respective countries.

Four thematic research papers were produced and published during the lifetime of the project, as well as a survey report (see also Box 2.) and the above-mentioned analytical framework; 21 national or thematic case studies were developed, presenting in-depth analysis of developments in different areas. Detailed information on the methods applied (e.g. how countries, practices, sectors and occupations were selected) can be found in the individual research papers this synthesis report is based on.

⁽⁹⁾ ReferNet is a network of institutions created by Cedefop in 2002 to provide information on national vocational education and training (VET) systems and policies in the EU Member States, Iceland and Norway. Each national partner is a key organisation involved in VET in the country it represents.

Box 2. Future of VET survey of vocational education and training providers

The purpose of the VET provider online survey was to obtain information about how the content and means of delivering IVET has changed over the past 10 years. It was carried out between June and October 2021 and addressed VET providers in Europe at upper secondary level typically providing IVET at EQF levels 3 and 4. Managers and heads of VET institutions as well as experienced teachers were the key target group.

Although the survey is not representative of the population of providers, we tried to obtain responses from VET providers who are in some ways regarded as typical because they represent a relatively common type of IVET provider in the respective country. The survey was distributed both through international networks and organisations (e.g. Cedefop's ReferNet) and via national experts in selected countries. The questionnaire has been translated into the national language of the focus countries (English and nine other languages).

This report mainly uses results for 11 countries for which the sample is sufficiently large to come to reasonably robust conclusions (n = 893): Austria, Croatia, Finland, France, Italy, the Netherlands, Poland, Romania, Slovenia, Spain, and the United Kingdom.

More details on the survey are provided in a separate report (Cedefop, 2023, forthcoming-a).

Source: Cedefop.

Interim results were regularly presented and discussed with a larger audience. Two conferences ⁽¹⁰⁾ and two expert workshops ⁽¹¹⁾ were carried out. The core project team, often including additional experts from the

⁽¹⁰⁾ In November 2020, Cedefop organised an online conference for policy-makers, stakeholders, experts and researchers to discuss the challenges and choices facing European VET today. The final findings of the project were presented at the online conference *Future of VET: the way forward* in December 2022.

⁽¹¹⁾ In October 2021, the workshop *The future of VET: comparative methodologies for VET research* was organised with around 30 international experts. In September 2022, a workshop on the *Future of VET in Europe: pathways to vocational excellence* was organised at Germany's Federal Institute for VET (BIBB), in Bonn, to discuss key findings of the project together with internationally renowned VET researchers. Interim results of the project were also presented at several other events, e.g. at national and international research conferences.

consortium, met with Cedefop, more than 25 times during the 3 years of the project, mostly online, due to the pandemic. Nevertheless, these meetings often became expert workshops rather than the usual progress meeting between client and contractor.

CHAPTER 2.

The changing profile and nature of VET

2.1. Introduction

In Chapter 1 we saw how VET has been shaped by a wide variety of factors that have interacted in complex ways which have shifted over time. We also saw how the previous project on the changing nature and role of VET had been able to give some broad indications of how VET had changed in Europe over the last two decades, while highlighting the scale and nature of the diversity that exists – and persists – between countries. The current project has given the opportunity to build on this work and to probe in greater depth key areas where the details of the characteristics of VET and the nature of change have largely been a black box until now: VET institutions, curriculum, assessment and VET's role in relation to adults. These topics form the content of this chapter. Analysis draws heavily on experiences in selected countries as empirical material is richer for some countries than for others.

In Section 2.2 we look at the institutional trends in the VET provider landscape. It is self-evident that the structure of VET institutions sets the frame for VET delivery in any country and is an essential part of the infrastructure through which changes in policy and practice are implemented. Through the project it has been possible to look at key dimensions of this institutional framework: the basic numbers of VET providers, which has an important bearing on provider size and delivery possibilities; changes in the degree of autonomy they are able to exercise; cooperation with stakeholders; how VET's status compared to general education tracks has evolved; and how its relationship to higher educational levels has developed. On all these topics, it seems that VET has been subject to the steady influence of long-term forces, although it has often required legislation to effect institutional change, resulting in points of sudden change, as when laws are passed to grant providers greater autonomy. In many cases the change process has consisted of a series of steps in response to outside drivers.

In Section 2.3 we turn to curricula: the descriptions of what it is that people will learn during a VET programme. As the section will show, curricula have often evolved steadily and incrementally in their detailed content in response to the broad economic forces discussed in Section 1.2; these have pushed employer demands towards broader, more transversal skills sets and pushed VET away from shorter programmes tailored to narrowly specified occupations and towards broader ones and more work-based learning. There has been a long-term European policy goal to make VET more relevant to labour market needs, so this broad shift, first detected in the previous study, reflects this goal to some degree. Another area of interest probed by the current study has been the level of curriculum autonomy and flexibility. As noted in Section 1.2, an important driver here has been the idea of achieving more individualised learning pathways, partly in response to the breakdown of predictable career pathways in traditional industries (the once much-discussed jobs for life) and partly because of a growing general expectation of greater individual choice in the western world; this long-term trend has been given an additional and largely unforeseen push by the ability of the internet to deliver near-instant individualised gratification.

Assessment is examined in Section 2.4. The question of how to determine what someone has learned in VET, is a vital, though often neglected subject. Writing in 1999, Green noted that ‘it is surprising ... how poorly documented actual assessment methods and content, and the process of certification, tend to be’ (Green et al., 1999). Our findings suggest that there is still a lack of research into assessment but significant developments have taken place in a range of areas: the overall roles and function of assessment; the use made of standardised and externalised methods and skills demonstrations; how assessment has evolved to keep in touch with shifts in the types of skills being developed by VET; and the impact of digitalisation. An interesting aspect revealed by the analysis is how far assessment has been affected by changes elsewhere in VET: assessment results have been put to work as a tool to monitor institutional performance in contexts of increasing autonomy; modularisation of the curriculum has meant that in many cases small parts of qualifications are individually assessed; and the advent of recognition of prior learning practices has stimulated new forms of assessment. In such contexts, the influence of external drivers on assessment might be seen as partly being ‘filtered’ through other dimensions of VET. At the same time, assessment has also been affected directly by long-term trends like the shift towards transversal skills; often considered more difficult to assess,

these types of skills frequently need new assessment methods. Equally, assessment is one area of VET that was considerably affected by the system ‘shock’ of the pandemic. Although computer-assisted methods were already starting to be used, the force majeure impact of COVID-19 added a new push to developments.

The final part of this chapter, Section 2.5, looks at the relationship between IVET and adults. As we saw in Section 1.2, acceleration in the rate of skill change, demand for higher level skills, and a falling youth population have combined to throw new emphases onto the need to upskill and reskill adults. Understanding how VET has responded to this challenge has been an important element of the current project. With most VET ‘infrastructure’ focused on IVET, the key question is how IVET has been adapting to these new circumstances. Addressing this topic has involved several considerations: an examination of evolving institutional arrangements for CVET and how they relate to IVET; how numbers of adult learners have changed; and what effect this new clientele has had on provision since their principal need has traditionally been for small-volume courses, which in the past have not typically been validated or recognised through State-backed and quality assured methods. The question of how to ensure the needs of adults are met is an important example of how an external driver can have ramifications right across VET: at the level of whole systems, individual institutions and programmes/qualifications.

2.2. Institutional trends

2.2.1. Introduction

One of the key research questions that the Future of VET study has sought to address is the extent to which we can observe institutional changes in Europe’s VET provider landscape, throughout the period of investigation 1995 and 2020, and whether these can be related to institutional diversification and/or expansion.

This section is based on the dedicated report on institutional trends in IVET that has been published as volume 2 of the Future of VET project (Cedefop, 2022c). It examines the way in which institutional arrangements for the delivery of IVET have changed over the past 25 years.

It explains that vocational schools have been subject to reform and their number has fallen (even though the number of VET learners is sometimes

on the increase) as a result of demographic trends and the need to deliver vocational skills more efficiently. It is also clear, especially from the survey of training providers, that vocational schools have experienced much change as they have sought to respond to a variety of labour market challenges. The scale of and significance of these changes should not be underestimated. Vocational schools have, over the past 10 years, experienced changes with respect to both what they teach and how they teach it.

The following subsections focus on how countries have adapted their VET provision in response to the various external forces they are confronted with, as discussed in the introduction.

2.2.2. Institutional changes in the VET provider landscape

Throughout the period of investigation of our study, there have been many significant changes in the VET institutional landscape designed to make sure that VET at upper secondary level meets the needs of the labour market, society, and the individual learner. Vocational schools have been subject to reform, falling in number as a result of demographic trends and pressures to deliver vocational skills more efficiently.

Countries differ significantly in their policy responses, partly in response to the different ways in which the major drivers outlined above play out in different places and partly owing to differences in VET institutional and policy arrangements. One way to compare countries is to take a look at the relative stability of policy-making, distinguishing two broad groups of countries: those with relative policy stability, and those with a dynamic policy environment.

Examples of a stable system would be Germany or Norway. The main characteristics of the German IVET system have remained stable between 1995 and 2020: there has been no fundamental changes in the institutional arrangements for the provision of VET. VET is characterised by continuity and any changes have been incremental, though it should be noted that a series of incremental changes over time can bring about substantial change as well.

Countries where evolution over 1995 to 2020 has involved more radical changes include the former Soviet bloc countries⁽¹²⁾ and UK-England, as well as Finland and Italy. The former Soviet bloc countries have experienced a number of policy twists and turns over time, as the countries have tried to

⁽¹²⁾ Including Bulgaria, Czechia, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia.

establish a VET system that meets the needs of their economy and society in the post-communism period. In Finland, a series of reforms since the 1990s have been designed to improve what was considered to be a well-established system. These reforms have been intended to increase equality between VET and general education at upper secondary level, and to provide VET students with eligibility to enter higher education.

The percentage of upper secondary learners in EU Member States who take the vocational pathway has remained more or less stable at around 48 to 47% over the 2013 to 2019 period. However, this masks wide variation between Member States from countries where a majority of those enrolled at upper secondary level take the vocational pathway (e.g. in Czechia, Croatia and Slovenia) to situations where it is very much a minority pursuit (e.g. in Ireland, Cyprus and Malta) (Cedefop, 2022c).

Most countries experienced an increase in the extent to which authority and autonomy have been granted to regional and local levels across the period of investigation ⁽¹³⁾. However, there are considerable differences both in countries' starting points and the extent of change. The increased autonomy of VET institutions, along with the flexibility that it is expected to bring about, may mean that they become better placed to respond to changes in (local and regional) economies and labour markets and demand from learners (for more information, see Section 2.3.2). In the case of UK-England, the way in which VET providers are funded – according to the number of learners completing a course – requires them to provide courses and programmes which meet local demand.

Results from the VET provider survey suggest that there has been both increased cooperation with a wide range of stakeholders and increased competition amongst VET providers over the past 10 years. Coordination with employers to organise training opportunities and monitor learner progress has increased in half of the institutions surveyed; cooperation to align the content of learning also increased in 50% of the cases, though 35% of the respondents have not experienced change in either option. While the survey was not representative, these findings may point to a certain degree of inertia in the sense of a lack of incentives for VET providers to change what they do. Competition to enrol learners has increased over the past 10 years according to 71% of respondents to the VET provider survey (Cedefop,

⁽¹³⁾ For example, observed for (non-exhaustive list): Austria, Bulgaria, Croatia, Czechia, Germany, Finland, Ireland, Iceland, Lithuania, Luxembourg, Malta, Netherlands, Poland, Slovakia, Slovenia.

2023, forthcoming-a). This would be expected in a context of falling VET learner numbers, though other factors may also be at work.

In several countries, there is evidence of a decline in the number of vocational schools, in many cases the result of a shrinking youth cohort. In some cases, this has led to the creation of larger, regional centres of VET that are able to maintain the range of vocational provision or even expand it further.

Finally, the way in which VET providers and programmes are funded potentially affects provision. When faced with cuts in their funding, vocational institutions have generally sought to offset this by diversifying their offer into areas where other funding streams can be accessed, e.g. by engaging more in the provision of VET at higher levels and/or the provision of CVET. Another important funding issue concerns how the costs of provision are distributed across stakeholders. With the introduction of an apprenticeship levy in UK-England in 2017, the burden of funding training has shifted increasingly towards the employer and the apprentice and away from the State. This has led to a sharp drop in apprenticeship starts, for intermediate and advanced level apprenticeships, although higher-level apprenticeship starts have increased (Cedefop et al., 2022).

2.2.3. Trend towards broadening of VET

The previous study observed that boundaries between VET and general education at upper secondary level have become increasingly blurred. Across countries, for several programmes and qualifications, it is becoming increasingly difficult to say which school programmes should be defined as VET and which as general education. The findings from the Future of VET study confirm this trend, showcasing different developments that lead to increased rapprochement between the two. In many cases, the rationale for these developments lies in the attempt to make education and training more attractive, and to facilitate progression between different learning pathways.

Though boundaries between general and vocational pathways are becoming increasingly blurred, in the sense that more general subjects are being incorporated within VET studies, VET and general pathways remain separate with their own qualifications and programmes, and, in many instances, separate providers.

In several countries, VET reforms have sought to increase equality between VET and general education, as described for Finland in the previous section. Parity of esteem between VET and general education also plays a

role in the introduction of T-levels (technical-levels) in UK-England at the end of 2020. The purpose of this reform of vocational qualifications is to introduce a qualification which will be recognised by learners and education institutions alike as being of equal value to the general stream equivalent A-levels (advanced-levels). It is by developing a vocational qualification that is 'large' – it takes 2 years to complete full time with a strong general component – that in some way mirrors the structure of an A-level (the general qualification) that parity of esteem is to be obtained. T-level two-year courses have been developed in collaboration with employers to ensure that they meet the needs of industry⁽¹⁴⁾. While they are mainly classroom-based with a substantial general education element, they also come with a major work experience element of a minimum of 315 hours, around 45 days.

It remains to be seen whether the introduction of T-levels can be considered a sign of academic drift. If students are more likely to take T-levels than apprenticeships (given that the latter are in short supply), there will be evidence of academic drift insofar as there is an emphasis on general education within T-levels. On the other hand, if T-levels succeed in persuading more students to select the vocational rather than general route through upper secondary education, then the overall impact of their introduction will, in aggregate, be vocational drift (Cedefop, 2022c).

Across countries, we can also observe examples of initiatives which have sought to combine general and vocational paths, allowing learners to pick and choose from each pathway as part of increased tailoring of education and training programmes to individual learner needs. This allows a higher degree of specificity, so that individual learners are better placed to pursue their selected career and there is flexibility to address emerging labour market needs. These are sometimes referred to as hybrid pathways, which offer an opportunity for learners to follow a more varied pathway through upper secondary education by being able to select courses from both general and vocational streams. Yet, to date, such initiatives tend to be of small scale rather than a universal trend.

In some countries, such as Finland, Norway and UK-England, upper secondary VET providers have a tradition of providing both vocational and general courses. There are also examples where hybrid pathways are a more recent development, such as in Lithuania. Since September 2020,

⁽¹⁴⁾ These are equivalent to three A-levels; three A-level passes are also a typical requirement to enter university.

gymnasium students in general school have been able to study some courses provided in VET schools. In this setting, the VET school and the general education school, together with the learner, work together to draw up an individual learning plan so that the maximum weekly number of 35 lessons is not exceeded.

Our research has shown that, despite the observed broadening of VET and the increasingly blurred lines between VET and general education, VET retains a strong distinct identity through upper secondary education and, to a lesser extent, at higher levels. This is the case even though in several countries IVET and general education are provided in the same institution. While VET retains its distinct identity, its content has clearly changed: this is the focus of the following chapter. Changes have also been made which increasingly allow for VET learners to access higher education.

2.2.4. Strengthened links to higher levels of education

Many countries have looked to strengthen the links to higher levels of education to make VET more attractive to young learners. As a result, during the last two decades, there has been expansion and diversification of vocationally oriented education and training offered at higher levels in European countries (Cedefop, 2019c, p. 11). We can observe that there is now much more VET provision at higher levels: there is now something which is recognisably higher-level VET which means that programmes such as apprenticeships can be extended to higher levels as well as delivering classroom based VET. Yet, vocationally oriented education and training at higher levels can take many forms and is in most countries not clearly defined or considered to be a sector on its own. Statistical data on the extent to which education and training at higher levels can be classified as vocational (as opposed to general) are limited, which makes it difficult to assess the role that VET plays at higher education levels.

In this context, it is of interest to examine the changing relationship between VET at ISCED level 3, the traditional ‘heartland’ of upper secondary VET provision, and VET at higher levels. However, defining VET at higher levels is far from easy. In the study on the *Changing nature and role of VET*, it was noted that ‘the distinction between vocational, general, academic or professional becomes increasingly fuzzy at these levels. This distinction is also rarely used by countries at present’ (Cedefop, 2019c, p. 11).

The evidence, where available from national statistics, suggests that post-secondary, non-tertiary education tends to be overwhelmingly classified as

vocational. At tertiary level, vocational provision usually takes the form of either short-cycle programmes or professional bachelor degrees.

From a more institutional perspective, three different responses can be identified that VET systems typically choose to meet the increased demand for higher-level skills:

- (a) ensuring that VET at upper secondary levels permits or facilitates progression to higher levels (either vocational or general);
- (b) establishing or further developing vocational institutions delivering post-secondary VET;
- (c) providing workplace-based progression routes (e.g. through the development of post-secondary/bachelor-level apprenticeships).

To improve the transition from upper secondary to higher levels, efforts have been made to ensure that upper secondary VET qualifications have parity of esteem with their general education counterparts. In some cases, this has been achieved through requiring additional study from vocational learners to obtain the *matura/maturita* qualification which allows for transition to higher education (e.g. in Czechia and Lithuania).

Some countries have introduced additional VET offerings to bridge the gap between upper secondary and tertiary education, i.e. to straddle ISCED levels 4 and 5. The Dutch associate degree is one example of such a development. It was piloted in 2006 and subsequently became part of the higher education system in 2013. The rationale behind its introduction was to offer 2-year programmes that would facilitate the transition from VET to higher education. Associate degrees are offered by universities of applied sciences.

In Germany and UK-England, apprenticeship-type programmes have been extended to higher levels. In Germany the number of dual study courses offered increased from 512 in 2004 to 1 662 in 2019. Over the same period, the number of students rose from approximately 41 000 to 108 000.

In other countries, there has been a significant increase in the provision of apprenticeships at higher levels. This has been particularly the case in UK-England and Ireland. In the latter, following a remodelling of the system, apprenticeships introduced from 2016 onward lead to an award between EQF levels 5 to 8 (NFQ 5 to 10). In England, in 2015, degree apprenticeships were launched as part of the apprenticeship reform programme, providing the opportunity for apprentices to gain a full bachelor or master degree (see Section 3.4.3).

Results from the VET provider survey offer insights into how VET providers

have engaged in additional provision at higher levels, which allows us to obtain some indication of the extent of diversification of VET provision that has taken place. Approximately 35% of respondents said that there had been changes in the levels at which they provide training over the past 10 years; this was generally at EQF levels 4 and 5, where additional provision had occurred. A large majority of respondents cited increasing demand from learners for VET at this level as a key reason for this.

2.2.5. Hybrid provision and alternative pathways

Hybrid programmes, hybrid institutions, and alternative pathways exist at the fringes of VET systems across countries. Cedefop (2022c) provides examples of new programmes and new types of school but, for the most part, there are few examples, with the possible exception of UK-England where there seems to have been an ongoing preference of policy-makers to experiment with new qualifications / programmes and new types of school. One reading of the evidence is that the products of the experimentation tend not to last long (e.g. general national vocational qualification, GNVQs, and free-schools). Aside from England's predilection for experimentation, it is evident that change in the other countries has mostly been accommodated within existing structures. For example, the extent to which it is possible to tailor provision to specific needs within the Dutch system does not seem to have necessitated wholesale institutional change. This may well reflect VET's coming of age, reported in the *Changing nature and role of VET* study. As VET has matured it has been able to accommodate change relatively easily within its existing structures (such as integrating more general education or extending VET to higher levels), maintaining its identity as something separate from other types of education or programme delivery. There is variation between countries. Germany perhaps represents the country which has exhibited most stability. To some extent this might reflect the dominance of the dual system and the learning fields approach which has allowed change to take place readily without upsetting existing structures. Other countries have had to develop, or reform their apprenticeship or dual systems over the same period (e.g. Finland and Norway). The eastern bloc countries⁽¹⁵⁾ and Finland provide examples of where more change has taken place compared to Germany, especially so in extending VET to higher levels. In the former eastern bloc countries, it is about adding an extra year to upper secondary

⁽¹⁵⁾ Including Bulgaria, Czechia, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia.

VET education to allow students to enter higher education, and in Finland it is about expanding provision of VET at higher levels in VET institutions. Though it is not always clear about the extent to which access to higher level VET in Finland is predominantly from upper secondary VET or general education. In general, however, the narrative is about stability rather than change or, perhaps more accurately, it is about managing continuing, and sometimes substantial, change within existing structures and programmes (except in England).

Despite all this, new provision and alternative pathways have emerged. These include:

- (a) tailoring VET provision so that it meets the individual's requirements (rather than adopting a one-size-fits-all model). This is particularly evidenced in the Netherlands where learners can, for example, mix and match parts taken from different qualifications (crossover qualifications);
- (b) switching between vocational and education pathways made more achievable. Reforms in several countries now allow learners in the VET stream to gain access to higher education (e.g. by extending the duration of VET studies so that learners can take examinations which grant access to HE, as seen in Lithuania and Czechia);
- (c) developing VET at higher levels, thereby providing a VET pathway through higher education. This has seen the development of VET qualifications at higher levels, such as associate degrees in the Netherlands or degree level apprenticeships in UK-England, as well as expanding the volume of VET provision at higher levels.

Arguably the balance still favours general education. Learners can move from vocational to general, typically by increasing the content of general education in vocational, so that access to higher education can be gained. It is not clear to what extent practices are in place to include more vocational education in its general counterpart (this fell out of scope of the current study). That said, the universities of applied science – which might be described as the VET schools of higher education – grant admission to those from general education.

2.2.6. Concluding reflections on institutional changes

Our research on institutional changes has shown that, throughout the past two to three decades, vocational schools have been subject to reform, falling in numbers as a result of demographic trends and pressures to deliver vocational skills more efficiently. Yet countries differ significantly in their policy

responses, ranging from examples of relative policy stability to those with a highly dynamic policy environment. Even for the former, incremental change over time can result in significant levels of institutional change.

The findings of the study show that boundaries between general and vocational pathways are becoming increasingly blurred in the sense that more general subjects are being incorporated within VET studies. The boundary remains, however, in so far as VET and general pathways remain separate with their own qualifications and programmes, and, in many instances, separate providers, especially when looking at the upper secondary level.

In order to improve the transition from upper secondary to higher levels, efforts have been made to ensure that upper secondary VET qualifications have parity of esteem with their general education counterparts. Some countries have introduced additional VET offerings to bridge the gap between upper secondary and tertiary education.

Further, we can observe the emergence of hybrid programmes, hybrid institutions, and alternative pathways, although the overall number of examples identified is limited. Change has more often been accommodated within existing structures, without requiring wholesale institutional change. Rather than there being alternative routes through VET, the evidence suggests that flexible pathways have emerged in the provision of VET which allow learners to adopt a pathway best suited to them, as the example of the Netherlands demonstrates.

2.3. Trends in curricula

2.3.1. Introduction

Policy debates on the current and future role of VET often revolve primarily around changes in future labour demand. Existing jobs might require significantly different sets of skills than a few years earlier, and many jobs are expected to change dramatically or disappear completely. Though there is a general concern that the knowledge and skills taught today may be much less useful for the challenges of tomorrow but the content of vocational education and training needs to be defined from a long-term perspective emphasising a robust canon of knowledge. Reconciling these apparently irreconcilable characteristics represents a significant challenge and will also have to consider the fact that curriculum change inevitably takes time.

There is extensive research on how workplaces and work organisation have changed and may change in the future, and the resulting consequences for skills. However, the focus of research on the skills demand side has not been matched by an equivalent body of research on the supply side. We know surprisingly little about how the structure and content of VET curricula and programmes interact with changes in the wider economy and society, especially over the long term. What we do know is that the relationships are likely to be complex. VET does not simply respond to wider changes but has agency and is thus implicated in those changes. It is vital to start to develop an understanding of how changes in working life and labour demand interact with the provision of VET, and particularly what has happened in terms of the content of provision, in contrast to the surface statistics.

Previous research by Cedefop based on the analysis of national education statistics has revealed that, in almost all countries in Europe, enrolment in shorter, more practical VET programmes at upper secondary level has declined since the 1990s; enrolment in more technical and theoretical VET programmes providing direct access to higher education has increased (Cedefop, 2020d). These figures seem to imply that there has been increasing demand for jobs requiring higher and better skills and so that young people are increasingly choosing (or are ‘forced’ to choose) pathways that offer them more job and further training opportunities. While this can be considered as academic drift at upper secondary level, these numbers do not tell us anything about how the content of programmes themselves may have changed. Are the IVET programmes young people enrolled in during the 1990s the same as in the 2020s in terms of the balance between practical and theoretical content, between general and specific skills? Has curriculum change perhaps exacerbated the academic drift by increasing general, theoretical content at the expense of hands-on skills? Are the increasing specialisations and diversifications of tasks and jobs that we observe in the labour market reflected in an increasing number of more specific qualifications on the part of the VET system, or does VET respond by offering fewer, more general IVET qualifications while leaving specialisations to continuing VET (CVET) (Section 2.4)? These questions, to which we turn below, cannot be answered without considering the extent to which VET providers can shape the structure and content of curricula.

Therefore, this chapter, which is based on the dedicated project report (Cedefop, 2022b), begins by looking into curriculum autonomy (Section 2.3.2), explains how changes in the number of curricula need to be interpreted

(Section 2.3.3), discusses the trend towards greater accentuation of general and transversal skills (Section 2.3.4) and clarifies why this trend does not contradict an increased emphasis on workplace learning (Section 2.3.5).

2.3.2. Curriculum autonomy and increased flexibility

Efforts have been made at EU and Member State level over the past 15 years to promote flexible and individualised learning pathways, i.e. providing learners with a certain degree of choice in terms of the structure of a VET programme or qualification. Most recently, the *2020 Council Recommendation on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience* ('VET Recommendation') stresses that VET programmes should be 'learner-centred, offer access to face-to-face and digital or blended learning, flexible and modular pathways based on the recognition of the outcomes' (European Parliament and Council of the European Union, 2020).

Flexibility may refer to offering learners the possibility to vary duration and workload in line with their abilities and needs or increased choice by offering electives (i.e. elective units/modules or subjects) or specialisations. Our findings show that the degree of choice for learners has increased over time.

For example, the Finnish VET reform of 2017-18 underlined the goal of enabling individual progress and more flexible study times, based on the accreditation of prior learning and individual starting points for studies. Increasing flexibility and freedom of choice between the different educational pathways at upper secondary level was also already part of the so-called youth education experiments (*Nuorisooasteen koulutuskokeilu*, 1992-2001). This enabled vocational learners to achieve eligibility for higher education by choosing general upper secondary studies, while also enabling general upper secondary students to complete an initial VET qualification beside their general education.

In the Netherlands, increased flexibility and individualisation has been achieved by elective modules as well as by so-called cross-over qualifications (*cross-over kwalificaties*). Elective modules are not prescribed by the qualification but can be selected freely by the learner. VET institutions can develop and deliver cross-over qualifications as part of a pilot programme that runs between 2017 and 2025. These combine existing qualifications from two or more different sectors. Currently, there are 135 cross-over qualifications.

VET schools in Poland are autonomous in developing their teaching programmes, based on the VET core curricula, and in choosing either subject-centred or modular programmes, which can be easily modified depending on labour market needs. Also, in Slovakia, the autonomy of individual schools to define content has increased in recent years, as a result of VET reform in 2008. Since then, State educational programmes (*štátne vzdelávacie programy*, i.e. national curricula containing educational standards) have formed the mandatory basis for the autonomous development of school education programmes by VET schools.

In Lithuania, the Vocational training act (*Profesinio mokymo įstatymas*), with its subsequent amendments, has increasingly liberalised VET provision and favoured greater autonomy for VET providers. As a result of the new Law on VET, as of 2019, 42 State-led VET schools had been awarded the status of a public entity, significantly expanding their autonomy compared to the previous situation.

In Slovenia, the so-called open curriculum (*odprti kurikulum*) is an important element in the autonomy of IVET providers. At national level, within framework curricula, the contents and objectives of lessons are determined for 80% of the curriculum (except for mathematics, Slovene and a foreign language, where 100% are prescribed), while the remaining 20% of the content can be determined by the schools, catalogues of knowledge, in cooperation with companies or regional partners.

Available evidence shows that the extent of elective content has increased and that, usually, the higher the educational level of programmes, the more autonomy IVET providers have in this respect. For instance, in Slovakia, a reform in 2008 has increased schools' autonomy. Lower secondary VET programmes allow schools to determine 8% to 21% (depending on the specific programme) of the content, while the percentage in programmes at upper secondary level ranges from 30% to 42% (Cedefop, 2020a, SK, pp. 2; Vantuch and Jelinkova, 2019, p. 50 and p. 73).

According to the survey of VET providers, respondents in most countries expect their institution's influence on the content of VET to continue to grow over the next decade. Survey results also confirm the past trend towards increasing flexibility and individualisation in terms of curriculum choices across the 10 countries surveyed; respondents expect that providing learners with more options allowing individual pathways and curriculum choices will be further strengthened over the next 10 years across all countries surveyed.

2.3.3. Changes in number and scope of qualification standards

Results from the previous project suggested that the number of qualifications standards or profiles, either in terms of educational or occupational standards, along with the variety of vocational fields in which VET programmes are offered in Europe, was declining ⁽¹⁶⁾. There was clear evidence for this in countries, such as Denmark, Finland, Hungary, the Netherlands and Norway; a survey among European VET stakeholders confirmed this assumption (Cedefop, 2020). However, it was not clear to what extent this can be traced back to the broadening scope of VET qualifications (e.g. by merging qualifications into hybrid qualifications ⁽¹⁷⁾ or to what extent the provision of qualifications has changed simply due to demographic reasons or a lack of demand (e.g. the extinction of certain professions, lack of applicants).

The picture is still mixed. Based on the ReferNet survey we conducted and the case studies, we can argue for some countries that the reduction in the number of VET qualifications over time is the outcome of a deliberate strategic process at VET system level. A good example is the Finnish VET reform of 2017-18 (Vocational Education and Training Act 531/2017, *Laki ammatillisesta koulutuksesta 531/2017*). The reform not only unified the legislative framework for youth and adult VET, it has also led to broader profiles and a reduced number of VET qualifications. The total number of qualifications of around 350 (including initial, further and specialist level) was halved.

Another example is the case of Czechia, where, in the first half of the 1990s, remarkable growth and differentiation of vocational fields for which programmes were offered (from more than 500 to over 800 fields) was followed by counter measures introduced through a reform in 2004 that tried to reduce the number of fields by merging them; this resulted in fewer than 300 vocational fields in 2019. A temporary specialisation of programmes

⁽¹⁶⁾ Indicators for the horizontal differentiation of vocational education offers, in terms of the variety of vocational fields they serve, vary between countries. Sometimes this can be measured by the number of qualification standards, sometimes by the programmes and courses offered, sometimes by both.

⁽¹⁷⁾ By hybrid-qualifications we refer here to qualification standards which have been created by previously separated standards, such as the creation of the occupational standard of mechatronics out of mechanics and electronics. Please note that elsewhere in this project we also refer to hybrid qualifications and programmes as the sort of double-qualifications in vocational and general education which qualify both for an occupation and give access to higher education, for which the vocational *baccalauréat* or vocational *matura* would be prime examples. There are many other forms of hybrid provisions (see e.g. Cedefop, 2022c; Deissinger et al., 2013).

has ultimately given way to a significant broadening, if one compares the situation in the early 1990s with today.

Also, in the Netherlands, the reduction in the number of qualifications can be seen as a result of deliberate effort, launched in the period 2010-15, to rationalise the VET offer and to bring qualifications that are similar together, offering VET learners a broader basis. However, in recent years, efforts have been made to make qualifications more tailored to specific regional and emerging needs, e.g. by allowing learners to select elective modules. While the basis has become broader, qualifications have not necessarily become less specific because electives allow for flexibility in either direction: a broadening or specialisation.

For more than two decades, a similar pattern of broadening profiles and decreasing numbers of IVET programmes could be observed for Norway. Two lines of argument were brought forward for the broadening of programmes: first, to provide greater opportunities for students to choose their desired education regardless of place of residence, social background and age; and second, to reduce the mismatch between supply and demand for apprentices. Recently, however, there is a slight reverse trend towards more specialisation and an increase in the number of programmes.

When there is a large reduction in the number of qualifications as in the above cases, it is usually an indication of a concrete reform effort at system level. When the number of qualifications changes only slightly, this is usually an indication of the incremental renewal of qualifications taking place in all countries to reflect changes on the demand side. In such cases, it is less obvious whether a broadening of qualifications has been a deliberate process. For instance, the total number of recognised qualifications standards, in terms of training occupations, in the German dual VET system (*Duale Berufsausbildung*) shows a moderate decline in the last two decades. This, however, does not stem from a specific strategy to reduce the number of qualifications; it has been the outcome of the regular, sector-specific revisions of training regulations. Occupational profiles and curricula within the same occupational area increasingly include similar content, so even though occupations remain formally separate, they become broader and more generic in the sense that they share some essential contents, effectively constituting a 'core' occupation of sorts.

Countries where the number of qualifications or the variety of vocational fields for which programmes are available has risen in recent years are rare. In Cyprus, new fields of study and specialisations have been introduced in

recent years as part of an initiative to increase the attractiveness of VET. However, so far only a few vocational programmes have been offered, so increasing the numbers of VET qualifications in Cyprus is more of catching-up with other countries rather than deliberate specialisation.

A specific case is UK-England. Despite periodic reforms which have sought to cull the number of vocational qualifications, the number remains large. Organisations responsible for delivering qualifications have been independent of government for several decades, and an important strand of policy has been to encourage competition between awarding bodies, which has resulted in many qualifications including vocational ones ⁽¹⁸⁾. However, there are also huge differences between sectors. Some sectors are quite well organised around skills and training, e.g. engineering, construction, whilst others are not. Some sectors are not collectively organised but have major players who organise training well, like the retailers, some of whom work with awarding bodies closely. Therefore, the overall direction of travel for England is difficult to assess, especially, because at the same time, new T-levels (Technical levels) were introduced for upper secondary students in 2020; by the start of the school year in 2023 there will be 23 in total. One of the aims here has been to try to raise standards and improve clarity and understanding of VET qualifications by reducing their number ⁽¹⁹⁾.

To sum up: among the countries for which reliable information was available we can observe over the last two decades a decrease in the number of qualifications accompanied by a broadening of profiles: Croatia, Czechia, Finland, Netherlands, Norway and Slovakia (with recent reversed trends), although to a different extent (Table 1). These are all countries with relatively high shares of enrolment in vocational education at upper secondary level. Falls were also reported for Denmark and Hungary (both countries in which IVET is also organised partly or fully as apprenticeship training) and Ireland. However, in these three countries, as well as those with stable developments, such as Germany, we cannot confirm a deliberate broadening of profiles. Similarly, increasing numbers of qualifications (e.g in Cyprus) seem to reflect a general increase in VET rather than a greater specialisation. Although developments differ between countries with regard to the changes in the number of qualifications, and in some countries (e.g. Czechia, Norway, UK-

⁽¹⁸⁾ An exclusive focus on the number of qualifications, without enrolment figures, can also be misleading. In the UK-England, there are hundreds of awards available but the number of people taking them reduces sharply.

⁽¹⁹⁾ Department for Education (2023). *Introduction of T-levels: policy paper*.

England) there is also a back-and-forth, the overall picture is that VET profiles at secondary level tend to become broader, contrary to the specialisations on the labour market, while stronger specialisation becomes apparent only in optional modules and/or at higher levels (EQF level 5 and beyond).

Table 3. **Observed changes in the numbers of VET qualifications and changing scope of profiles over time**

Stable development	Germany; France; Lithuania, Romania, Slovenia;
Decrease in number of qualifications / programmes	Denmark; Hungary; Ireland
Increase in number of qualifications / programmes	Spain; Italy*; Poland; UK-England**
Decrease in number of qualifications / programmes accompanied by broadening profiles	Czechia; Finland; Croatia; Netherlands; Norway; Austria**; Slovakia
Increase in number of qualifications / programmes accompanied by narrowing profiles	Cyprus

NB: *Refers to regional VET (leFP programmes). **development not clear-cut. NO: decrease after initial increase.
Source: Cedefop 2022.

2.3.4. Trend towards greater accentuation of general and transversal skills

While at programme level countries tend to have a clear picture of what they consider vocational versus academic, and have to report enrolment data for international statistics accordingly, the distinction is less clear at the level of curricula and subjects. Compared to general education, VET curricula are more heterogeneous and not necessarily structured by subjects. Consequently, comparative curriculum research in VET is methodologically more complex, still fragmented and largely consists of studies which cover only two or three countries (compare for instance Frommberger, 2003; Pilz, 1999; Pilz et al., 2014). Particularly in VET systems that follow a competence-based model, curricula tend to be integrated or holistic, i.e. without explicit structuring of content into general and vocational. Apart from that, what is considered vocational may change over time. Elements of individualisation and curriculum autonomy at provider level are challenging an assessment of how

the balance between types of content and skills has changed over time (see also Section 2.3.2).

The most common distinctions made in IVET curricula in Europe are those between general (i.e. general, transversal, cross-sector or cross-occupational) and vocational (i.e. occupation-, sector- or domain-related/specific) content; this is sometimes further divided into theoretical (classroom based) and practical content (learning in workshops or at the workplace), and between mandatory and elective subjects. The term transversal skills is rarely used in the curricula analysed; instead key skills, people skills, key competences, common studies, or other terms are used. It is also often not clear if transversal skills are considered part of general or vocational content. Transversal skills might be integrated in general or vocational subjects and/or only implicitly covered in curricula and programmes (Cedefop, 2022a, p. 83).

For many countries it is possible to analyse the extent to which vocational content in relation to general content is emphasised in curricula and qualification standards in VET, but most would struggle to isolate transversal skills in their curricula (compare Table 4).

Table 4. **Examples of structuring content in curricula according to general, vocational and transversal skills**

Country	Vocational Skills	General skills	Transversal skills
Bulgaria	specific VET subjects; general VET subjects (e.g. foreign language for the profession, health and safety working conditions, entrepreneurship)	general subjects (e.g. Bulgarian language and literature, information technologies and foreign language)	Part of both general subjects and general VET subjects
Finland	vocational studies (occupation-specific skills)	common studies (communication and interaction; and societal and working life competences)	Part of common studies
Luxembourg	professional subjects (optional subjects)	general subjects (e.g. civic education, languages) (optional subjects)	Not defined as such, but included in school and in-company training

Country	Vocational Skills	General skills	Transversal skills
Norway	vocational subjects	general subjects (e.g. Norwegian, natural science, social science, physical education)	
Slovenia	professional theoretical contents practical education/ training	general education (including transversal skills)	

Source: Extracts from Cedefop (2020a) and country case studies.

There is evidence of a trend towards general and/or transversal skills but there are also counterexamples and often advances in one direction turn out to be like a pendulum that swings back, as in the case of Norway and Lithuania.

For instance, in Norway the *Reform 94 (R94)*, launched in 1994) led to a significant increase in the scope of general subjects, from 13% to 31% of the total instruction hours in the 2 school-based years. The increased emphasis on general subjects was supported at that time by the social partners in favour of a broad competence base to meet changing skills needs in the future. With the Knowledge promotion reform launched in 2006 (*Kunnskapsløftet*, short *KL06*) all curricula, from primary education through upper secondary education, were revised to further strengthen basic skills like reading, writing, mathematics and digital competences increasing again the share of general studies in VET to more than 50% in relation to vocational subjects. For apprenticeship training, trainers felt that the new curricula were not sufficiently vocationally oriented. Consequently, a new comprehensive curriculum reform, *Læreplanverket for Kunnskapsløftet 2020, LK20*), is currently being implemented reflecting a shift from content-based to competence-based curricula integrating democracy and citizenship, sustainable development, and public health and life skills across subjects.

Lithuania is another example where a new VET law (*Lietuvos Respublikos profesinio mokymo įstatymo Nr. VIII-450 pakeitimo įstatymas*), from 2019 onwards, emphasised vocational skills. Before that, general skills dominated the content of VET programmes, accounting for 80%. Since 2019, this share has reduced to 50%. Besides an increase in occupation-specific skills, the new law has also meant a higher share of transversal skills (15% compared to 5% before) (Cedefop, 2020a, Lithuania, p. 2).

In Czechia, for which good data are available, such a contrasting development can be observed even within the country for the two major streams of IVET. Whereas the share of occupational content increased and the share of general education decreased in the 3-year programmes, the balance in 4-year programmes with *maturita* moved in the other direction, putting a higher emphasis on general education subjects and less on VET content. The general component in these vocational programmes increased from less than 40% in the first half of the 1990s to more than 50% after curriculum reform in 2004. Some subjects (e.g. ICT and economy) which were previously considered occupation-specific have been re-categorised as general education (Cedefop, 2020a, Czechia, pp. 2; Federičová, 2021).

However, the other direction is also possible. For example, with the latest VET reform in Denmark, introduced through the Law on Vocational Education and Training of June 16, 2015 (*lov om erhvervsuddannelser af 17. februar 2015*), general skills became more prominent, but were integrated into the teaching of occupation-specific skills. For instance, the basic mathematics and algebra a carpenter requires are taught as part of practical training (e.g. in a workshop) instead of teaching students theoretical algebra in a classroom (Cedefop, 2020a, p. 1, Denmark).

In Italy, the share of general content has been significantly increased in regional VET curricula since 2003. This is a result of formally integrating regional IVET into the upper secondary national education and training system and extending the duration of the programmes.

In Finland, the share of optional studies which can be chosen from other programmes has increased over the years at the expense of obligatory common studies (communication, mathematics and natural sciences as well as societal and working life skills), which have roughly halved between the early 1990s and 2017.

The trend towards transversal skills cannot really be proved with hard evidence, such as comparison of timetables, due to the above conceptual issues; often it is only evidenced in policy documents that we have analysed. For instance, in Estonia, national VET and adult education development plans from the past 15 years highlight the growing relevance of transversal skills in VET programmes. Teaching VET students such skills responds to the requirements of labour market and changing economic conditions (Cedefop, 2020a, Estonia, p. 3). The VET system in the Netherlands has put an emphasis on so-called 21st century skills (*21ste-eeuwse vaardigheden*). Although they are not formally included in the national qualification files,

teaching these skills has become popular in schools in recent years and they are increasingly offered as part of the elective modules (Cedefop, 2020a, Netherlands p. 3).

Although countries reported a growing relevance of transversal skills in VET programmes, there is no clear trend in how such skills are being imparted across different VET systems. Some of the examples suggest inclusion of transversal skills in general subject knowledge (e.g. Italy), but there were also cases where we saw them being integrated in VET content (e.g. Germany), or in both general education and VET content (e.g. Bulgaria). The concept of transversal skills has challenged traditional curriculum planning in VET and will keep on challenging it. The VET provider survey we carried out shows that most respondents (70-90% depending on the country) believe that transversal/soft skills will increase in the coming years.

The observed curriculum changes seem to reflect the claim that VET should also prepare for higher and further education, while at the same time not disregarding specific vocational requirements. This central tension probably explains a large part of the pendulum movements we have observed. A general trend for Europe in this regard is difficult to identify, and would require more detailed curriculum analysis, comparing not only changes within one country over time, but also comparing curricula across countries. That would still not answer the other two big open questions: the difference between the intended (written) and the taught curriculum; and the effects the long-term shift to learning outcomes might have had on teaching on learning. Whether a new VET PISA, as currently developed by the OECD, will be able to shed light on these questions remains to be seen.

2.3.5. Increased emphasis on workplace learning

Trends towards more general and transversal skills and towards more workplace learning may seem contradictory at first but the increased emphasis on general skills has not taken place at the expense of workplace learning. As the Danish example showed, a parallel increase in general skills and workplace learning is possible through stronger integration of general skills into workplace and workplace-related learning, such as occupation-related theoretical instruction. However, it can also be assumed that the workplace is a good, or even better, environment for learning many transversal skills, such as teamwork and problem-solving.

In principle, the differences in the extent of workplace learning between different types of programmes and VET providers in Europe are large.

However, there are also significant differences between individual occupations or occupational areas of the same type. For instance, in Austria the share of workplace learning for IVET differs between apprenticeships (70-80%), schools for intermediate VET (10-15%) and colleges for higher VET (around 5%), and, within those tracks, between different areas such as engineering, business administration, or tourism. An expansion of workplace learning has been observed in Austria for colleges for business administration (with the 2014 curriculum) due to the introduction of compulsory work placements. Apart from that, changes in the extent of workplace learning have been modest.

Some countries reported an increase in workplace learning over time, along with an overall decrease in classroom instruction (e.g. Hungary and Italy). This is in line with findings from the VET provider survey. Especially in Italy, the Netherlands and Finland, respondents indicated that the significance of the classroom as the central place of learning has reduced at their institution while workplace learning has increased. For regional VET in Italy, a progressive increase in the hours dedicated to workplace experiences can be observed, along with a corresponding reduction in hours related to profession-related theoretical contents and practical training in workshops (compare also the discussion on T-levels in UK-England in the previous chapter).

In Poland, as of the 2018/19 school year, all VET schools providing education in a given occupation have been required to set up formal cooperation arrangements with employers from their particular sector potentially enabling more work-based learning; earlier, such agreement on cooperation was not mandatory.

As part of the 2006 *KL06 reform* in Norway, the trend towards broader vocational programmes was continued. To compensate for the broader programmes, the in-depth study project (later named vocational specialisation) was introduced as a new subject in the first and second year. The main aim was to give VET students an opportunity to gain experience from relevant occupations through practical work in school workshops or projects or through work placements in firms. Before this, the first 2 years in the 2+2 model were entirely school-based ⁽²⁰⁾.

⁽²⁰⁾ Note that upper secondary VET in Norway is mostly implemented as a 2+2 model, where the first 2 years are mainly school-based, followed by a 2-year apprenticeship.

Cyprus started to introduce periods of workplace learning in its upper secondary technical schools as of 2016/17. As part of the Strategic plan for technical vocational education 2015-20 (*Στρατηγικός Σχεδιασμός Τεχνικής και Επαγγελματικής Εκπαίδευσης 2015-20*), work placements of 4 weeks duration (for practical direction students) and 2 weeks duration (for theoretical direction students) were introduced at the end of the first and second year of studies (between June and August) (Cedefop, 2020a, Cyprus, p. 3).

Examples of a decreasing emphasis on workplace learning were scarce and, according to the VET provider survey, most respondents expected further increases in workplace learning in the next 10 years.

2.3.6. Concluding reflections on curriculum change in VET

It is a common assumption that, through a mix of learning environments, students acquire a range of transversal skills in VET that they are less likely to acquire in general education. Whether these are intended or explicitly taught is another matter. In the explorative analysis of VET qualifications and curricula we could observe some reduction of qualifications, broadening of IVET profiles, increasing emphasis on general and transversal skills as well as on work-based learning. However, except for the last, we also found and some of the observed movements are more like those of a pendulum that is not necessarily synchronised between countries but that depends on status quo and case history.

What we can say with some certainty is that the extent of the elective content in VET programmes has increased and that, usually, the higher the educational level of programmes, the more autonomy IVET providers have in this respect. Providing learners with more options that allow more individualised pathways and curriculum choices is also a trend that is likely to continue.

More research is needed on changes in qualifications and curricula. Neither a focus on overall enrolment figures, nor on the number of qualifications is satisfactory. It may well be that the number of qualifications remains stable, while students are concentrated in only a few programmes: these figures need to be analysed together. Further, and despite all the methodological challenges involved, VET research needs to start seriously comparing (intended) VET curricula across countries. This would also be a precondition for the comparison of, respectively, the taught, assessed and learned curriculum.

2.4. Trends in assessment

2.4.1. Introduction

Assessment is the process of determining the extent to which a learner has acquired certain knowledge, skills and competences against predetermined criteria (Cedefop, 2015, p. 21). This process involves the collection of evidence on individual progress with the assessment criteria providing a reference point. The quality of the assessment approach (including methods, tools and instruments) needs to be assured in order to maintain trust in VET and in the credibility of VET qualifications: it must be ensured that their holders have actually achieved the intended learning outcomes. It is often defined by the following key technical characteristics: validity, reliability, impartiality and fairness⁽²¹⁾.

Just as VET systems are influenced by and respond to various drivers, including political or ideological considerations, assessment practices in VET are also influenced by various factors, trends and developments. For example, the COVID-19 pandemic, which was particularly disruptive to teaching and learning during the lockdowns, has also led to changes in the design and organisation of assessment; some of these are likely to continue.

Assessment is particularly influenced by changes in educational principles and practices, as discussed in Sections 2.1 and 2.2. Factors that may influence the development and application of IVET assessment include the broadening of its skills and competence base, with a greater emphasis on general subjects and a greater focus on transversal skills and competences; there may also be changes in organisation and delivery of IVET (such as a stronger focus on learner-centred pedagogy). Other influencing factors are the various functions associated with assessment in IVET (including quality assurance of the VET system) or the technological developments and digitalisation that make new forms of assessment possible.

This section is based on the dedicated report on assessment in IVET as part of this study (Cedefop, 2022d) that aimed at identifying and analysing the dominant assessment forms applied and how these have evolved during the last 25 years. The following subsections refer to trends observed related to an extension of the variety of assessment functions (Section

⁽²¹⁾ Validity ensures that assessment approaches measure as precisely as possible the intended learning outcomes and that evidence fully supports the assessment; assessment reliability relates to the 'degree of stability, consistency and accuracy of the assessment outcomes' (Gillis and Batemann, p. 10).

2.4.2) and developments in the direction of standardising and externalising assessment (Section 2.4.4); they highlight challenges in assessing transversal competences (Section 2.4.5), discuss trends towards the introduction of skills demonstrations (Section 2.4.6), explore the impact of the COVID-19 pandemic on assessment (Section 2.4.8) and look into the alignment of intended learning outcomes, delivery mode and assessment (Section 2.4.9).

2.4.2. Expanding the variety of assessment functions

Assessment can have different functions depending on how the results are to be used. With reference to individual learners, they can be used both to support learners' learning and improve their performance (formative assessment), and to present a summary of a student's learning achievements and performance over a period of time; this usually entails real consequences for the learner, such as grading, ranking, selection, provision of access to higher education (summative assessment) (Siarova et al., 2017). However, assessment results can also be used to monitor or evaluate the performance of a VET provider and contribute to the quality assurance of the education system.

The evidence gathered points to a general expansion of the roles and functions of assessment which are also used side by side and may complement each other. This is well illustrated by the case of Finland, where a strengthened emphasis on the formative assessment approach can be observed (Räisänen and Rökköläinen, 2014) and where a combination of formative and summative assessment of VET is traditionally sought (Stenström and Laine, 2006). In addition, in 2007 Finland introduced external evaluation of VET learners' learning outcomes to determine how successful learners are in achieving required learning outcomes and to develop further and ensure the quality of VET ⁽²²⁾.

The use of assessment results to monitor the performance of VET institutions has also increased, for example, in Poland, where standardised external exams (introduced in 2004) allow learners and parents to compare results between schools (Dębowski, 2022), or in Lithuania, where a system of external assessment of VET providers was introduced in 2020, using as one of the indicators the percentage of assessed learners with high scores in their assessment results ⁽²³⁾.

⁽²²⁾ Finnish Education Evaluation Centre. Learning outcomes evaluations

⁽²³⁾ Lithuania: Setting up a system for external assessment of vet-providers in formal IVTE and CVET?

In several countries, it is formative assessment that has received increasing attention in recent years (usually, however, without diminishing the importance of summative assessment) (see also Psifidou, 2014). In Croatia, for example, the *Guidelines for assessment of learning processes and learning outcomes in primary and secondary education, including VET (Smjernice za vrednovanje procesa učenja i ostvarenosti ishoda u osnovnoškolskome i srednjoškolskome odgoju i obrazovanju)* were published in 2020, advocating for complementarity and balanced use of assessment of learning with approaches aimed at monitoring learning outcomes, identifying strengths and weaknesses, providing feedback to learners, and planning future learning and teaching (Pavkov, 2022). In Malta, the secondary school reform *My journey: achieving through different paths* was introduced in the school year 2019/20 and called for a shift in emphasis from high-stakes, standardised, and summative assessments to a balanced approach to assessment of, for, and as learning (Ministry of Education and Employment of Malta (MEDE), 2016). In Austria, the new quality management system (*Qualitätsmanagementsystem für Schulen, QMS*) for schools (general education and VET), introduced in 2021 and to be rolled out completely by 2024, more strongly emphasises formative forms of assessment (QMS, 2022).

2.4.3. Flexibilisation of assessment

The choice of form and timing of assessments can also serve to support the flexibilisation and individualisation of educational pathways (Section 2.2.2), for example, by assessing units or modules of qualifications separately, or by taking into account not only learning outcomes obtained in the formal education system but also those acquired in non-formal and informal learning contexts.

Curricula, programmes and qualifications are increasingly structured into smaller modules or units and there is evidence that several countries have introduced more flexible approaches, allowing learners to accumulate smaller parts of qualifications that are assessed separately ⁽²⁴⁾. According to the VET provider survey, an increase in awarding qualifications based on separately assessed modules or units can be observed especially in France, Romania and Finland. Also, in countries with a traditionally strong

⁽²⁴⁾ This is also confirmed by the forthcoming Cedefop research report on *Microcredentials and links to evolving qualification systems* (see [Cedefop project: Microcredentials for labour market education and training](#)).

focus on apprenticeship training systems, the possibility of taking the final assessment, usually taken at the end of apprenticeship training as an overall or holistic exam, in two parts was introduced: in Austria in 2011 and in Germany in 2005 (Luomi-Messerer et al., 2015, p. 75). Some countries, however, seem to put a stronger focus on end-point assessments that cover the whole qualification (e.g. Hungary and UK-England).

In many countries, there is a general increase in opportunities for validation and recognition of non-formal and informal learning (e.g. work experience), facilitated or supported by the use of smaller parts of qualifications and particularly by the implementation of learning outcomes approaches (European Commission, 2020b). The VET provider survey pointed to an increase in this respect, particularly in countries where validation of non-formal and informal learning has been well established for many years (such as France, the Netherlands and Finland) as well as in countries with a strong school-based tradition in VET (such as Italy, Romania, Slovenia, and the UK).

For example, the approach to the recognition of professional experience (*validation des acquis de l'expérience, VAE*) in the acquisition of a qualification, established as individual right by law in France in 2002, was further strengthened by the introduction of the *blocs de compétences* (blocks of competences) in 2014. Each block or unit of competences that form part of a vocational diploma is assessed separately and successful adult candidates receive a certificate attesting to their mastery of the competences in a block. These documents can then be used for further education or to apply for a job, supporting the individual career pathway (France Compétences, 2021). With the further development of the competence-based approach in the Finnish VET system in recent decades, there has also been a strong emphasis on personalised study plans and recognition and accreditation of prior learning. This approach was further strengthened by the Vocational education act enforced in 2018, which stipulates that a personal competence development plan must be drafted for everyone. This plan records and recognises the competences already acquired by the learner and sets out what kind of competences are still missing and how they will be acquired in different learning environments. An e-tool ⁽²⁵⁾ supports candidates in self-assessing their competences (acquired through work, study or other activities) based on the competence requirements set for each vocational qualification. Users of the tool are also invited to supply evidence of

⁽²⁵⁾ Osaamisen Tunnistaminen [Recognition of competences].

competences acquired through prior learning and are provided with a report as a form of documentation of these competences. With reliable evidence, it is possible that certain units or the entire qualification can be recognised. In other cases, competence tests take place (Karttunen, 2019). Lithuania is an example of a country with a traditionally more school-based system of IVET, where reforms to improve opportunities for recognition of prior learning have only recently been introduced. The new procedure for assessing acquired competences, approved in 2020, consists of a theoretical test (administered centrally via an electronic testing system) and a practical test focusing on work processes and professional activities (conducted in real workplaces if possible). It is recommended that it also includes a conversation part following the assessment (Tutlys, 2022).

In summary, the increasing possibilities to have competences already acquired credited to a VET qualification have not only led to an expansion of examination options (which have been made accessible to new target groups, for example); in some cases new examination formats have also emerged.

2.4.4. Standardising and externalising assessment

There has been an increase in individual and flexible forms of assessment but the evidence gathered also suggests that (sometimes in parallel) reform processes have been undertaken to increase the standardisation of assessments as well as the externalisation⁽²⁶⁾ of at least parts of the final assessments (Coates, 2018, p. 5). This approach allows, for example, for comparison of the performance of VET providers and provides insights into the quality of the entire VET system. No clear trend in one direction or the other can be discerned in this regard, as the developments are very country-specific and depend in each case on which role and function is associated with the assessment. There are a few countries that have only externally designed or conducted standardised final exams; many countries use mixed forms of external and internal exams.

The approach taken also depends on the content of assessment: in several countries there is a tendency to standardise and externalise examinations in general subject knowledge. Such standardised and external examinations are associated with a high level of reliability and are often introduced to

⁽²⁶⁾ External means that the assessment is designed and carried out outside the VET provider, e.g. by national assessment centres.

strengthen the value and image of VET and the parity of esteem with general education. This is of relevance when it comes to access to higher education studies and for improving the transition from VET to higher education.

In the Netherlands, for example, central examinations in some subjects (Dutch language, basic maths, English) were introduced in 2014 (Broek, 2022); in Austria, standardised written examination forms were introduced in the school year 2015/16 in German, modern foreign languages and applied mathematics as part of the partially standardised competence-oriented upper secondary school-leaving exam in Colleges for Higher Vocational Education (BMBWF, 2022). In other countries, general education subjects were separated from the final exam for obtaining a VET qualification and VET graduates wishing to pursue higher education need to take the standardised exams. This is the case in Croatia, where the State *matura* as a standardised national final exam was conducted for the first time in the school year 2009/10 (Pavkov, 2022), as well as in Poland, where learners of upper secondary technical schools can take the maturity exam which is based on the general education core curriculum (Dębowski, 2022).

In the Netherlands, there has been an approach towards standardising examinations while at the same time strengthening the decentralisation of assessment. The Act on VET and adult education (*Wet educatie en beroepsonderwijs*, 1995) introduced a national qualification structure with centrally defined learning outcomes as a common reference for the assessment process. At the same time, the autonomy of VET providers was strengthened by the law, as was their responsibility for assessment, while they were also given the option to outsource examinations to external institutions and to use centrally developed exams.

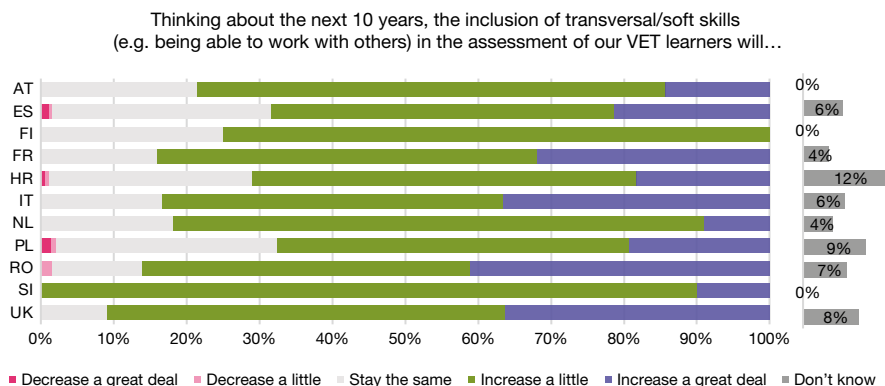
Other examples of countries where standardised and external VET examinations have been introduced include Poland, where the system of external VET examinations was introduced in 2004 and has been mandatory for learners in VET schools since 2010, and Croatia, where national exams in VET are conducted in some fields, e.g. general care nurses (since 2015) and IT technicians and salesperson (2017-19). While these examinations were initially only conducted in theoretical subjects, the first national skills exams for the general care nurse qualification were developed and piloted in 2018.

2.4.5. Challenges in assessing transversal competences

The evidence gathered suggests that countries have placed greater emphasis on transversal competences in their VET programmes and qualifications

in recent years (although a trend towards transversal skills is difficult to substantiate with hard evidence, as noted in Section 2.2.4). The research conducted indicates that the assessment of learners' transversal competences has increased and this trend is also expected to continue in the future: the VET provider survey asked questions about the likely developments in VET over the next 10 years, also with regard to the inclusion of transversal/soft skills (e.g. the ability to work with others) in the assessment of VET students. Most respondents indicate that they expect an increase in this respect, as illustrated by Figure 2.

Figure 2. **Expected change in the inclusion of transversal skills in VET assessment**



Source: VET provider survey. Data from selected countries. n = 893.

However, so far, this increase appears to be more related to formative assessment, which is conducted internally at the VET provider level, and less to summative or externally conducted assessment. This might be due to the many challenges that are associated with the assessment of transversal competences (see Dębowski et al., 2021; European Commission, 2012; Stęchły et al., 2019). There appears to be no common clear understanding of what transversal competences are, let alone how to formulate clear and concrete assessment criteria and performance descriptions and how to assess such complex competences in a transparent and reliable way. Certain transversal competences (such as personal and social competences) are also difficult to capture externally and it is a challenge to conduct their assessment independently and outside of the work context. However, if standardised

and external examinations used to improve reliability of assessment and transversal competences (that are part of the intended learning outcomes) are not included, this affects the validity of the assessment.

This is still a relatively open field in which much is in flux and continued conceptual work and reform efforts can be observed. In Austria, for example, efforts are being made to assess a wide range of transversal competences with the diploma thesis which is part of the partially standardised competence-oriented upper secondary school-leaving exam in colleges for higher vocational education (*Berufsbildende Höhere Schulen*). In order to ensure a certain degree of transparency and standardisation, assessment rubrics or grids that specify the competence requirements were introduced (from 2014) (Fellinger, 2022). In Poland, since 2019, pilot projects have been conducted for strengthening the inclusion of transversal competences, particularly personal and social competences, as well as problem solving, in external VET assessments. The related conceptual work explores, among other things, to what extent and how virtual and augmented reality could be considered for these exams (Dębowski, 2022).

2.4.6. Trend towards skills demonstrations

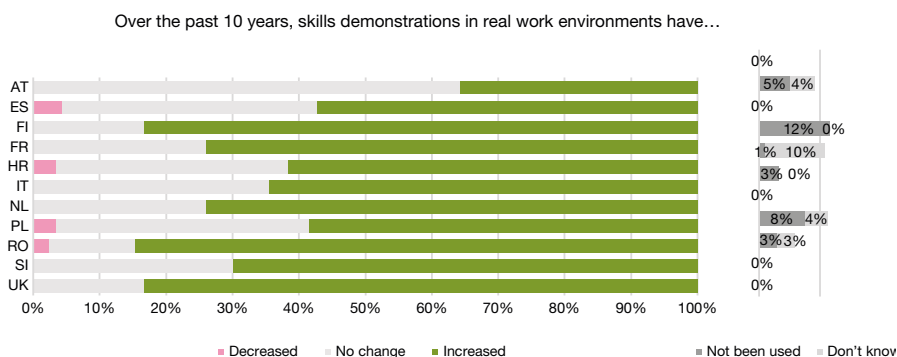
While written tests are still commonly used, there is evidence that countries have increasingly introduced various ways of collecting evidence related to practical knowledge. They have introduced practical final examinations or tasks, including project assignments and assessment formats that resemble real work situations (see e.g. Grollmann et al., 2007; Stenström and Laine, 2006). In Poland, for example, the external examinations in VET, introduced in 2012, consist of a written and a practical part. The latter can either take the form of a documentation, where learners have to solve case studies (with a focus on abstract thinking and problem solving), or of a performance, where learners have to carry out a work activity (focused on practical skills) (Dębowski, 2022). In Hungary, projects were introduced as part of the final exams in VET in 2020. Such a project must relate to a complex work-related task and include a portfolio made up of various documents and a self-reflection section, which should illustrate the development of the candidate's vocational, social and personal competences ⁽²⁷⁾.

As mentioned in Section 2.3.5, there is also evidence of an increased emphasis on workplace learning and this is reflected in the assessment-

⁽²⁷⁾ Information received from Éva Farkas (email, 22 February 2021).

related findings, since they point to increased use of skills demonstrations in real work environments. This trend is confirmed by most of the respondents to the VET provider survey (Figure 3) and illustrated by the examples from the Netherlands and Finland.

Figure 3. Changes related to the use of skills demonstrations in real work environments



Source: VET provider survey. Data from selected countries. n = 893.

In Finland, vocational skills demonstrations were introduced as a new form of assessment in the early 2000s; with the 2018 reform, this became the main assessment method in VET. Vocational skills demonstration is about performing job-relevant work tasks in as authentic an environment as possible, ideally as part of in-company learning phases (Virolainen, 2022). In the Netherlands, with the changes to the qualification structure and qualification files in 2016, more emphasis has been placed on assessment in a real occupational context. This assessment is carried out in the company where the student learns and works in the work-based pathway; in the school-based pathway, it takes place in the company where the students do their work placement (Broek, 2022).

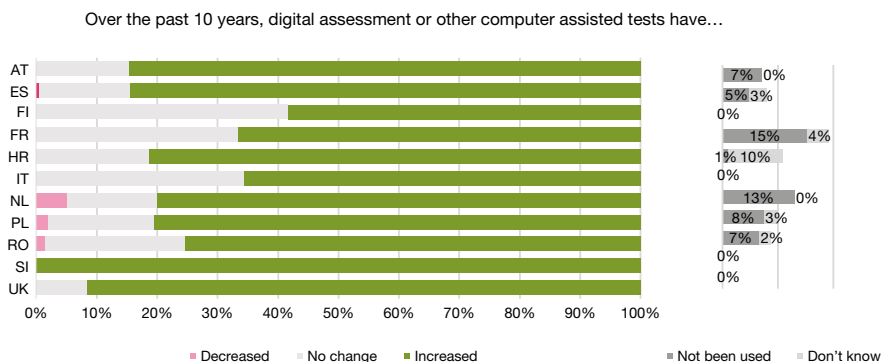
Skills demonstrations in real work environments are usually used to ensure validity and authenticity of assessment as well as to ensure the credibility and relevance of the qualifications awarded for the labour market; the latter was, for example, also the reason for the introduction of skills demonstrations in 2017 in Romania) (Cedefop, 2019h, p. 45). This can be strengthened through the involvement of employers in assessment, as it is the case in Finland, where vocational skills demonstrations are designed,

carried out and assessed in cooperation with representatives of the world of work. However, this approach is not without challenges: there are sometimes quite limited possibilities to carry out the assessment in an authentic situation (e.g. in very specialised fields), while companies and work situations can be very different and, to some extent unpredictable, subject to constant change through various influences that cannot always be controlled. These include, for example, the order situation in a company and the work to be done at a specific point in time, the type of clients or customers with their respective specific wishes and behaviour, which affects the reliability and comparability of the assessments. Consequently, skills demonstrations in real work environments can only be standardised to a limited extent. This shows that reliability and validity cannot easily be achieved simultaneously to the same degree: sometimes a compromise is required or a combination of different forms of assessment is used to satisfy both principles. This is also one of the reasons why diversification of assessment forms and approaches can be observed in many countries; a combination of standardised external written examinations with a high degree of reliability are often introduced to meet the requirements of accountability and to strengthen the value and image of VET, while other forms of assessment are better suited to ensuring the validity of the assessment. This includes, for example, the introduction of skills demonstrations at the workplace or other assignments close to the workplace.

2.4.7. Increasing use of computer-based assessment methods

In parallel to skills demonstrations, a trend towards the increasing use of digitised assessment approaches can be noted (e.g. Psifidou, 2014; Sangmeister et al., 2018). This is only partly due to the reaction to the disruption caused by the COVID-19 pandemic (see below); the vast majority of the respondents to the VET provider survey indicated an increase in this respect (Figure 4) but this is observable to very different degrees in European countries.

Figure 4. **Changes related to the use of digital assessment or other computer-assisted tests**



Source: VET provider survey. Data from selected countries. n = 893.

Poland, for example, introduced a central IT system for organising the entire exam process in 2019. From examination registration to the conduct of the examination, all steps are handled electronically. This makes it possible, for example, to use more complex tasks in the written part of the examination with the help of animations or videos (Dębowski, 2022). Other countries, like Germany and Croatia, have started to develop and pilot digital assessment approaches. In Germany, this has already been carried out for a couple of years as part of the national initiative ASCOT+ (*Technology-based assessment of skills and competences in VET*)⁽²⁸⁾. The ASCOT+ projects are developing digital measuring instruments for professional and cross-professional competences in three professional fields and testing them as teaching and learning media and in exams. The projects aim to develop instruments that are suitable for assessment in an authentic workplace simulation. In Croatia, a pilot project on digital assessment was carried out in 2019, but it was not accepted by VET schools and will therefore not be implemented soon. However, in 2020, an e-grading application for State *matura* exams was tested and will be introduced for all subjects from the school year 2022/23 onwards (Pavkov, 2022).

The use of digital technologies for assessment can be observed not only for summative assessment but also for formative assessment. This is the case, for example, in Switzerland, where an e-portfolio was introduced

⁽²⁸⁾ ASCOT+ research and transfer initiative

to support the documentation of learning achievements of future chefs. Digital technologies are also increasingly used in the context of validation of non-formal and formal learning (e.g. Fahrenbach and Luomi-Messerer, 2021; Luomi-Messerer, 2019), such as in the form of e-portfolios in Poland (Dębowski, 2022).

It was reported that the use of digital technologies for assessment is, or has been, met with reservations in several countries; overall, there is still much development going on in this respect. The fact that this approach is fraught with ambiguity is due to the mix of advantages and challenges associated with the introduction and use of digital assessment. While a major advantage is seen in enabling standardised examinations for many candidates using complex tasks, as well as at least partially automated assessment, this resource-saving option does not seem to apply in all cases (as the assessment in a simulated environment might not be sufficient for all areas). There are also concerns about inequality between candidates, as not all have the same level of accessibility and connectivity, and concerns about the fairness and objectivity of remote examinations. In order to create acceptance for these new forms of assessments, quality assurance aspects and adequate training for teachers and examiners are needed.

2.4.8. Impact of the COVID-19 pandemic on assessment

The COVID-19 pandemic, with the lockdowns imposed, has led to disruptions in teaching and learning in all countries. It has also forced VET providers to digitise conventional teaching in a very short time and to convert teaching and learning formats partly or entirely to distance learning. This disruption has also impacted assessment in VET in a variety of ways and has, for example, led to postponing exams, reducing exam content (e.g. in Slovenia ⁽²⁹⁾), using alternative assessment procedures, tools and approaches to demonstrate skills (e.g. virtual forms), or to adapting the usual assessment approach in other ways, e.g. by reducing the numbers of assessors usually required, such as in Slovenia and Norway (OECD, 2021, p. 13). In Croatia, for example, it was possible to present and defend the thesis as part of the final VET exam in a virtual way and to use various technologies for demonstrating practical skills (Pavkov, 2022). The use of videos for demonstrating practical skills in VET assessments was reported, for example, for Estonia (Mägi and Preegel, 2022), Finland and UK-England. In Finland, the vocational skills

⁽²⁹⁾ Cedefop VET news: Slovenia: response to the COVID-19 outbreak.

demonstrations, usually carried out in the workplace, needed to be adapted and carried out in workplace-like environments (OECD, 2021, p. 13). This was also the case in UK-England, where it was made possible to carry out end-point assessments of apprentices in suitable alternative venues ⁽³⁰⁾.

The VET provider survey asked to indicate ‘the most sustainable change as a long-term effect of COVID-19’ and only in a few cases did the respondents select the option ‘the way we assess learning’; in most cases respondents expect that the COVID-19 pandemic has long term effects on ‘the way we teach and students learn’. However, there are also some respondents who chose assessment for this question. In Croatia, for example, this might be related to the introduction of the e-grading system. In the Netherlands, this could be related to the increasing autonomy given to VET providers in conducting assessments, e.g. using formative assessments and other evidence instead of final examinations, as long as the quality of the evidence collected can be guaranteed (Broek, 2022). Also, for Estonia, the expectation is reported that the increasing flexibility in conducting assessments is likely to be maintained with the switch to digital mode (Mägi and Preegel, 2022). In other countries, however, the changes in examinations during the constraints associated with the COVID-19 pandemic are considered only temporary adjustments.

2.4.9. Alignment of intended learning outcomes, delivery mode and assessment

There is evidence that assessment specifications, which specify the criteria underpinning assessments, are increasingly being used. This approach enhances transparency and has been strengthened by the shift to learning outcomes for describing qualifications and curricula. This trend of using assessment standards based on learning outcomes is likely to continue in the future, as this is expected by most of the VET provider survey respondents.

Consistency between intended learning outcomes, the delivery model (and here in particular the teaching and learning approach) and assessment criteria is an important quality aspect of assessment. This alignment is closely linked to the principle of validity of assessment, which ensures that assessment approaches measure as precisely as possible the intended learning outcomes and that the evidence collected fully supports the assessment ⁽³¹⁾.

⁽³⁰⁾ Institute for Apprenticeships. *Guidance during COVID-19*.

⁽³¹⁾ In higher education, Biggs (2003) has coined the concept of *constructive alignment* to characterise such an approach (see also Cedefop, 2017e, pp. 40, 56-57).

The results of the VET provider survey also indicate – at least to some extent – coherence between the intended learning outcomes, delivery and assessment. The country examples analysed also show that countries often make considerable efforts to achieve this alignment.

Some strive to ensure that examinations are closely aligned with learning outcomes, as the case from Poland shows; VET exams are developed based on the learning outcomes included in the VET core curriculum by mapping assessment content to learning outcomes and assessment criteria. Countries also reflect on questions such as how detailed the descriptions should be for the learning outcomes used as reference for assessment and to what extent learning and competence acquisition are pedagogically supported in this approach (Dębowski, 2022). In Finland, more general assessment criteria were used in VET in the 1990s, while in the early 2000s there was a move towards more detailed descriptions to support the assessment of the skills demonstrations introduced at that time. However, as it was felt that this approach risked focusing learning too much on what was being assessed, and to allow for adaptations to different contexts, more general assessment criteria have been used since 2022 (Virolainen, 2022). The reflection on alignment and on what room there is for interpretation and adaptation of assessment criteria can also be observed in the Netherlands (Broek, 2022): the Act on VET and adult education gives VET providers more autonomy and responsibility in designing the pedagogical approach and deciding on the form of assessment, as long as this is in line with the descriptions in the qualification files. The alignment of intended learning outcomes and assessment is ensured by external certification of the assessment tools. Nevertheless, justified adaptations are possible, e.g. to support specific target groups such as learners with special needs; these must be approved by the examination board of the VET schools. Some adaptations can be made easily, while others are more difficult, especially if the form and content of the examination is changed, as this requires reflection on the extent to which this changed assessment can still confirm that the intended learning outcomes have actually been achieved. If the adaptation results in the requirements of the qualification file no longer being met, this is problematic; it would undermine the value of the qualification in the labour market as evidence that the holder is able to perform the specified range of core tasks.

2.4.10. Concluding reflections on assessment approaches in VET

The research shows that assessment approaches are subject to continuous reform in the countries covered by this study, indicating its fundamental importance for improving the quality and value of VET in general. A general increase in the diversity of assessment approaches (forms, methods) can also be observed. In many countries, phases can be observed in which sometimes one principle is pursued more strongly, sometimes the other, in the assessment and associated change processes over the years. In some cases, opposing tendencies can occur simultaneously, which seems to reflect different conflicting goals and value orientations. Some of these can be traced back to the economic, educational and social goals, which are also subject to change; others may be due to the fact that different aspects or principles are in the foreground from the perspective of different levels (such as educational administration and educational practice). This can lead to potential conflicts and tensions in the field of assessment, as it is also a political issue that entails a power dimension.

2.5. IVET opening up to adults

2.5.1. Introduction

European societies are confronted with consecutive crises that all affect the supply of and demand for adult learning. The European debt crisis from 2009 until the mid to late 2010s; the 2015 migrant crisis and Brexit (2016-20); the COVID-19 pandemic; global crises, such as the climate crisis, energy crisis (also further fuelled by the Ukraine war in 2022 and the ban on Russian energy supplies), all make the point that there is a clear need for more adult learning. This need for adult learning is firmly anchored in European level initiatives such as the European pillar of social rights (European Commission, 2017b) and the European skills agenda (European Commission, 2020a). This requires all those involved in the adult learning to increase their efforts to support more adults in learning better. This also applies to VET systems which need to adapt and increase their focus on adult learning.

When talking about what VET systems do for adult learners, there are different directions this discussion can take. First, it can discuss how many adults (aged over 18 or over 25) are enrolled in IVET programmes; second, it can discuss how CVET systems accommodate to the learning needs of adults; third, it can discuss how VET systems provide shorter courses or

provide second change education opportunities. In all these strands, it becomes clear that VET systems play an important role in upskilling and reskilling of adults and generally in providing the skills needed for individuals to maintain employment, improve their employment opportunities, or, more generally, to confront better the skills-related challenges in life.

VET systems both comprise initial VET (IVET) and continuous VET (CVET) subsystems. The starting point for this study is – instead of relying on established distinctions between systems and subsystems – a broad concept of CVET, operationalised as the learning of adults related to a current or a future occupation after leaving initial education. Therefore, the study looks broadly at the ecosystem supplied by VET providers that support the learning of adults after leaving initial education, specifically focused on learning that is relevant for the labour market, but also on the acquisition of key competences, or socially relevant adult learning (e.g. basic skills training). These programmes can lead to formal qualifications or not. From this perspective, we acknowledge that, at country level, in providing the different forms of adult learning, different types of organisations, and different educational subsectors could play a role, including IVET institutions. This role might develop over time.

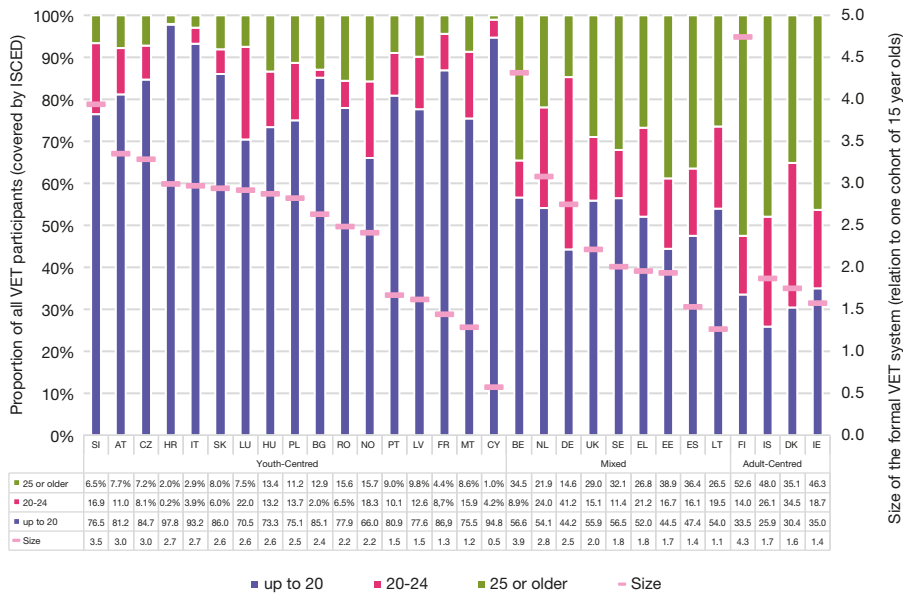
Taking this more holistic approach, what is lacking, is a clear overview and comparative perspective across Europe on how VET systems facilitate the learning of adults and what specific role VET systems play in the different Member States. This overview and comparative perspective could open up discussions and reflections concerning how Member States traditionally look at the role their VET systems and VET providers play in relation to adult learning. Looking more holistically at how VET systems provide learning to adults does not only improve comparison between countries and across systems: it also sheds important light on the developments over time within the VET system as well. Through looking at a more secondary task of VET systems, it becomes clearer how they change to accommodate the learning of target groups that are not the primary focus. It can show, for instance, how VET systems are opening up to work with employers; offer more work-based learning; offer more tailored provision; take into account prior experience; and include less traditional/ classroom-based pedagogies. While looking at developments between 1995 and 2020, this section examines how IVET facilitates the learning of adults and which supporting policies are being pursued to bring IVET and CVET closer together. It tries to find an answer to the question of whether IVET is opening up to adults or not?

2.5.2. Cross-country comparison of the role of IVET providers in adult learning

While it is for many reasons difficult quantitatively to compare VET systems and the involvement of adults in VET (Cedefop, 2019d), during the Future of VET study a framework was developed by which countries can be compared on the extent to which the VET systems take in adults as students. This framework looks at the absolute size of the formal VET systems (as captured by the related UOE ⁽³²⁾) and the age composition of the systems' student body. Based on this, the study showed that countries differ substantially in terms of whether the majority – 60% or more – of VET participants are young people below 20 (addressed as youth-centred systems), whether participants are more distributed across age groups (mixed systems) or whether the 20+ age group makes up 60% or more of participants (adult-centred systems). Figure 5 presents data for the EU-27 as well as Norway and Switzerland and the UK, showing that most countries have youth-centred systems (using data for the school year 2019/20). Nine countries have mixed systems, with 40% to 60% of participants aged 20 or older: Belgium, Estonia, Germany, Greece, Lithuania, Netherlands, Spain, Sweden, and the UK. Four countries have adult-centred systems, with 60% of participants being aged 20 or older, including Denmark, Finland, Iceland and Ireland.

⁽³²⁾ UNESCO OECD Eurostat (UOE) joint data collection.

Figure 5. Grouping of countries: youth-centred, mixed, adult-centred – schoolyear 2019/20 – sorted by the relative size of VET systems (Ratio of participants to 15-year-olds of 2019)



Source: ISCED data (educ_uae_enrs05 + educ_uae_enrs08 (calculations Cedefop).

This framework focuses on enrolment of adult learners in formal VET programmes, but formal VET programmes are not the only way in which adults learn in VET institutions. In terms of approaching CVET and the learning of adults more generically, the study identified four orientations in which IVET providers could play a role.

- (a) VET leading to a formal qualification: this relates to VET programmes at ISCED level 2, 3, and 4 (EQF 2-4). The aim is to obtain a formal education qualification, allowing further learning as well as preparing for labour market re-entry or increasing opportunities for higher level jobs or shifting jobs between sectors. This can also include higher level VET: ISCED 5 (EQF 5) or higher, having the aim to obtain a higher (vocational) education formal qualification, opening up further formal learning pathways. This can be organised in an integrated way with IVET or organised separately for adults, having a distinct qualification structure, and distinct structure of delivery.

- (b) VET leading to acquisition of specific vocational/occupation-specific skills and not leading to a formal qualification: this relates to vocational courses and programmes not leading to a formally recognised qualification. This can include specific courses, training workshops, etc. They aim at the acquisition of specific skills and possibly of a credential that has a value in the professional field. These VET courses can be linked to formal VET qualifications in the form of specific modules or certificates. It can also include ALMP and more liberal adult education provision.
- (c) Basic skills training: this relates to basic skills courses aimed at solving a skills deficiency in specific basic skills such as literacy, numeracy and digital skills. It can include training courses being part of active labour market policies offered by VET providers and personal or social learning courses offered by VET providers.
- (d) General education tracks (academic tracks and second-chance): this relates to formal qualifications for adult learners that are either regarded as second-chance programmes or programmes that are aimed at obtaining access to higher education.

The mapping of countries found that in some the IVET providers are dominant in all or most orientations (Finland and Ireland); in others, the IVET providers are mostly dominant in relation to the formal programmes (both in VET and general tracks (Czechia, Spain, Estonia, Croatia, Latvia, Hungary, Malta, Netherlands). Only in one country are IVET providers a dominant player in non-formal orientations (Greece). There are also some countries where IVET providers do not play a role in any of the orientations (Belgium and Slovakia). The role played by IVET providers does not correlate with adult participation in education and training in general, or more specifically in VET. Where the participation is high and the role of IVET providers is limited, countries have established separate systems to serve adult learners (Belgium, Denmark and Germany). In the following sections, we briefly discuss the role of IVET providers in these orientations.

Over the past two decades, there has been a clear trend in which IVET providers have taken on more adult learners (in both the 20-24 and 25-64 age groups), enabling them to work towards full VET qualifications (Orientation 1); provision is organised either specifically for them or with adults joining groups of younger students. Although this trend differs in strength, it is visible across countries, no matter whether they have (still) a youth-centred system, a mixed system or have had adults as their main target group for longer stretches of time. IVET for adults represents an important sub-field of formal adult

education (Hefler et al., 2022) and is a strongly growing one. In many places, adults have become a proportionally more important clientele to fill available places. External drivers for this depend on the specific geographic context: declining numbers of young people aged up to 19 entering IVET tracks, sometimes due to shrinking birth cohorts (when comparing the cohort size of 15-year-olds in 1995 to 2020); academic drift in upper secondary education; and the inflow of migrants and refugees in need of an education to enable them to settle into the society in which they now reside. IVET organisations themselves strive in many places to become more accessible for adults, e.g. by becoming more flexible in provision, adopting curricula in line with adult participant needs and enabling the recognition of prior learning.

Across EU Member States, there have always been stark differences in IVET provider roles in offering various forms of short CVET courses, not leading to a formal qualification (Orientation 2); they reflect different traditions in the division of roles and responsibilities between IVET, which is typically State-governed, and CVET, which is typically dominated by private actors. In Ireland (as in the UK), there has never been a clear-cut institutional divide between IVET and CVET, with the key State-funded organisations always providing both, based on differentiated funding arrangements for young people and adults, for individuals or enterprises. In some countries, including Czechia, Estonia and Lithuania, IVET organisations cater for an increasing demand for CVET, with other for-profit or non-profit organisations broadly absent from the market. In some countries – e.g. the Netherlands – the provision of CVET had been introduced as a specific permission to State-run IVET organisations to explore additional revenue streams, but without making these providers the key players in CVET provision. In most Member States, IVET providers have practically no role in short forms of CVET, with the latter delivered by a different set of organisations, such as private companies or specific adult education centres⁽³³⁾. Available evidence suggests that only in Finland, following a large-scale policy effort, have reformed IVET providers recently become important providers of short CVET courses.

The provision of basic adult education (Orientation 3) has seen considerable expansion in many Member States since the beginning of this century (European Commission et al., 2021), with support for adult literacy becoming a policy priority at least for stretches of time. IVET providers are

⁽³³⁾ Belgium-NL, Belgium-FR, Bulgaria, Denmark, Spain, France, Croatia, Cyprus, Latvia, Luxembourg, Hungary, Malta, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Sweden.

currently playing a role in the provision of (stand-alone, i.e. not part of a full VET qualification) basic adult education (including second language courses) in a group of Member States (Denmark, Greece, Spain, France, Italy, Luxembourg, Malta, Netherlands, Portugal, Finland). In countries, where IVET providers had already played a role in the provision of adult basic education previously, however, according to the (also limited) evidence available, they have not expanded the level of activity to a substantial degree. As a kind of exception, some countries have seen the introduction or expansion of provision, such as the *Qualifica* centres in Portugal or the provincial centres of adult education in Italy, where novel ways to promote IVET for young people and for adults have been introduced, which also include the provision of adult basic skills. Elsewhere, the provision of adult basic skills has been embedded in the provision of programmes leading to a formal qualification, so that adults with gaps in their basic skills or in need of improving their abilities to communicate in a second language turn to formal programmes, as, for example, in Austria. However, no comparable data are available across Member States about the extent to which regular VET programmes are used as a form of adult basic education provision.

For second-chance education (i.e. offering a formal qualification) (Orientation 4), IVET organisations' contributions to general education (mainly at the upper secondary education level) are difficult to observe; in some countries, regular IVET programmes might always include high proportions of academic material and deliver higher education entrance, as for example, in Slovenia. Programmes with such a strong academic stance might even be classified as general, as in Denmark. In such situations, the contributions of IVET institutions to academic preparation for further education are included in their overall contribution to formal VET qualifications. Setting aside this difficulty, countries differ greatly in whether or not 'second-chance education', qualifying for entry higher education, are offered by IVET institutions beyond their regular programmes or whether these opportunities are organised solely by 'academic' institutions or by organisations outside the formal education system. IVET organisations can typically offer extension programmes, so that VET graduates who do not qualify for higher education entrance can do the academic work required to prepare for higher level studies. In seven countries ⁽³⁴⁾ IVET organisations play an important role in offering opportunities to qualify for higher education; in a further five countries, they

⁽³⁴⁾ Croatia, Czechia, Estonia, Latvia, Netherlands, Spain, UK-EN.

at least play some role (Germany, Hungary, Cyprus, Malta and Finland). In all other countries, IVET organisations are not active in ‘second-chance education’, insofar as the latter may instead be organised in a stand-alone fashion (independent from regular IVET programmes granting access to HE). Typically, in these countries, acquiring the right to enter higher education is the responsibility of other institutions (Hefler and Markowitsch, 2013). With a continuing trend seeing more adults aiming for higher education across Europe, there are reasons to believe the IVET role in preparing for HE is also growing, though no data are currently available to investigate this trend in any detail.

Overall, adult participation in formal and non-formal CVET is much higher in countries with strong State support for adult learning. Much higher levels in participation in adult learning are mainly to be understood as driven by advanced level of State joint funding. The Netherlands stands out as the level of State support for adult learning is comparatively low, but participation in adult learning is high. However, free provision of formal programmes for adults within the VET centres is obviously a highly effective way to provide VET on different levels to large groups of adult learners. Low overall participation rates in formal adult education in Germany, and even more in Lithuania and Portugal reflect an overall lower level of public resources made available. Public funding nevertheless has had a pivotal role in recent progress made in adult learning in all three countries.

There are highly diverse patterns in the role of formal education organisations (schools, universities) providing non-formal job-related education and training. In Denmark, Lithuania and Finland, providers of formal education play a substantial role in the provision of non-formal job-related CVET. In contrast, the role of schools and universities in the respective field is limited in the Netherlands, Portugal and especially in Germany. In contrast, organisations specialised in CVET provision – for profit and non-profit organisations, and organisations affiliated to business interest organisations or trade unions – play a particular large role in Germany, Lithuania, the Netherlands and Portugal. They play a limited role in Denmark and only a marginal role in Finland.

2.5.3. Policies and national reforms

By analysing six country examples of reforms (Denmark, Germany, Lithuania, Netherlands, Portugal and Finland), the study aimed to understand better how policy developments impacted the role of IVET providers in offering

learning to adults, and how IVET and CVET systems are related to each other. Before discussing the reform orientations, objectives and results in terms of opening up IVET to adults, the relevant reforms are briefly introduced.

In Denmark, against the backdrop of an already high level of adult participation in VET, a novel pathway for adults, EUV, *Erhvervsuddannelse for Voksne* (Vocational education for adults) was introduced in 2015; it consisted of three different strands, each targeting different adult learners and offering courses of different duration. By making validation and recognition of prior learning a compulsory element of the courses, it was intended that they should be shorter and require less effort, thereby attracting new groups of learners and increasing the proportion of low qualified people who acquire a vocational qualification. The EUV programmes closely mirror related programmes for young people, with the exception that adults' prior learning allows for shortening their duration. However, early evaluation results are not too promising. The main conclusion of the 2017 report is that the political goal to provide adults aged 25 and over with a more attractive, clear, and targeted pathway from unskilled to skilled had not yet been reached as programme participation is low. The programme suffers from low take-up as alternative modular pathways within the AMU system provide a route to qualifications, which is perceived as less demanding and more in line with adults' current life situations. Employers also find it more difficult to provide support for the new EUV courses compared to the arrangements for the established (AMU) system. The policy has shown limited effectiveness within an environment where well-supported pathways to similar qualifications building on shorter non-formal learning modules acquired over longer stretches of time are in place (Andersen, 2022).

Finland has achieved an adult-centred VET system capable providing VET to adults to a significant degree. The capacity for delivering VET to adults has been systematically expanded since the mid-1990s, mainly by introducing a set of organisations for the purpose. Through system reform, implemented between 2015-18, the two sets of organisations mainly engaged in either IVET for young people or VET for adults have been merged, so that all organisations have become part of a unified system and entitled to cater for participants of all ages. Given the overall size of the system, substantial gains in efficiency have been expected from the reform from the merger of organisations which formally catered for different sets of populations, enabling cuts in public funding. Early outcomes of the reform include a decline in the number of organisations specialised in the delivery of VET for

adults; while providers of IVET for young people have been able to open up provision of VET to adults, the specialised providers of VET for adults have found it difficult to reach young people as a result of their dominant image of being an adult education provider. While the main aim of the reform is to unify the system, a secondary aim is to find ways to increase the efficiency and to cut costs, given the size of the Finnish VET system. It remains to be seen whether the merging and consequent streamlining of former independent strands of delivery will have detrimental effects on the capacity for delivering quality VET to adult populations.

In the Netherlands, a policy package has been implemented since 2018, with the aim of further strengthening the already considerably high level of autonomy of the regional training centres (ROC), which are providing IVET for young students, but also for young adults (20-24) and adults in general. VET programmes accessible to adults at no cost need to be considered a major resource in an adult learning system characterised by a tradition of comparatively high-level fees for CVET, a strong reliance on market mechanisms and many for-profit providers. The high levels of tuition fees in the higher education sector add to the picture. Against this backdrop, three strands of reform intended to unleash the entrepreneurial spirit of the regional training centres: regulatory reform allowing them to offer a higher variety of modularised programmes tailored to the needs of adults; strengthening the local cooperation of centres with regional employers and public employment service centres; and expanding the number of financial incentives for CVET, following a demand-side funding strategy which targets enterprises (SMEs in particular) or individuals (STAP, *Stimulering Arbeidsmarktpositie*, or Incentive labour market position budget, introduced in 2022, offering an individual subsidy to learn). More business opportunities in the training market should be created, with public organisations expected to seize their chances. Implemented policies may have contributed to a recent increase in the number of adults in VET institutions in general, but national data, which enable comparison over longer stretches of time, suggest stable development at best. However, any future evaluation of the reforms will need to pay due attention to the countries' starting point, with the Netherlands having one of the largest VET systems and an overall high participation of adults in the system.

Germany has a large VET system with a mixed age structure, with a large number of young people (up to age 19) and young adults (20-24) participating in IVET. Adults (age 25+) make up only a minority, but opportunities to acquire

a formal VET qualification in adulthood are mainly not regarded as part of the formal system; they are therefore not covered by the regular (UOE) statistics, although they are well covered by national data. The notable success of IVET cannot be understood without taking into consideration a particular institution, which is a set of formal CVET offers reserved for the upskilling of graduates of a particular apprenticeship track. The relevant institution of the so-called *Aufstiegsfortbildung* (upgrading training) has come under pressure, mainly due to academic drift and changing employment patterns, which have also weakened the standing of the apprenticeship system. Although the related programmes lead to the award of formal qualification, they are not counted as formal. Since about 2010, a series of reforms have aimed at reinvigorating the role of this specific type of formal CVET, mainly by extending the support made available to adults for preparing for the demanding formal examinations at the heart of the system. Based on the measures introduced, including rebranding of the qualifications awarded and the extension of public funding supporting the take up of programmes, participation could have stabilised, but the overall strong decline since the early 1990s could not be reversed (Hefler and Unterweger, 2023).

Portugal has pursued a long-term policy aiming to provide upskilling opportunities for the still large batches of adults holding no qualification beyond completion of lower secondary education. Against the backdrop of a small, youth-centred VET system, a novel framework was created in 2005 to provide education institutions with the means to create an integrated offer out of lifelong guidance, the provision of general and vocational education, and the validation of prior learning under the name New opportunities initiative (*Iniciativa Novas oportunidades*). However, due to post 2008 austerity measures, the system was put on hold and restarted in a much smaller fashion as the *Qualifica* programme in 2017. The *Qualifica* centres need to be seen against the backdrop of more encompassing VET reform, including the introduction of a dual certification pathway in vocational education and training, the introduction of a credit system, and increasing attention to the modularisation of education programmes. The basic approach of providing a framework that gives existing education organisations the right and the means to offer integrated packages based on guidance, provision and validation has proven successful.

Lithuania has a small and shrinking VET sector, with reforms implemented to reinvigorate the system and inviting adults (25+) as participants to compensate for ever smaller birth cohorts, strong emigration and a growing

preference for higher education. Since 2010, a new type of organisation has been introduced with the aim of overcoming the schism between IVET, under the control of the Ministry of Education, and CVET provision for the unemployed, steered by the Ministry of Social Security. 42 sectoral centres for practical training were implemented between 2013 and 2018. The centres are a vocational training institution equipped with modern practical training facilities, providing initial and continuing practical vocational training for all Lithuanian citizens: vocational school students, college and university students, employees of companies upgrading their qualifications, and jobseekers retraining and improving their competences under programmes regulated by the employment service. They can be used both for overcoming low levels of skills and for complementing high levels of academic skills, acquired in the HE sector, with practical skills that are in high demand in specific economic sectors. The centres are available to a much broader base of potential participants. Being part of much broader efforts to reform VET (Tūtlys et al., 2022), the centres are considered a success, with increasing numbers of adult participants at least partly offsetting a declining number of young people entering VET.

The six case studies show a diversity in terms of the time period covered by the reform, the scope of the reform in terms of orientation towards the learning of adults and the level at which the reform was implemented. These reviewed reforms and developments can be positioned in a wider European perspective concerning stimulating lifelong learning and adult learning, also acknowledging the role of the VET sector in supporting this⁽³⁵⁾. Table 5 below provides an overview of the policies studied. It indicates the type of reform, the years of implementation, the drivers behind the reform, the main result areas associated with the reform, and whether there are positive or negative views of how the reform opened up IVET to adult learners.

⁽³⁵⁾ The 2019 Ecorys study (European Commission and Ecorys, 2019, p. 44) provides an overview of latest reforms covering adult learning. This, besides specific adult education reforms, also covers reforms in IVET and CVET. The report also maps the emergence of strategies that cover adult learning. These can be overarching lifelong learning strategies as identified in 13 countries; specific (basic) skills strategies (three countries); reform strategies for VET/HE (in four countries); and/or skills strategies (in eight countries) (European Commission and Ecorys, 2019, p. 56).

Table 5. Overview of policies

	Adult-centred IVET systems			Mixed IVET systems	Youth-centred IVET systems	
	DK	FI	NL	DE	LT	PT
Policy measure	Novel programme	Merging IVET/ CVET	Autonomy package	Strengthening existing linkage	Novel centres	Integrated provision
Years	2015-	2015-18	2018-	2010-	2013-	2017-
External drivers						
Skills shortages	X	(x)	(x)	X	X	(x)
Financial pressure		X	X		X	
Internal drivers						
Increasing attractiveness of VET (particularly for adults)	X		X	X	X	X
Reforming organisational set-up of systems offering learning to adults: reducing overlap and supporting synergies		X			X	X

	Adult-centred IVET systems			Mixed IVET systems	Youth-centred IVET systems	
	DK	FI	NL	DE	LT	PT
Revising content and delivery of VET, making it more tailored to needs of adult learners		X	X		X	X
Result areas						
Changing institutional roles and responsibilities	X	X	X		X	X
Changing qualifications and IVET/CVET programmes' landscape	X	X	X	X	X	X
Changing modes of delivery: same or distinct programmes for young and adult learners	X	X	X			
Changing the pedagogical approaches: competence-based approaches and modularisation	X	X	X		X	X
Use of validation of prior learning and shortening (IVET) programmes	X	X			(x)	X

	Adult-centred IVET systems			Mixed IVET systems	Youth-centred IVET systems	
	DK	FI	NL	DE	LT	PT
Towards a lifelong learning culture and mindset	X		X			
Overall outcomes						
Positive, negative or mixed views on overall outcomes	minor (positive)	mixed views	positive	mixed views	positive	mixed views

Source: Cedefop.

Table 5 shows that as drivers, the reforms and developments cannot be isolated from their historic, economic, and organisational contexts. They are formed in the interplay of preceding policy reforms, interests from different stakeholders and policy intentions. The case studies show that both external and internal drivers are referred to in describing the policy objectives. From the case studies a general picture emerges that the policy direction points to creating IVET-CVET systems that can respond to emerging needs for skilled workers, are able to respond to adult learners' needs, make VET an attractive option, and all this in the best economic value-for-money organisational set-up.

In terms of areas affected by the reforms that changed the link between IVET and CVET, and that worked on the opening-up of IVET for adults, the case studies showcase the following. From an education system perspective, the developments can be seen in relation to changing institutional roles and responsibilities and in changing qualifications and the IVET/CVET programme landscape. From an epistemological and pedagogical perspective, changes can be observed in the modes of delivery (distinct provision for young and adult learners); the pedagogical approaches (competence-based approaches and modularisation); and the use of validation of prior learning and shortening (IVET) programmes. From a socioeconomic or labour market perspective, changes are reported related to developing a lifelong learning culture and mindset. More specific to the epistemological and pedagogical perspective, the cases indicate a general tendency towards more modular approaches and making IVET programmes more based on adult learning principles, also for younger learners, allowing more flexibility in programme delivery. However, IVET systems struggle with making general parts of IVET programmes mandatory for adults. While this has been reintroduced in some countries (Finland) and is better aligned to adult learner needs, it is possible to skip these parts based on validation and recognition of prior learning in other systems (for instance in Denmark). Overall, the role of validation of prior learning is regarded as essential in making IVET programmes more accessible for adults and aligned to their needs. The case studies did not highlight significant changes in assessment practices. The study shows that opening up IVET for adults is a slow and uneven process across countries and across economic sectors.

Assessing impact starts with two countries where adults comprise most VET participants. In Denmark, the introduction of a novel type of offer for adults could not effectively increase their participation, most likely due to

the existing alternatives. In Finland, against the backdrop of high numbers of adults in VET, the merging of IVET and VET for adult structures has reduced public spending, with unknown unintended effects on the accessibility and quality of courses delivered for adults. Among countries classified under 'mixed systems', the Netherlands has aimed for IVET organisations becoming more active on the private training market (i.e. seeking competition with private training providers), with unclear outcomes, as some IVET providers progress well and others lag behind in orienting to adult learners. In Germany, policies have tried to strengthen one key institution of the IVET-CVET link, with at least some success regarding stabilising the numbers of participants in the related programmes. In Lithuania, the implementation of a new type of VET provider catering for broader groups of participants has been successful in attracting adults and has thus been an important component in slowing down the loss of students in VET. In Portugal, the approach of introducing new centres providing integrated services based on counselling, provision and validation has proved an important contribution to upskilling.

The study shows that how VET for adults is provided and organised depends on long-term historical developments for which the direction of travel is not easily altered. It is therefore difficult to see radical changes in the countries, and the reforms largely showcase that the systems alter through incremental changes. Reforms generally did not fully deliver on their promises: this is largely due to the often short reform period (around 5 years), as reforms of this scale often need much more time to settle. As a general tendency it can be observed that the distinction between orientations (orientation 2: VET leading to a formal qualification; orientation 1: VET leading to acquisition of specific vocational/ occupation-specific skills and not leading to a formal qualification) is fading. Providers are increasingly offering both orientations; formal programmes are modularised and awarded with certificates; delivery modes integrate more non-formal learning approaches; and use of validation processes is stimulated. The same direction of travel can be observed in the context of the emergence of microcredentials in higher education and VET.

Are IVET systems opening up to adult learners? Are adult learners better served? Are lifelong learning cultures being established in IVET systems? The study is not too positive about this. Both in terms of the number of adult learners participating in IVET programmes and of tailoring the provision to adult learners' needs, the reviewed reforms do not yet show clear positive outcomes. And more needs to be done to truly open up IVET to adults. The role of IVET providers in offering learning to adults can be characterised

by using the three scenario-orientations. Pluralistic VET for adults is represented by Ireland and Finland. In these countries IVET providers play a role in the different orientations, ranging from vocational courses to basic skills programmes and formal VET programmes. From the case studies, this future orientation can be identified for Denmark and Finland. Distinctive VET for adults is represented by those countries where IVET providers are an important supplier of both formal and non-formal VET (e.g. Czechia, Estonia). Mostly the emphasis is on the formal VET programmes. From the case study countries, the Netherlands could serve as example. Special purpose VET for adults is more difficult to find among the countries but could be associated with the UK-England further education colleges. It must be emphasised that this analysis only looked at the role IVET providers play in providing training to adults.

2.5.4. Concluding reflections on adults in IVET

This study tried to go beyond simple quantitative overviews of participation rates of adults in VET, and the approach opened up new perspectives on the role of IVET providers in adults learning. While the study sees a considerable role for IVET providers in up- and reskilling, it cannot be concluded that they are a dominant player, or even would be a more prominent player under the assumption that the future resembles the past direction of travel. This is without considering the role of higher education institutions in offering up- and reskilling opportunities. However, the study showed that IVET providers can be involved in different types of adult learning and are not necessarily confined by national traditions. When looking at the policies, reforms and developments in more detail, a couple of cross-cutting aspects are noticeable: first, an increased emphasis on modularisation and learning outcome approaches; second, more emphasis on validation processes to shorten and tailor the provision to individual needs; and third, setting up guidance structures.

CHAPTER 3.

Country patterns and variations

3.1. Introduction to country analysis

While it is possible to pick out and dissect the broad forces that have shaped, and continue to shape, the VET environment in Europe, country specificity is an essential dimension that has been considered throughout the current project. Every country has its own mix of external factors that has shaped VET in the past and does so today. Each country also has its own conception of VET and its own governmental and administrative structures, policies and practices which shape how external forces are interpreted and influence how they are reflected within VET.

At the same time, certain groups of countries have similarities. The most notable example is probably the dual system countries whose distinctive approach to apprenticeships has long clearly differentiated them from other countries in terms of VET provision. Other country groupings are not so easy to discern. Nonetheless, country groupings help us better to understand the forces of work on VET and the patterns of change that have been discerned during the project. We have continued the country groupings from the previous project, which is mainly based on geographic proximity and partly by cultural-historic and political-economic context. The country narratives of the previous study (Cedefop 2020) help to provide a more complete picture of the country's context and trajectory.

In the following sections we examine 11 country groupings, showing how the changes discussed in the preceding chapter have played out 'on the ground'. Doing so enables us to shed light on the interactions between the different dimensions of change, which sometimes reinforce one another and sometimes run in different directions. It also highlights the non-linearity of change processes and the possibility that changes may be slowed or reversed, as different factors come into play or are given emphasis by

different actors at different times in policy and practice; this shows how VET can often seem like a pendulum, swaying this way and that under the attraction of different forces.

It was not possible to study all 30 countries to the same extent; for some countries case studies have been conducted (for a few even several on different topics); some countries were covered by the provider survey (Section 1.4); for others only desk research has been conducted. Consequently, the details provided in the following section vary from country to country, although efforts were made to harmonise the information available.

3.2. Central and eastern Europe

3.2.1. Baltic States

The Baltic States show socioeconomic and cultural similarities related to common historical and political developments: after regaining independence in the early 1990s they faced common challenges in developing skill formation according to the requirements of market economy. The transition period (last decade of the 20th century) is also when key reforms in VET started. Seeking to meet the skills needs of the emerging market economy, the Baltic States transformed the Soviet model of VET provision to school-based VET, sustaining the integration between VET and general education.

The last 30 years has highlighted common factors and trends related to VET for all three countries: long-term increases in the old-age dependency ratio, shrinking youth cohorts, and net reduction in student population. To address these demographic trends, and to increase the quality and efficiency of vocational education, many small providers have been merged.

The set-up of upper secondary education has changed little since the early 1990s which may relate to stable participation in VET – it remained a ‘second’ preferred option vis-à-vis general education, accounting for less than one third of VET students in Lithuania and less than two thirds in Estonia and Latvia. Since apprenticeships have recently been introduced (in the last 10 to 20 years) they are still marginal in the Baltic countries, comprising 10% or less of all VET learners. Expansion of higher education and vocational drift at higher levels has taken place in all three countries. An increasing share of adult learners in VET can also be observed (Cedefop, 2020b, p. 83).

Since EU accession in 2004, all three countries have developed a more systemic approach to the design of VET curricula, qualifications and

institutional pathways of VET delivery. This has included the implementation of national qualifications frameworks, modularisation of VET, giving increased importance to transversal skills, introduction of work-based learning and apprenticeships, and granting greater autonomy to VET providers in curriculum design and organisation of learning processes.

Despite obvious similarities in key IVET figures, as well as trends related to VET content and structure, it can still be debated whether there is a ‘Baltic way’ in vocational education and training, given that there are also some differences. We will illustrate this by zooming in on several aspects, specific to national contexts.

Although various reforms have removed dead-ends and have led to a more differentiated IVET system, the share of IVET students in Estonia is still considerably lower than that of students in general education ⁽³⁶⁾. While most programmes allow for direct progression to the next level of education and horizontal permeability is possible ⁽³⁷⁾, actual progression is rarely used; for example, slightly more than 5% of upper secondary VET graduates continue into tertiary education (Cedefop and Ministry of Education and Research, 2022).

To respond to falling youth numbers, both VET schools and higher education institutions have started to open up to adult learners (25+); this explains why the share of adults in IVET and CVET has more than doubled since 2010/11, reaching more than 40% of the total VET population in 2020/21. Since 2010, the proportion of higher-educated adults entering VET has also been on the rise (Cedefop and Ministry of Education and Research, 2022, p. 4).

In terms of VET content and structure, Estonia has seen a trend towards more practical learning in both the school-based form of study and workplace-based form (e.g. apprenticeships) (Cedefop, 2020a, EE). The share of practical training in VET programmes is 35% or more, depending on the type of programme ⁽³⁸⁾.

Estonian VET from the past 15 years highlights the growing relevance

⁽³⁶⁾ The share of VET students was 40% in 2020, source: EDUC_UOE.

⁽³⁷⁾ Qualification achieved in upper secondary vocational education gives access to higher education; however, it may require learners to pass State examinations that are compulsory for general upper secondary education graduates: an optional additional year of general education is available for upper secondary VET graduates (ISCED 354) to help them to prepare (Cedefop; Ministry of Education and Research 2022).

⁽³⁸⁾ For instance, in the school-based track, it is usually divided equally between school workshops and workplace learning (Cedefop; Ministry of Education and Research 2022).

of transversal skills (entrepreneurship, social skills and attitudes, learning competence) in vocational programmes. The trend reflects the aim to respond better to labour market requirements and changing economic conditions (Cedefop, 2020a, Estonia, p. 3). While integration of general and vocational subjects in VET curricula is encouraged, they often remain separate e.g. separate summative assessment is particularly common in subjects such as mathematics or physics, whereas, by way of contrast, language skills are often assessed as part of a complex vocational task (Mägi and Preegel, 2022).

Autonomy of VET providers in Estonia has traditionally been high, allowing them to engage in economic activities in their fields of training; teachers and schools are free to choose methodologies and teaching materials and schools create their own curricula⁽³⁹⁾.

In Latvia, the main VET track (involving more than 60% of all VET learners) is the 4-year programmes (ISCED 354) leading to a secondary VET qualification at EQF level 4. Graduation from the programme requires both a VET qualification and success in four State exams in general subjects, giving access to higher education (Cedefop and Ministry of Education and Science, 2022, p. 5). The share of higher education students studying in professional higher education⁽⁴⁰⁾ comprises more than two thirds of all students in higher education (Daija et al., 2019, p. 21)⁽⁴¹⁾. In the other two countries, this share is much lower. While apprenticeship-type schemes (nationally called work-based learning) have been introduced more recently (2015) than in Estonia (2006), the participation rate is almost the same at around 10% (Cedefop and Ministry of Education and Research, 2022).

Formal vocational adult education in Latvia is provided by evening schools, adult education centres, lifelong learning centres and vocational schools, with most adults opting for one of the first three (Cedefop, 2023, forthcoming-b, p. 49). Publicly financed regional adult education centres

⁽³⁹⁾ Vocational secondary education is based on national curricula and all school curricula are based on VET standards (Cedefop, 2020a, p. 8, EE).

⁽⁴⁰⁾ Professional higher education is provided at two levels: first-level college (short cycle) programmes (2 to 3 years; ISCED 554, EQF 5) targeted mainly at the labour market, though graduates can continue their studies in second-level professional higher education; second-level higher education programmes (2 to 6 years) (ISCED 655, 656, 657, 756 and 757, EQF 6 and 7) leading to a professional qualification and either professional bachelor or master degree or a professional higher education diploma (Cedefop; Ministry of Education and Science 2022, p. 5).

⁽⁴¹⁾ In 2018, a new type of professional qualification – professional doctor degree in arts – was introduced. Saeima (1995). [Augstskolu likums](#) [Law on institutions of higher education]. Last amended 21.6.2018.

also play a large role in the provision of non-formal education since they organise programmes that do not lead to formal credentials but completion of these programmes is seen as valuable in the professional field (Cedefop, 2023, forthcoming-b, p. 43).

In comparison to the other Baltic countries, Latvian IVET seems to be more centralised and regulated to a higher degree by the State. Nevertheless, a recent regulation has provided for a certain degree of flexibility and autonomy of VET institutions i.e. national VET curricula have a 'variable' part (up to 30%) which providers can modify to respond adequately to changes in regional/local contexts. The rest of the curriculum (70%) is referred to as the main (basic) unchangeable part and is defined in accordance with relevant national education standards (Cedefop, 2020a, LV).

Major VET reforms in the 1990s in Lithuania are associated with the reorganisation of State-led VET providers into self-administered vocational institutions, enabling various stakeholders (companies, social partners, State and local government, etc.) to participate in VET governance. Also, VET schools and teachers have been granted autonomy in curriculum design, thus enhancing partnerships between schools, local employers and regional authorities (ETF, 2002; Laužackas, 2005; Tütlys and Kaminskienė, 2008). The new status of VET providers has also increased their financial independence (Tütlys, 2021) ⁽⁴²⁾.

The implementation of competence-based VET standards (1997-2008) has brought important changes in VET assessment since tasks in qualification examinations came to be based on competence descriptions (albeit the training process itself continued to be based on subjects) (Tütlys, 2022). Modularisation of VET curricula was introduced gradually between 2013-18 resulting in several modular VET programmes. The new VET Law (2019) strengthened this trend towards modularisation, stipulating that all VET programmes shall be modular. Updated and/or newly developed modular programmes address gaps identified in students' practical skills by increasing the share of occupation-specific content (at the expense of general subject knowledge). Before the modularisation of all VET programmes, general subject knowledge dominated VET content at 80%; however, since 2019,

⁽⁴²⁾ The rights, freedoms and autonomy of VET schools have been further expanded through the new Law on VET (2019), according to which the VET school must have a collegial governing body, the Council, composed of nine representatives: a student representative, a teacher representative, a representative of the municipality in which the school operates and six social partners (Cedefop, 2020a).

this share has been reduced to 50%. Besides the increase in occupation-specific skills (to 35%), the new law also meant a higher share of transversal skills (15%) (Cedefop, 2020a; Tütlys, 2021). The modularisation of VET curricula has also enabled the opening up of VET; for instance, since 2020 gymnasium students in general schools are able to study in VET schools. After assessing their personal abilities and workload, they can enter one or more modules of a VET programme (Cedefop, 2020a, p. 6).

Despite the changes described above, the number of young IVET learners has decreased by roughly one third over the last 6 years (Cedefop and Qualifications and Vocational Education and Training Development Centre, 2023, forthcoming, p. 6). Further, only a quarter of learners aged 15 to 19 ⁽⁴³⁾ chose an IVET track (Cedefop, 2023, forthcoming-b). VET suffered a significant loss of esteem *vis-à-vis* higher education during the first two decades of the independent State, resulting in a significant imbalance of youth flows between VET and HE (Tütlys, 2021). Also, participation in apprenticeship (introduced in 2008) is low – around 6% in the school year 2020/21 – whereas the national goal is to increase it to 30% by the end of 2024 (Cedefop and Qualifications and Vocational Education and Training Development Centre, 2022, p. 7).

In contrast to falling overall participation in IVET, the share of adults in formal (C)VET programmes is steadily increasing, especially for ISCED level 4 programmes; in 2021, more than 30% of all IVET and around 70% of CVET learners were aged 25+ (Cedefop and Qualifications and Vocational Education and Training Development Centre, 2023, forthcoming, p. 6). With the implementation of the Lithuanian qualifications framework, development of occupational standards and national modular VET curricula, the separation between CVET for adults (seen as labour market training for the unemployed and jobseekers) ⁽⁴⁴⁾ and IVET (provision for youth in schools) was abolished (Tütlys, 2021). Despite these developments, participation in formal adult education and non-formal education is low (Cedefop, 2023, forthcoming-b, p. 84f).

⁽⁴³⁾ 57% of all individuals in IVET are between 15-19, while 22% are aged between 20 and 24 and 19% are aged 25 and above. Lithuania's VET system is, thereby, a mixed system, even though the system is more oriented to those aged 15 to 19 (Cedefop, 2023, forthcoming-b, p. 84).

⁽⁴⁴⁾ During the first two decades after 1990 the public provision of CVET was dominated by active labour market policies and directed to employment goals and dealing with the problem of structural unemployment, while the CVET provided by employers was very fragmented and minimal.

Table 6. **Baltic States: trends**

Common trends	
	<ul style="list-style-type: none"> • Long-term increase in the old-age dependency ratio; • Shrinking youth cohorts and net reduction in student population; merger of smaller VET providers. • Medium share of VET students in Estonia and Latvia and low share in Lithuania; • Participation in apprenticeships is marginal, but increasing; • Expansion of HE and vocational drift at higher levels; • Increasing autonomy of VET providers; • Modularisation of VET; • Increased emphasis on transversal skills.
Distinctive features	
Estonia	<ul style="list-style-type: none"> • Increasing share of adult learners in IVET and CVET • Rare use of possibilities for horizontal permeability • Increasing practical component in school-based VET • Predominantly adult apprentices
Latvia	<ul style="list-style-type: none"> • Much higher share of students in professional higher education compared to Estonia and Lithuania
Lithuania	<ul style="list-style-type: none"> • Increased share of occupation-specific • Newly unified governance of IVET and CVET • Increasing share of adults in CVET but still low participation

Source: Cedefop.

3.2.2. Visegrád Group

The Visegrád countries, Czechia, Hungary, Poland and Slovakia ⁽⁴⁵⁾, enjoyed more or less stable economic growth following the socioeconomic transformations after 1989, which possibly contributed to their faster recovery from the 2008 crisis compared to the southern Europe countries.

The youth population of the Visegrád countries has been in decline since the 1990s, most pronounced in Poland which has also the biggest population among the four countries. The trend can be partly explained by considerable labour mobility as a result of joining the EU in 2004, combined with insignificant migration (particularly in the case of Hungary), as well as high levels of outflow of tertiary students (particularly in Slovakia). Despite some temporary increases, a decline in the youth population (15 to 30 years old) has resulted in a net loss of more than 20% in 2015 compared to 1995 in all Visegrád countries (Cedefop, 2020b, p. 87). The latest population

⁽⁴⁵⁾ The **Visegrad group** pursues common goals to foster military, cultural, economic and energy cooperation with one another.

projections e.g. in Czechia, Poland, foresee further population decline⁽⁴⁶⁾. In this context, the potential effect of Brexit and the COVID-19 pandemic shall also be considered. Poland has recently received the highest number of Ukrainian refugees of all European countries⁽⁴⁷⁾.

Economic growth and foreign investment, along with emigration and shrinking working populations, have resulted in significant skills shortages in all four countries. These shortages could not be mitigated in the short term (e.g. through migration inflow of skilled labour) which resulted in a shift in policy thinking through a renewed emphasis on VET in recent years. The financial resources that the Visegrád countries could access due to EU membership played an important role in restructuring their VET systems.

The Visegrád countries share some common patterns: all have traditionally strong school-based VET systems that are predominantly youth-centred (Cedefop, 2023, forthcoming-b); there is a clear trend towards so-called double qualifications (combining general and vocational education components with the possibility to acquire both higher education access as well as a vocational qualification); the introduction of additional courses to IVET programmes to prepare learners for a *maturita* examination; delivery of dual education which is not genuine apprenticeship, in the sense that it is not provided as a separate pathway (as in Germany or Austria) but as work-based learning within school-based VET; and low levels of participation in adult education compared to upper secondary education. Despite these commonalities, there are also some differences rooted in historical and current policy developments. The following paragraphs focus on the particularities of each of the four countries.

In Poland, educational reforms during the post-Communist transition period (1990s) focused exclusively on general education, which has led to a de-vocationalisation (Dębowski and Stęchły, 2015; Dębowski and Stęchły, 2022) supported also by the disruption of the previously existing direct links between enterprises and VET schools (Cedefop, 2020b)⁽⁴⁸⁾. Although

⁽⁴⁶⁾ For example, the Polish population is projected to decline to approximately 34 million by 2050 (being 38 million in 2021) (Statistics Poland, 2014). However, after 2014 in Poland, there has been massive worker inflow (mainly from the Ukraine)

⁽⁴⁷⁾ More than 1.3 million refugees were registered for temporary protection or similar national schemes as of August 2022, <https://data.unhcr.org/en/situations/ukraine>

⁽⁴⁸⁾ Large State-owned companies were closed or privatised, and new owners refused to support VET schools previously linked to them. This was due, on the one hand, to lack of money and, on the other, to the popular belief at the time that vocational education was too expensive, held no future for Poland's economy, and to the preference for higher education (Cedefop, 2020b, p. 87).

the overall number of enrolments in upper secondary and post-secondary education (both general and vocational) declined over the last three decades (1990-2017), it was most pronounced in vocational upper secondary programmes, from approximately 80% to 60% (Chłoń-Domińczak et al., 2019, p. 6). Significant reforms in VET took place in 2012 and 2017-18: the reform of VET core curricula in 2012 introduced learning outcomes, increased the visibility of key competences within lifelong learning and the transparency of procedures for recognising prior learning. As part of the 2017-18 reform, VET schools providing education in a given occupation were required to set up formal cooperation with employers from their particular sector; earlier, this had not been mandatory (Dębowski, 2022). Vocational upper secondary programmes (*technika*) providing a double qualification were extended to 5 years (instead of 4) and two-stage sectoral programmes were introduced ⁽⁴⁹⁾. VET examinations have also been significantly modified over the years, with a pivot towards performance-based assessment in work situations.

As a result of the reforms in 2012 and 2017-18, the popularity of VET has been growing and this was most visible for vocational upper secondary schools which in 2016/17 represented more than 40% ⁽⁵⁰⁾ of the overall number of upper secondary education enrolments (Chłoń-Domińczak et al., 2019, p. 20). While the share of enrolments in first stage sectoral vocational programmes (which do not provide access to tertiary education) remained more or less the same over the years, participation in the recently introduced second stage vocational programmes, though still a minor track, doubled ⁽⁵¹⁾. Although employers supported the emphasis on VET policy ⁽⁵²⁾, Poland can be still regarded as a statist VET regime (Busemeyer and Thelen, 2012), which has high commitment to VET from the public sector but implies relatively low employer involvement (Dębowski and Stęchły, 2022).

⁽⁴⁹⁾ First stage sectoral (3-year) programmes replaced the former basic vocational school programmes as of 2017/18; they lead to a vocational qualification diploma for a single-qualification occupation. Second stage sectoral (2-year) programmes began to operate in 2020/21: these further develop the vocational qualifications attained in first stage sectoral programmes and graduates will be eligible to continue to tertiary education after passing the secondary school leaving examination (*matura*).

⁽⁵⁰⁾ The participation rate refers to the main VET track, the 5-year upper secondary VET programme that provides a double qualification. The rate does not include the first- and the second-stage sectoral programmes. If included the overall participation rate in VET will be around 60%.

⁽⁵¹⁾ From around 2 000 learners in 2020/21 to approximately 4 000 in 2021/22 (Statistics Poland, 2022).

⁽⁵²⁾ They have increasingly demanded reform and government action to provide a skilled labour force.

In contrast to the policy priority set for general education during the transformation period in Poland, in Hungary, VET and adult education experienced a short-lived revival in the late 1990s and early 2000s when general education was promoted within VET and adult education (Laczik and Farkas, 2022, p. 232). However, since 2010, Hungarian vocational policy has been characterised by strong centralisation, downgrading of general education within VET programmes (particularly, those that do not provide access to tertiary education) and reduction in expenditure on VET (Laczik and Farkas, 2022). The downgrading of general education is expressed in the reduced duration of VET programmes in vocational secondary schools from 2+2 years to 3 years (as of school year 2013/14): the practical training component in those programmes sharply increased, comprising more than two thirds while class hours for vocational theoretical subjects – and especially general education subjects – fell to around one third (Cedefop, 2020a). The idea behind these reforms was to prevent early school leaving while providing businesses with skilled workers. However, reducing general education components within one of the main VET tracks ‘reinforced the existing problem of VET absorbing young people from lower socioeconomic backgrounds, whose experience of basic school is characterised by underachievement’ (Laczik and Farkas, 2022, p. 233).

The number of learners in secondary vocational schools (which do not lead to the *matura* examination) declined between 2010 and 2018 by almost a half (Ministry of Human Resources, 2020). Equally, by 2010 vocational grammar schools had become the most popular route among young people: the 4-year programmes provided by these institutions enabled progression opportunities to tertiary education and graduates had significantly higher employment rates afterwards (Valuch, 2013). Since 2015/16, however, participation in this VET track has also been decreasing, which can be explained by a parallel increase in participation in upper secondary general education (grammar schools). These have now become the most popular upper secondary education pathway, with the highest enrolment shares

over the past 6 years ⁽⁵³⁾. This is an important development given that policy interventions have been made more in the opposite direction, i.e. to promote participation in VET ⁽⁵⁴⁾.

In Czechia and Slovakia, there has been also a decline in VET but to a lesser extent (compared to Poland and Hungary), possibly because the share of vocational learners in upper secondary education has been traditionally high compared to most European countries.

For example, in the 1990s, the overall ratio of learners in general and vocational upper secondary education in Czechia was around 85:15, in 2003/04 approximately 80:20, and in 2019/20 it reached 75:25 in favour of vocational programmes (Federičová, 2021). Developments in participation within main upper secondary VET tracks are like those observed in Poland and Hungary. For instance, IVET offering the *maturita* examination (4-year programmes) in the last 30 years has increasingly been preferred to IVET (3-year programmes) that directly leads to the labour market, as the former enables further studies at tertiary education while the latter is considered a ‘dead-end’ educational path ⁽⁵⁵⁾ (Dvořák and Gal, 2022, p. 168). In terms of content, while the general education component in 4-year vocational programmes (with *maturita* examination) increased from less than 40% in the 1990s to more than a half after 2004, its share in the 3-year vocational programmes remained stable comprising around one third of VET curricula (Federičová, 2021).

One particularity of the Czech context is the important role of local actors, i.e. the presence or absence of a successful manufacturing or service company for the supply of quality technical vocational education and training (Dvořák et al., 2021). Regions are also key local actors since they provide scholarships to increase enrolment in programmes leading to qualifications demanded on the labour market that are taken by small

⁽⁵³⁾ Hungarian Central Statistical Office (KSH), 2022.

⁽⁵⁴⁾ To foster participation in three-year VET programmes, in 2016, the government introduced a 2-year academic programme allowing graduates to prepare for a secondary school leaving examination, which will give them access to tertiary education. The reform did not result in overall increased participation in vocational secondary school programmes, including apprenticeships which are not a separate pathway but can be provided as work-based training within vocational secondary school programmes.

⁽⁵⁵⁾ IVET directly leading to the labour market includes mainly a 3-year secondary education leading to a vocational certificate (EQF 3), commonly called ‘apprenticeship’ education, being essentially a school-based VET programme. Graduates cannot directly enter tertiary education and to do so they need two or more additional years of study to gain *maturita*, but these follow-up programmes are known to have very low completion rates (Dvořák and Gal, 2022, p. 179).

numbers of learners (supported qualifications). Although the scholarships may be seen as promoting equality, VET schools could use them to attract youngsters from poorer families who would gain a short-term advantage at the cost of losing direct access to higher education (Dvořák and Gal, 2022, p. 185). The establishment of post-secondary vocational schools (VOŠ, ISCED 5B) is another specificity of the national context ⁽⁵⁶⁾. They are an ‘exceptional case of policy borrowing’ ⁽⁵⁷⁾, which were gradually ‘assimilated to correspond more closely to domestic tradition’ i.e. contrary to the original ideas, the concept of VOŠ has shifted from tertiary towards advanced upper secondary education (Dvořák and Gal, 2022, p. 188). Higher vocational schools started with around 4 000 learners in 1995 and, in the school year 2003/04, reached a total of over 30 000. In 2019/20, participation decreased to slightly less than 18 000 learners (Federičová, 2021). With the increasing availability of university programmes, VOŠ have become less attractive, also due to still unresolved permeability issues between university and non-university programmes (Dvořák and Gal, 2022; Matějů et al., 2009).

In Slovakia, secondary VET traditionally targeted specific professions, resulting in many specialised programmes. This was also supported by strong links between VET schools and companies in the subsegment of secondary VET, providing training for a respective worker profession in contrast to the subsegment that was not directly affiliated to companies and that was aimed at developing vocational skills not precisely linked to a specific profession. With the transformation of the economy after 1989, and the collapse of State-owned companies, the narrow specialisation of VET programmes became problematic (Cedefop, 2020a). This partly explains why VET programmes entitling graduates to apply for higher education have become the main VET track in Slovakia. The VET stream offering a double qualification ⁽⁵⁸⁾ has expanded over time: in 2017, half of those who graduated from upper secondary education did so through VET with *maturita* (49%); around a quarter through general education and slightly less than 15% through VET

⁽⁵⁶⁾ To cover the gap between secondary and tertiary education, and in an effort gradually to create a sector of higher vocational education, higher vocational schools were initially established as a pilot programme in 1992/3 before becoming part of the formal education system in 1995.

⁽⁵⁷⁾ The German Universities of Applied Sciences (*Fachhochschulen*) served as a model for the first VOŠ.

⁽⁵⁸⁾ This refers to school-based 4-year (rarely 5-year) programmes with a focus on VET theory and a lower share of work-based learning, for example, in school labs, workshops and short-term internships (Vantuch et al. 2019).

without *maturita* ⁽⁵⁹⁾ (Vantuch and Jelinkova, 2019). The stream of graduates with a secondary vocational qualification (without *maturita*) designed to facilitate direct entry into the labour market decreased to less than a quarter in 2019/20 compared to 1989/90 (Vantuch and Jelinkova, 2022). Also, despite heavy promotion and the massive fiscal incentives available to enterprises involved in dual VET, the latter is still marginal, comprising slightly more than 5% of the newly enrolled VET learners as of the 2019/20 school year (Vantuch and Jelinkova, 2022, p. 205).

The experiences collected for the Visegrád countries show quite clearly that the expansion of general education content in the curricula, access to higher education, and upgrading in terms of extending programme duration, are, at least in these countries, tried and tested means of making VET more attractive. However, a downgrading of general education within VET programmes and shortening of programmes, as in Hungary, seem to have detrimental effects. This also shows how sensitive the diversification of the structure of VET provision is and how difficult it is to find the balance between social, educational and economic goals.

⁽⁵⁹⁾ This includes: mixed schemes which are 4-year (rarely 5-year) programmes with school-based learning along with in-company training within the framework of traditional school-company agreements; and dual VET combining in-company training and school-based learning, where learners (or their parents) have a contract with enterprises for training, while companies and schools are contracted to deliver the shared provision of VET theory and practice. Dual learners remain students and do not have employee status within contracted companies.

Table 7. **Visegrád group: trends**

Common trends	
<ul style="list-style-type: none"> • Youth population decline and skills shortages leading to a renewed focus on VET • Very high share of VET students in Czechia, Slovakia and medium share in Hungary and Poland • Double qualifications have become the main VET track in upper secondary education • Academic drift within upper secondary VET • Introduction of follow-up courses to IVET programmes preparing learners for a <i>maturita</i> examination • Apprenticeships are provided in the framework of school-based VET • Low participation in adult education as compared to upper secondary education 	
Distinctive features	
Czechia	<ul style="list-style-type: none"> • Decreasing participation in higher VET • Increasing role of local/regional actors: employers and regions
Hungary	<ul style="list-style-type: none"> • Higher share of apprentices as compared to the other Visegrád countries • Centralisation of education policy (including VET) • ‘Downgrading’ of general education within VET programmes not providing access to tertiary education
Poland	<ul style="list-style-type: none"> • Strong academic drift since 1990s, but recently U-turn and renaissance of VET • Increased involvement of employers in VET governance
Slovakia	<ul style="list-style-type: none"> • Decreased participation in VET providing direct entry into the labour market (but without access to HE) • Still marginal participation in apprenticeships

Source: Cedefop.

3.2.3. South-eastern countries

In Bulgaria and Romania, VET is traditionally prevalent as vocationally oriented upper secondary school education, providing an alternative to general education with schools being the main place of learning (Cedefop, 2017d; 2020b).

In both countries, the image of vocational education and training has been an issue: in Bulgaria, parents’ and learners’ lack of awareness of VET prospects reduced interest in it (PwC, 2020). In Romania, the idea of VET delivering low-level qualifications as compared to academic higher education (seen as an elite pathway to skill formation) has long prevailed (Vladut, 2022, p. 318).

Socioeconomic and demographic developments (such as ageing and emigration) have affected VET enrolments. For example, youth unemployment rates in Bulgaria fluctuated over the period 2010–21 with peaks (i.e. above EU-27 average values) between 2011 and 2013, possibly a follow-up effect

of the 2008 economic crisis. In Romania, youth unemployment has remained stable and below the EU-27 average. Currently it is slightly higher than in Bulgaria ⁽⁶⁰⁾ which may be partly due to the stronger decline in Bulgarian youth population ⁽⁶¹⁾. While ageing affects VET enrolments also in Romania, emigration ⁽⁶²⁾ is another important factor contributing to a fall in enrolments in high school, including VET, with parents' emigration sometimes leading to learners dropping out of schools (Vladut, 2022, p. 326).

Between 1995 and 2015, the share of Bulgarian VET learners remained stable although this was partly due to shifts between vocational programmes in 2002 and 2011 (Cedefop, 2018a). In the last 5 years, the overall number of VET learners has been increasing, though the increase in enrolments in VET programmes at EQF level 4 ⁽⁶³⁾ has balanced out the fall in those at EQF level. To make VET more responsive to the needs of the labour market, dual VET has gradually developed since 2014 ⁽⁶⁴⁾ which also relates to increased participation of social partners in skill formation policies (Simeonova-Ganeva, 2022). For example, increased employer involvement is manifested in assessment procedures: the amended Bulgarian VET Act (2016) strengthened employer representation in examination commissions for apprenticeship qualifications. In 2017, Romania revised the methodology for the certification exam for qualifications at EQF level 3 ⁽⁶⁵⁾ by introducing a skills demonstration component (practical examination) to increase the certificate's relevance to the labour market (Cedefop, 2019h).

In recent years, social partner involvement in skill formation in Romania has also increased. In 2016, the dual form of initial VET (apprenticeships) for qualifications at EQF levels 3, 4 and 5 was introduced, which resulted in increasing number of enrolments and reversed the decreasing trend produced partly through the reintroduction of a former type of vocational school in 2012 (Vladut, 2022).

⁽⁶⁰⁾ Eurostat. [YTH_EMPL_100__custom_2166586](#).

⁽⁶¹⁾ In 2021, Bulgaria had the lowest share of young people in the total population (14%) with the EU-27 average being 16%. Eurostat. [YTH_DEMO_020__custom_2165280](#).

⁽⁶²⁾ The Romanian diaspora is the fifth largest in the world (OECD, 2019)

⁽⁶³⁾ In national terminology, these are programmes for third level professional qualification. Similarly, EQF level 3 programmes are known as programmes for the acquisition of a second level professional qualification. **Both programmes** are the main VET tracks in Bulgaria. National Statistical Institute.

⁽⁶⁴⁾ Implementation is still mostly project-based: e.g. after the piloting of dual education through the *Domino* project (2015-19), a follow-up project (2020-23), in cooperation with the EU, is currently **supporting more vocational schools to introduce dual track programmes**,

⁽⁶⁵⁾ These qualifications include 3-year professional programmes with a significant part of work-based learning providing graduates with a professional qualification of a skilled worker.

The introduction of dual tracks (apprenticeships) in both Bulgaria and Romania explains increases in the number of learners in work-based training as well as future expectations regarding the development of work-based elements in curricula. For example, more than 40% of Romanian respondents in the VET provider survey stated that the position of the classroom as the central place of learning has decreased. Most Romanian respondents (80%) anticipate a further increase in elements of work-based learning in curricula in the years to come.

Despite the ongoing vocational drift in both Bulgaria and Romania, general education components have always been integrated into vocational programmes. For example, school-based VET in Bulgaria distinguishes between general subjects and occupation-related content including general as well as specific VET subjects. The latter draws a line between specialised and transversal skills within occupation-related content (Cedefop, 2020a; 2022b, p. 71) This structure of vocational qualifications enables so called double qualifications with possibilities for entry to higher education.

In Romania, VET qualifications are structured into technical general units and technical specialised units, both of which integrate key competences (Cedefop, 2020a). The development of qualifications in terms of their number has been stable over the last two decades and neither a narrowing nor broadening of vocational profiles could be identified (Cedefop, 2022b, p. 48).

The share of VET learners in post-secondary VET has remained marginal in Bulgaria, comprising less than 1% of the overall number of VET learners in the school year 2021/22 ⁽⁶⁶⁾. Also in Romania, enrolments in post-secondary remain relatively small as compared to the large upper secondary sector (Cedefop, 2019h, p. 30).

Adult participation in CVET is low in Bulgaria: in 2015 the share of participants aged 25 to 64 was around a quarter of all employed people against an EU-28 average of approximately 40% (Simeonova-Ganeva, 2022). IVET providers play a large role in the provision of formal CVET to adults, but programmes are not usually tailored to their needs. For example, when adults enrol in regular schools, there is no special programme for them. Providing programmes designed especially for adults is left to the private market (Cedefop, 2023, forthcoming-b), in particular vocational training centres licensed by the National Agency for VET (NAVET). By way

⁽⁶⁶⁾ See [data related to vocational colleges providing fourth level of professional qualification](#) (ISCED 5b/EQF 5).

of contrast, IVET providers in Romania do not play a role in school-based adult learning ⁽⁶⁷⁾. However, they do play a significant role in workplace-based learning through provision of so-called apprenticeship at workplace programmes, which are legally distinct from the dual form offered in official IVET. In practice, however, companies providing apprenticeship at workplace also often provide apprenticeships for IVET programmes (Cedefop, 2019h).

Table 8. **Bulgaria and Romania: trends**

Common trends	
	<ul style="list-style-type: none"> • Declining (youth) population • Traditionally school-based IVET countries with medium share of VET students • The attractiveness of VET is an issue • Recent introduction of apprenticeships and increased work-based elements in curricula • Large upper secondary sector compared to a marginal post-secondary one • Low formal CVET provisions
Distinctive features	
Bulgaria	<ul style="list-style-type: none"> • Increasing involvement of social partners in VET governance following the EU accession and the introduction of apprenticeships • Increasing, but still insufficient, employer involvement in assessment
Romania	<ul style="list-style-type: none"> • High emigration of skilled workers • Introducing skills demonstration component in assessment • Increasing role of IVET providers in apprenticeship provision for adults

Source: Cedefop.

3.2.4. South-central countries

Despite their access to the Mediterranean Sea, we discuss Croatia and Slovenia here as part of the CEE countries and not southern Europe for two reasons: first, because of their common communist past and, second, because their VET systems share more features with, for instance, the Visegrád states or Central Europe than they do with south European countries. However, what Croatia did share with southern Europe was that young people have been hit very hard by the financial crisis, with youth unemployment rates comparable to Greece and Spain.

As in the Visegrád countries, the share of VET learners at upper secondary level has traditionally been high in Slovenia and Croatia, and

⁽⁶⁷⁾ On a school-based level this is provided by authorised private and public training organisations, considering the needs of employers.

the rate of early school leaving low. Like the Visegrád countries, a modest decline in VET in relation to general education can be observed over the last two decades. Practical VET, without direct access to higher education, declined while longer and more theoretical VET programmes with direct access to higher education have grown. In Slovenia, this needs to be seen against the background of the expansion of tertiary education, in particular the expansion of short, practically oriented professional higher education programmes (Cedefop, 2020b, p. 101) ⁽⁶⁸⁾.

The continuing preference for vocational training, which qualifies learners equally for the labour market and higher education, so-called double qualifications (hybrid VET programmes), is most pronounced in Croatia. The idea of the double qualification is underlined in Croatia by the fact that, since 2009, general skills have no longer been part of the final exam for programme completion in IVET. Instead, only vocational skills are assessed ⁽⁶⁹⁾ and VET graduates wishing to pursue higher education need to take the State *matura* exams on general education subjects. Around 90% of learners in 4- and 5-year initial VET programmes take this exam (Cedefop, 2022d). It remains to be seen what long-term effect this will have on the standing of vocational education and training in Croatia. On the one hand, VET increase in value, as many VET graduates qualify for higher education, but on the other hand, it may be devalued, as vocational skills cannot compensate for academic skills: vocational skills seem to be seen as irrelevant for access to higher education.

This is more remarkable as the general trend towards more transversal skills, which according to our survey will also continue in Slovenia and Croatia, concerns both vocational and general skills. For instance, in Slovenia so-called key competences, besides general knowledge such as communication in the Slovene language or communication in a foreign language, also include standards for entrepreneurship, information and communication literacy, health and safety at work, environmental education, social skills, learning to learn, career planning and management (Cedefop,

⁽⁶⁸⁾ The share of tertiary level enrolments accounted for by short-cycle courses (which are defined as programmes that are practically / occupationally based and designed to aid the transition into employment, and professional bachelor degrees) is around 14% in Slovenia, but below 1% in Croatia (Cedefop, 2022c, p. 93).

⁽⁶⁹⁾ For the final practical assessment, learners must prepare a final thesis and defend it. The thesis may be a project, an experiment or practical work, in which case the written elaboration should include an account and description of the practical part and the results (Cedefop, 2022d; Croatian Agency for Vocational Education and Training And Adult Education, 2020).

2022b, p. 70). In contrast to Croatia, the vocational *matura* (*poklicna matura*) in Slovenia integrates general and vocational content ⁽⁷⁰⁾.

In both countries, a trend towards modularisation and individualisation in VET can be observed, made possible by greater curriculum autonomy. In Slovenia, the so-called open curriculum (*odprti kurikulum*) allows IVET providers to determine 20% of the curriculum content in cooperation with companies or regional partners (except for mathematics, Slovenian and one foreign language, where schools must follow 100% of the national framework curricula) (Cedefop, 2022b, p. 40). Our survey results for Slovenia also confirm the trend towards increasing flexibility and individualisation in curriculum choice and suggest that this will continue to increase over the next 10 years. In Slovenia, more than 80% of respondents expect such a development at their VET institution (Cedefop, 2022b).

Similar observations can be made for Croatia where, since 2009, the share of electives can be up to 15% of the total curriculum and has been increased to 30% as of 2018. The idea behind electives and greater curriculum autonomy is essentially to improve the responsiveness of VET providers to the (local) labour market (Cedefop, 2022c, p. 78).

Contrary to overall academic drift within upper secondary VET, in both countries VET policies have been trying to strengthen work-based learning and promote apprenticeships, at least since the financial crisis (Cedefop, 2017a; 2019a). However, apprenticeship numbers are still low.

In Slovenia, the renewed focus on apprenticeships must be seen against the backdrop of changing political orientations and strategies. Pavlin et al. (2022, p. 246) identify three about-turns in the history of Slovenia since independence: first an attempt to develop a collective skill-formation system along the lines of the German-speaking countries, then a more State-led skill-formation system, and finally the current model, which attempts to introduce a collective skill-formations system with neoliberal elements (Pavlin et al., 2022). Major challenges to achieving a collective approach include

⁽⁷⁰⁾ The compulsory part consists of a written and oral exam in mother tongue and theoretical-technical subject (depending on the programme); the elective part of an oral and written exam in either foreign language or maths, and various forms of practical assignment as product, service or project work with a presentation or seminar, where the learners can choose the topic. The written parts of the first and third exams are external and provided by the National Examination Centre (NEC), whereas the second and fourth exams and all oral parts of the exams are carried out and assessed at school level by the school examination boards for the vocational *matura*. For the fourth exam, an employer representative as an external member may be part of the examination board. See Cedefop (2019). *VET in Europe Slovenia*.

increasingly weaker social dialogue, expectations of State interventions that are too high, and the lack of long-term strategic vision within companies (Pavlin et al., 2022, p. 245). However, the authors also find that the skills formation system is becoming increasingly segmented, determined by large differences between sectors. For instance, in the health sector a State-led skill-formation system with elements of collective skill-formation prevails. Equally, in the metal sector, companies tend to ensure stable employment relations for their workers relying on VET schools that provide basic skills which are then deepened by continuous vocational training. In contrast, in the retail and hospitality sectors the expansion of non-standard employment, poor working conditions and low wages have diminished the attractiveness of vocational pathways (Pavlin et al., 2022, p. 262).

The limitations of social dialogue in Croatia (Matković and Buković, 2022), in terms of lack of interest, capacity and ambition of non-State actors, is the major reason for the (not very successful) struggle to develop apprenticeship-based VET that has been going on for two and a half decades. Based on a thorough analysis of the impact of Europeanisation and bilateral policy transfer projects, the authors conclude that, 'despite their ambition, the development of apprenticeships and the introduction of the Croatian qualifications framework (CROQF) ⁽⁷¹⁾, did little more than create additional institutional layers over what is still a predominately statist regime. In the case of apprenticeships, they remain constrained to a sort of corporatist oasis of training for skilled trades occupations – failing to expand into other educational tracks' (Matković and Buković, 2022, p. 287). The continued emphasis on State-funded, school-based VET in Croatia is another example that underlines the strong path-dependency of VET as emphasised in the previous project.

⁽⁷¹⁾ Croatian qualifications framework – CROQF

Table 9. **Croatia and Slovenia: trends**

Common trends	
<ul style="list-style-type: none"> • Ageing population and workforce • High share of school-based VET students • Modest overall academic drift at upper secondary level and within VET: increasing preference for double qualifications / hybrid VET programmes • Policy emphasis on re-establishing and modernising apprenticeships (with moderate success) • Increasing curriculum autonomy and individualisation • Increasing emphasis on transversal skills 	
Distinctive features	
Croatia	<ul style="list-style-type: none"> • Separating VET final exams from general State exams, i.e. further promoting double qualifications
Slovenia	<ul style="list-style-type: none"> • Increasing sectoral segmentation of the VET system

Source: Cedefop.

3.3. Southern Europe

3.3.1. Iberian Peninsula

In contrast to the economic boom experienced by south European countries in preceding decades, Spain and Portugal were hit hard by the financial crisis in 2008, resulting in severe limitations in resources for specific educational programmes ⁽⁷²⁾ as well as increased (youth) unemployment. For example, in 2015, the unemployment rate in Portugal was at about 23% and at almost 37% in Spain. Since then, the situation has improved but the youth unemployment rate for Spain is still more than double the EU average. The youth unemployment rate for Portugal has also been higher than the European average but to a much lower extent. The comparatively high early school leaving rates a decade ago, for both countries, have now decreased ⁽⁷³⁾.

Historically, Spain and Portugal have had lower levels of enrolment in VET at upper secondary level compared to general education, partly linked to the better image of the latter. For instance, in Portugal, in the years before the democratisation in 1974, VET had a negative reputation as it used to

⁽⁷²⁾ For example, the abolition of the new opportunities programme for adults in Portugal in 2021.

⁽⁷³⁾ In 2010, the share of early school leavers was 28% for both countries and by 2021, it had dropped to 6% for Portugal and 13% for Spain with EU-27 being 10%, Eurostat.

be associated with the technical teaching of the dictatorial and corporatist *Estado Novo* regime.

While the number of upper secondary students in general education has remained stable over the years, both countries showed the strongest relative (as compared to other European countries) increase in VET between 1995 and 2015 (Cedefop, 2020b, p. 105).

The overall number of IVET learners in Spain increased by a half within the last decade ⁽⁷⁴⁾ and reached over one million for the first time in 2021/22 (MECD, 2022). Post-secondary VET programmes (*FP grado superior*) have always accounted for most IVET enrolments, currently comprising more than a half of all learners, compared to enrolments in upper secondary VET programmes (40%) (*FP grado medio*) and lower secondary programmes (slightly more than 5%) (*FP grado básico*) (MECD 2022). This reflects a polarised qualification structure with a high share of low- and high-skilled people, but a relatively low share of intermediate-skilled people (25%). Although enrolments in upper secondary VET are now on the rise, the government has set a target to reach a 50% share of intermediate-skilled people by 2025 ⁽⁷⁵⁾.

Due to improvements in quality and programme offer, as well as increased awareness of young people of the advantages of dual education, the number of learners involved has increased by more than a half, reaching more than 35 000 learners in 2021/22, compared to 2012/13 when dual VET was introduced ⁽⁷⁶⁾. However, dual education is still a minority programme in Spain, representing slightly less than 4% of the overall number of VET learners ⁽⁷⁷⁾. This may possibly change in the future with the newly adopted law ⁽⁷⁸⁾ that consolidates vocational training in a single system integrating VET for the education system and VET for employment. The new VET system expands the dual principle, setting two intensity regimes for VET programmes: in the general regime, 25%-35% of the total programme duration is delivered in a

⁽⁷⁴⁾ From school year 2008/09 to 2021/22, author calculation based on Sancha and Gutiérrez (2019, p. 20) and MECD (2022)

⁽⁷⁵⁾ Sancha and Gutiérrez (2019) and also *Ley Orgánica de Ordenación e Integración de la Formación Profesional*.

⁽⁷⁶⁾ Observatorio de la Formación Profesional. *Estudiantes matriculados en FP Dual en España*.

⁽⁷⁷⁾ See footnote ⁽⁷²⁾.

⁽⁷⁸⁾ *Ley Orgánica 3/2022, de 31 de marzo, de ordenación e integración de la Formación Profesional*. [Law 3/2022 Organization and Integration of Vocational Training].

workplace, and in the intensive regime this part is above 35% and learners must enter a training contract ⁽⁷⁹⁾.

General education is still the first choice for learners in Portugal, although enrolments have remained stable throughout the years. A new pattern began to emerge resulting from the 2007 reform of the VET system ⁽⁸⁰⁾ in which upper secondary public schools started providing professional programmes. Since then, the share of young upper secondary learners in IVET programmes has been steadily increasing, reaching around 40% in 2015/16 (Liebowitz et al., 2018, p. 146). The share remained the same for 2019/20, which implies stable developments without major fluctuations over the period between 2015/16 and 2019/20 (DGEEC and DSEE, 2020). Up to now, the school-based sector has been of major importance within VET. In 2019/20, apprenticeships accounted for close to 15% of IVET at upper secondary level (DGEEC and DSEE, 2020), three times more than in Spain.

The 2007 VET reform consolidated the national qualification system and formalised the so-called qualifications with double certification. These consist of separate education and professional certifications comprising general, scientific, technological and work-based learning components: the education certificate, enabling permeability with general programmes since it has the same legal value as any other way of obtaining school certification; and the professional certificate, a steppingstone that can be complemented on the basis of prior learning, or be used for further practical learning (Lindeboom, 2022).

Double qualifications and the emphasis on modular provision of IVET and CVET programmes has allowed second-chance education to focus on specifically those types of learning outcomes that adult learners, for example, are lacking. This is particularly relevant in the Portuguese context characterised by a large share of the workforce without formal qualifications (Lindeboom, 2022). Since 2005, the provision of adult learning has undergone multiple reforms i.e. with the emergence of the new opportunities centres, local secondary schools started to provide training offers to the Portuguese adult population, enlarging the diversity of organisations in this field of training. The centres have been modified under different programmes and with different names. Since 2016 they operate as *Qualifica* centres (*Centros*

⁽⁷⁹⁾ Ley Orgánica 3/2022, de 31 de marzo, de ordenación e integración de la Formación Profesional and Cedefop news (2022). *Spain: VET revolution: setting the pace for a new model for vocational education and training.*

⁽⁸⁰⁾ Decree law No. 396/2007 of 31st December 2007.

Qualifica) providing integrated validation and career guidance services to low-qualified young people and adults (Cedefop, 2019e).

Spain has also opened up its IVET system to adults and, together with Portugal, is the only southern European country where 25- to 34-year-olds have higher than average rates in attaining VET qualifications during adulthood (Cedefop, 2019d). The new VET system in Spain (in place since 2022) may possibly contribute to enlarging and diversifying the VET offer to adults: it establishes unique, modular and flexible VET provision aimed at students and workers (both employed and unemployed) and also regulates the relationship between VET and university education, promoting mutual recognition, such as higher education credits, to facilitate the establishment of training itineraries that recognise previously acquired training in both directions.

Current developments in Spain and Portugal reinforce a previously observed trend: even though in both countries vocational upper secondary education still has lower status compared to general education, progress continues to be made in terms of sheltering graduates from low-skilled jobs and unemployment and ensuring entry to positions in the middle of the social hierarchy (Cedefop, 2018b).

Table 10. **Spain and Portugal: trends**

Common trends	
	<ul style="list-style-type: none"> • High (youth) unemployment rate • Historically high rates of early school leaving • Medium share of VET learners despite strong increase in the overall number of IVET learners • Image of VET is still an issue • Opening up of IVET to adults
Distinctive features	
Portugal	<ul style="list-style-type: none"> • High share of workforce without formal qualification • Introducing double qualifications • Higher than EU average rates in attaining VET qualifications during adulthood • Emphasis on modularised approaches
Spain	<ul style="list-style-type: none"> • Polarised qualification structure: need for more intermediate-level skilled people • Increasing participation in apprenticeships, although it is still marginal • Newly unified VET system bringing together IVET and CVET

Source: Cedefop.

3.3.2. Greece and Cyprus

In both Greece and Cyprus there has been a strong tradition in favour of general secondary education; with families tending to encourage young people to continue studies in higher education. The share of VET learners at upper secondary level, compared to other countries in Europe, has been traditionally very low. Further, VET graduates are less likely to participate in (non-formal) further training, which is a possible further indication of a rather moderate quality of VET.

Adults in formal IVET are rare in both countries (Cedefop, 2019d) and IVET providers do not play a role in delivering CVET. Instead, separate systems are established to serve the (re-)qualification of adults. In Greece for instance, evening vocational lyceums have been established to cater to the needs of adults, including exemption from courses when a learner shows proven competence. In Cyprus, private providers (monitored by the public services) play an important role in offering formal VET qualifications to adults and VET is essentially understood as further education, as in England ⁽⁸¹⁾.

It is not surprising then that, in both countries, most people tend to agree that learners with low grades are directed towards vocational education (Cedefop, 2017b, p. 82). In Greece, fewer people than in other EU countries believe that VET plays an important role in reducing unemployment (Cedefop, 2017b, p. 83). More favourable economic conditions in Cyprus are also reflected in public opinion on VET: in Cyprus, 81% of respondents taking part in Cedefop's public opinion survey agreed with the statement 'vocational education allows you to find a job quickly after obtaining a qualification or diploma', only a little more than half of all respondents in Greece (53%) agreed (Cedefop, 2017b, p. 42).

However, after the global financial crisis of 2008 the employment prospects of VET graduates were considered better than those of tertiary education graduates (Cedefop 2020). Cyprus has seen notable growth of enrolment in IVET, which has to be seen in relation to more favourable demographics. Greece has one of the world's most rapidly ageing populations, and the number of 18- to 24-year-olds between 2000 and 2020 decreased by more

⁽⁸¹⁾ Cyprus was a British colony until 1960, which still affects aspects of life there and is one of the key factors differentiating it from Greece. There are still very strong links to the UK with a remarkable share of students either taking their degrees in the UK or at domestic institutions supported by UK universities.

than 30%; in Cyprus it grew by 18% in the same period (only topped by Luxembourg and Norway) ⁽⁸²⁾.

To improve the attractiveness of VET, Cyprus has begun to diversify its provision. Apart from efforts to improve and expand apprenticeship programmes (Cedefop, 2019b), following curriculum reform in 2016/17, periods of workplace learning have been introduced in upper secondary technical schools. As part of the strategic plan for technical vocational education 2015-20 (*Στρατηγικός Σχεδιασμός Τεχνικής και Επαγγελματικής Εκπαίδευσης*), work placements of 4 weeks' duration (for learners in the practical direction) and 2 weeks duration (for learners in the theoretical direction) were introduced at the end of the first and second year of studies (between the months June and August) (Cedefop, 2022b, p. 61). VET at post-secondary level has been made available from 2012 onwards at the technical schools (Cedefop, 2020b, p. 108). Cyprus is also one of the rare cases in which the number of VET qualifications or programmes has risen in recent years as new fields of study and specialisations have been introduced to increase its attractiveness (Cedefop, 2022b, p. 51). In this sense, the diversification of VET provision in Cyprus can be considered an expansion while in many other countries a consolidation of provision has taken place.

The main IVET route at upper secondary level in Greece is the 3-year EPAL programmes (*Επαγγελματικό Λύκειο*). These programmes have over 25% of work-based learning and graduates can take part in national examinations for admission to tertiary education. A series of reforms has been implemented in these schools, such as modified curricula that address labour market needs for skills and competences, new teaching methodologies, and new criteria assuring the quality of resources and procedures. In 2013, by the Secondary Education Act, an optional final apprenticeship year for learners in EPAL schools was introduced leading to a higher level of qualifications (EQF level 5) ⁽⁸³⁾. In 2021 a **pilot** was started in six schools in different regions of the country, with the aim to transform them, in the medium term, into centres of vocational excellence (CoVEs) (Cedefop, 2021). The programmes

⁽⁸²⁾ This percentage change is expected to decline from 2020 to 2030 in Cyprus while growing slightly in Greece, partly turning around the youth population situation in the two countries (Cedefop, 2022c).

⁽⁸³⁾ Apprenticeship programmes have been offered for a long-time in the framework of EPAS schools, i.e. apprenticeship schools. These programmes were part of upper secondary education and were accessible to those that had completed compulsory education. They lasted 2 years and were delivered 4 days per week at the workplace. EPAS programmes were under the supervision of the Labour Ministry and EPAS qualifications did not lead to higher education.

of the pilot EPALs include general education courses, vocational guidance courses, specialisation courses, and internships in the second and third years of the programme. The increased freedom in the education process, the new teaching methods, and the training for in-service teachers of all specialisations in the pilot EPALs are expected to contribute to strengthening and upgrading VET in Greece.

The 2013 Secondary Education Act (Law 4186/2013 on the Restructuring of Secondary Education and other regulations, *NΟΜΟΣ ΥΠ' ΑΡΙΘ. 4186 Αναδιάρθρωση της Δευτεροβάθμιας Εκπαίδευσης και λοιπές διατάξεις*) also introduced the possibility to offer apprenticeships in post-secondary vocational training schools (IEK). These are 2.5-year programmes including optional internships (e.g. one of the five semesters). In 2015, the workplace component (internship or apprenticeship) became a mandatory part of IEK programmes.

Table 11. **Greece and Cyprus: trends**

Common trends	
<ul style="list-style-type: none"> • Low share of VET students • Still strong preferences for general and higher education but ongoing vocational drift. • Increase in workplace learning 	
Distinctive features	
Greece	<ul style="list-style-type: none"> • Strong decline in youth numbers between 2000 and 2020 • Relatively stable share of VET despite decline in youth numbers • increasing emphasis on workplace learning by introducing 'apprenticeship' periods or internships in upper and post-secondary VET, or making them mandatory • Increasing curriculum autonomy and flexibility
Cyprus	<ul style="list-style-type: none"> • Relatively strong growth of youth numbers between 2000 and 2020, but expected decline between 2020 and 2030 • Diversification of VET provision, but from a relatively moderate base • Increasing emphasis on transversal skills

Source: Cedefop.

3.3.3. Italy and Malta

Given their common colonial past we could have discussed Malta together with Cyprus (Malta was granted independence in 1964). However, due to geographical proximity, intense cross-border cooperation between Italy and Malta, and especially the fact that developments regarding VET in Malta

have little in common with Cyprus, we grouped it with Italy, as in the previous project.

While Malta is among the EU Member States with an increasing population, in 2020 the country showed the lowest increase recorded since 2010 ⁽⁸⁴⁾. This slowdown in population growth mirrors the impact of the COVID-19 pandemic on demographic shifts within the Member States exhibited in 2020 (National Statistics Office, 2021).

After the 2009 recession, real GDP growth in Malta recovered quickly. In contrast to other south European countries, the youth unemployment rate fell, and is currently one of the lowest ⁽⁸⁵⁾. Also, the early school leaving rate reduced steadily by almost a half from 2008 to 2020, from 27% in 2008 to approximately 13% in 2020, though it is still above the EU average ⁽⁸⁶⁾.

VET has become an increasingly popular option for learners after compulsory education ⁽⁸⁷⁾ and rising VET participation has coincided with an overall increase in post-compulsory education participation (NCFHE, 2018). The IVET offer has also been expanding: the Malta College of Arts, Science and Technology, MCAST, – the country’s leading VET institution ⁽⁸⁸⁾ – launched 17 new programmes in both 2014/15 and in 2016/17, and 24 in 2018/19 (Camilleri, 2019, p. 25).

Enrolments in post-secondary VET in Malta (similar to the case of Spain) play quite an important role compared to the overall share of VET. For instance, during the academic year 2019/20, the total number of post-secondary learners was 9 600, with slightly more than half of them choosing VET programmes (Ellsworth, 2000; NSO, 2021). Since 2014, apprenticeships ⁽⁸⁹⁾ have further expanded to new sectors and participation has increased,

⁽⁸⁴⁾ The population grew by only 1 500 persons, compared to 21 000 in 2019; the increase was mainly due to net migration.

⁽⁸⁵⁾ From 10% in 2010 to 7% in 2020, Eurostat. [YTH_EMPL_100__custom_2166586](#).

⁽⁸⁶⁾ Eurostat. [EDAT_LFSE_14__custom_2167149](#).

⁽⁸⁷⁾ All compulsory students aged 14 to 16 have the option to select two VET subjects. VET at post-compulsory level (for students over 16) is provided at lower, upper and post-secondary (non-tertiary) level.

⁽⁸⁸⁾ MCAST is State-run and provides courses from Introductory Level A up to EQF level 8. This includes apprenticeship at EQF level 3 and 4 as well as professional doctorate programmes.

⁽⁸⁹⁾ MCAST took over administration of apprenticeships from the public employment service in 2014. The enactment of the Work-based Learning and Apprenticeship Act, which came into force in 2018, further consolidated the 2014 reform in apprenticeship and work-based learning characterised by merging off-the-job education and on-the-job learning in a single apprenticeship scheme and strengthening the role of employers in assessment.

reaching close to 900 in 2018 ⁽⁹⁰⁾. In addition, the *MyJourney* secondary school reform (2019/20) allowed learners to take at least one vocational or applied subject at lower-secondary level alongside their compulsory lessons. This option was taken up by roughly 70% of learners in State schools in 2019/20 which may lead to a higher VET take-up in the coming years and possibly help Malta to reduce the early school leaving rate ⁽⁹¹⁾. Recently, the government has also launched the COVID-19 Apprenticeship Recovery Scheme investing EUR 2.75 million to be disbursed by the end of 2022, for learners to be given apprenticeship opportunities ⁽⁹²⁾.

VET modernisation in Malta is also visible by the introduction of a master degree in vocational education applied research (3-year programme at EQF level 7) in 2019, which is seen as ‘a shift from traditional education programmes to innovative practices, linking teaching and action research within the context of vocational, further and higher education’ ⁽⁹³⁾. The number of part-time VET master programmes offered by MCAST has been increasing in the period between 2016/17 and 2019 ⁽⁹⁴⁾ which may be related to the high popularity of post-secondary VET in the country, but also may be an indication of vocational drift at higher levels.

The role of VET in addressing the needs of adult learners is widely acknowledged in Malta: ‘the offer of part-time VET programmes targeting employed adults in need of upskilling is widening, publicly provided lifelong learning opportunities are being promoted, and possibilities for validating non-formal and informal learning are expanding’ (Camilleri 2019, p. 16). The Ministry of Education and Employment is the main provider of part-time adult learning courses followed by State VET providers (MCAST, Institute of Tourism Studies, ITS) as well as private organisations, including NGOs. Similarly, to other Member States, the pandemic slowed progress in participation in adult learning. The transition to online courses could not compensate for the fall in

⁽⁹⁰⁾ For example, 72% of advanced diploma courses at MQF/EQF level 4 were on apprenticeship, compared to around 36% of diploma courses at MQF/EQF level 3 (Camilleri 2019, p. 28).

⁽⁹¹⁾ European Commission (2021). *Education and training monitor 2021: Malta*.

⁽⁹²⁾ Industry partners, including companies and self-employed persons who retained apprentices on their books and had a valid contract on 15 June 2021, will receive EUR 500 per contract by end of this calendar year, depending on date of termination of contract. Those engaging in new contracts entered until 30th June 2022, will be funded EUR 1 000 per student, by December 2022, being the date of end of the scheme. *Malta apprenticeship recovery plan*.

⁽⁹³⁾ *Master in Vocational Education Applied Research 4.0*

⁽⁹⁴⁾ Cedefop (2021). *Vocational education and training in Europe: Malta*.

traditional training: for the first time since 2010, participation in adult learning dropped to 11% in 2020 (EU-27, 9%) ⁽⁹⁵⁾.

The Italian economy was by far the fourth largest in the Eurozone in 2021 ⁽⁹⁶⁾. The country has been facing economic and demographic developments similar to most other southern Europe countries: despite the presence of a younger foreign-born population with higher than average fertility rates, the ageing of the national population has continued to increase. Italy ranked third among the EU countries with the highest youth unemployment rate in 2021 and was fourth in 2014 when the unemployment rate of those aged 15 to 29 reached the peak of the decade (more than 30%) as a consequence of the sovereign debt crisis. Slow improvement in the Italian economy up to 2019 stimulated progressive growth in youth employment and a complementary decline in unemployment. A significant recovery occurred in 2021, after the 2020 downturn due to the COVID-19 pandemic: the youth unemployment rate (15 to 29) recorded 22% and the employment rate 31%; a higher share of NEETs (23% in 2021 against 22% in 2019) was the lasting effect of the pandemic ⁽⁹⁷⁾.

In terms of VET, Italy clearly differs from the other southern Europe countries: overall participation in IVET at upper secondary level has been exceeding participation in general education ⁽⁹⁸⁾. The country also scores highly compared with the EU average for participation in IVET; in 2020, the share of IVET learners was more than 50% while the EU average was slightly below ⁽⁹⁹⁾.

There are strong distinctions between national and regional IVET provision in Italy, mirrored in changes in IVET enrolments over the years. For instance, although the overall share of IVET learners has remained higher than that in upper secondary general education, the share of general education students increased by roughly 20% in the period 1995/96 to 2020/21, reaching a

⁽⁹⁵⁾ European Commission (2021). *Education and training monitor: Italy*.

⁽⁹⁶⁾ GDP of over EUR 1.7 trillion. Eurostat, Gross domestic product at market prices [TEC00001]. When looking at average figures in Italy, the north-south divide has always to be considered.

⁽⁹⁷⁾ Eurostat. (unemployment) YTH_EMPL_100. (employment) YTH_EMPL_010; (NEETS) EDAT_LFSE_20. <https://ec.europa.eu/eurostat/web/youth/data/database>

⁽⁹⁸⁾ The Italian upper secondary level is divided into national 5-year programmes (which include the last 2 years of compulsory education) in general schools, technical schools and vocational schools, and regional vocational training courses lasting for 3 or 4 years. At post-secondary, non-university level, there is a network of higher technical institutes (ITs) founded in 2010. These are highly specialised technological schools that offer students attractive technical skills for the labour market.

⁽⁹⁹⁾ Source: Eurostat, EDUC_UOE

total of 1.3 million enrolments in 2021/20. For the same period, the overall number of VET learners in State technical and vocational 5-year programmes (constituting the main VET tracks) dropped by 35% and by 7% respectively from 1995/96 (Vergani, 2021). By way of contrast, regional IVET provision (*leFP -Istruzione e Formazione Professionale*) has gained, increasing prominence in the formal education system i.e. enrolments increased by almost a half compared to 1995/96 (Vergani, 2021). Observed positive developments may be related to several reforms since 1997 aimed at formal inclusion of regional IVET into the upper secondary national education and training system. ‘Over time there is evidence of the introduction of learning outcomes; increasing the length of upper secondary provision to 3 or 4 years (previously it was 2); progressive increase in the hours dedicated to workplace experiences, along with a corresponding reduction in hours related to profession-related theoretical content and practical training in workshops ⁽¹⁰⁰⁾; increasing the amount of learning time given over to general and transversal skills; accreditation of regional IVET providers; and attempts to develop IVET at higher levels’ (Cedefop, 2022c).

Apprenticeships in Italy are available at all levels and programmes, both national and regional; in 2020 emphasis was placed on simplifying the implementation of apprenticeships that form part of compulsory education. Several meetings of the National Technical Committee were held, and an ad hoc working group bringing together all stakeholders, was set up (Education and training Monitor, 2021).

Adults in Italy generally have limited opportunities to obtain a VET qualification. Adult education is mainly delivered by provincial centres for adult education (*CPIA*) which are housed within secondary State schools and provide evening courses in basic skills training, e.g. on digital skills and languages. The role of secondary schools in CVET is almost non-existent besides the upper secondary technical schools (*Istituti Tecnici*). The latter suffer from a rather negative image since they are perceived as schools for learners at risk of dropping-out, which explains the low number of graduates (Cedefop, 2023, forthcoming-b, p. 73).

⁽¹⁰⁰⁾ This has led to a development where workplaces are no longer considered as a place to practice abilities developed during class (as it had traditionally been) but rather as places to develop specific skills or competences no longer taught in training institutions (Cedefop, 2022b, p. 63).

Table 12. **Italy and Malta: trends**

Common trends	
<ul style="list-style-type: none"> • Increased migration inflow, in particular from non-EU countries 	
Distinctive features	
Italy	<ul style="list-style-type: none"> • Aging population, high youth unemployment, high share of NEETs, considerable north-south economic divide • Medium share of VET students • Growing participation in regional VET programmes and decreasing participation in national IVET provision
Malta	<ul style="list-style-type: none"> • Growing population and low youth unemployment • Above EU-27 average early school leaving rate • Increasing participation in post-secondary VET • Further expansion of apprenticeships • Expanding part-time CVET offer to adults

Source: Cedefop.

3.4. Western Europe

3.4.1. Germany and Austria

Looking at recent developments that have a significant influence on VET, such as demographics, employment and unemployment trends, the starting points in Germany and Austria are very similar. In both countries the size of the population has been increasing ⁽¹⁰¹⁾ mainly due to positive net migration, with the increase expected to continue in the years to come. As with other EU countries, the population is aging ⁽¹⁰²⁾. In the period between 2010 and 2021, youth unemployment (15-29 years) in both Member States was below 10% and below the EU average ⁽¹⁰³⁾.

Generally, low youth unemployment in Austria is attributed to the wide range of VET programmes offered at upper secondary level and the specific mix of the dual and school-based VET system (Cedefop and ibw Austria,

⁽¹⁰¹⁾ In 2022, the population in Austria was 8.9 million and in Germany, roughly nine times more at 83.2 million.

⁽¹⁰²⁾ In 2020, 19% of the Austrian and 22% of the German population was aged 65+ and by 2070 it will reach over 29% and 28% respectively (Cedefop and BIBB, 2022; Cedefop and ibw Austria, 2022).

⁽¹⁰³⁾ Eurostat. YTH_EMPL_100_custom_2166586.

2022). In Germany, the dual system (apprenticeship) as the main pillar of VET also enables smooth education-to-work transitions (Cedefop and BIBB, 2022). Low youth unemployment rates correlate with relatively high employment rates among 20- to 34-year-old VET graduates with medium-level vocational qualifications. In both countries the employment rate was above 80% over the last few years (Cedefop and BIBB, 2022; Cedefop and ibw Austria, 2022). The COVID-19 pandemic has had a negative impact on youth unemployment, though positive signals have already been noted ⁽¹⁰⁴⁾.

Beyond common demographic and economic factors, historically, Germany and Austria (and also Switzerland) have had similar developments in terms of VET: the apprenticeship systems were fully incorporated into their respective education systems by the end of the 1960s; in the 1980s apprenticeships had very high levels of enrolment compared to general education and school-based VET; and the number and content of occupational profiles and VET governance features such as the involvement of social partners show many similarities (Cedefop, 2020b). However, notwithstanding these common historical developments and common current challenges such as globalisation, Europeanisation or the trend towards higher education, both the overall VET systems of German-speaking countries and their dual systems seem to have drifted apart since the 1980s (Cedefop, 2020b, p. 120).

Between 2010 and 2020, around two thirds of all upper secondary school learners in Austria were enrolled in vocational programmes ⁽¹⁰⁵⁾, with a strong trend towards school-based VET observed; as early as 2000 there were almost as many learners enrolled in school-based VET as in apprenticeships and, since 2010, school-based VET in Austria has begun to outperform dual VET in terms of learner numbers (Cedefop, 2020b, p. 117) ⁽¹⁰⁶⁾. The increasing attractiveness of school-based VET may be partly explained by better opportunities for progression to higher education (e.g. through the acquisition of a double qualification in 5-year VET programmes). At the

⁽¹⁰⁴⁾ At the beginning of the COVID-19 crisis, the unemployment rate of those aged under 25 in Austria, rose briefly to 13% (April 2020) and was, at that time, even higher than that of the other age groups. By July 2020, there had already been a marked recovery: the unemployment rate for those under 25 was 8% and by September 2021, it was already below the pre-crisis level (6%) (Dornmayr, 2021, p. 3).

⁽¹⁰⁵⁾ Eurostat. [EDUC_UOE_ENRS04](#).

⁽¹⁰⁶⁾ For instance, in 2018/19, learners in school-based VET accounted for 39% of the overall number of learners at upper secondary level, followed by 37% for apprenticeship programmes and 24% for general education programmes (Cedefop and ibw Austria, 2022; Statistik Austria, 2021).

same time, there are challenges related to securing company placements for apprentices due to structural changes in the economy, such as the decline of manufacturing and potentially also a reduced willingness of companies to train.

Since the 1990s apprenticeship graduates in Austria have been provided with different progression routes ⁽¹⁰⁷⁾ to higher education, but despite this, their overall progression rate is still relatively low. For example, in the school year 2020/21, the proportion of newcomers to apprenticeship training with a university entrance qualification (*Lehre mit Matura*) accounted for roughly 6% of all apprentices (Dornmayr and Nowak, 2021). The COVID-19 crisis has also had an impact on the Austrian apprenticeship training sector, with a considerable decline in the number of apprentices in the first year of apprenticeship ⁽¹⁰⁸⁾. The supra-company training (*Überbetriebliche Berufsausbildung*) targets young people who do not find a company-based apprenticeship placement or have not been accepted by a VET school. The training is funded publicly through the public employment service and the school-based part of it is provided at regular vocational schools. The practical training components are delivered by the accredited training provider (known also as training company (*Lehrbetrieb*)), which assumes the role of a company.

In Austria, formal adult education is provided by schools and universities: schools for working people, evening academic secondary schools (*Abendgymnasien*) and postgraduate offers of universities. IVET providers play a significant role in delivering apprenticeships to adults. Non-formal vocational education is predominantly provided by two major networks of organisations, one belonging to the Chamber of Commerce (*Wirtschaftskammer*), one belonging to the Chamber of Labour (*Arbeitskammer*) (Cedefop, 2023, forthcoming-b).

In the period between 1995 and 2020, there was a steady decline in enrolments in German IVET, from more than two thirds to half of all

⁽¹⁰⁷⁾ Vocational university entrance qualification (*Berufsreifeprüfung, BRP*) was introduced in 1997 giving VET graduates unrestricted access to universities, colleges, universities of applied sciences, academies and colleges. Since 2008 apprentices have the possibility to complete a free-of charge university entrance qualification parallel to the apprenticeship training thus enabling general university entrance (*Lehre mit Matura*).

⁽¹⁰⁸⁾ For example, especially for 2020, the difference of almost 3 000 apprentices in companies between September 2020 and September 2019 is seen as problematic, even though this decline was partly compensated for by an intensification of the so-called supra-company apprenticeship training (*Überbetriebliche Ausbildung*) (Dornmayr, 2021, p. 1)

enrolments ⁽¹⁰⁹⁾ (Cedefop, 2023, forthcoming-b; Cedefop and BIBB, 2022). This academic drift at upper secondary level has been exacerbated by IVET graduates progressing to higher education, which effectively redefines the function of IVET: ‘instead of being exclusively a qualification pathway in its own right, IVET is transformed into a multi-purpose learning opportunity that continues to equip young people with knowledge, skills and competences for a specific occupation but may also serve as a means of preparing them for academic studies’ (Wittig, 2021, p. 2). This ‘opening-up of IVET’ has been accompanied by a diversification of VET offers, for instance through the establishment of 2-year VET programmes with the option of adding another 1.5 years of training. The introduction of partial qualifications as well as the increasing availability of dual study courses at higher level (EQF levels 6 and 7) also help, albeit that the latter still play a marginal role within the system of higher education (Wittig, 2021, p. 12) ⁽¹¹⁰⁾. Further, IVET has been increasingly considered as an alternative option to tertiary education by high-school graduates. Most apprentices hold either the intermediate secondary school leaving certificate (*mittlerer Schulabschluss*) or the lower secondary school leaving certificate (*Hauptschulabschluss*), but the share of apprentices with a higher education entrance qualification (*Abitur*) has been rising: in 2019, almost one in three apprentices (29%) was a high-school graduate (Cedefop and BIBB, 2022). This contributes to the more mixed age structure of German VET learners compared to Austria, where more than 60% of VET learners are younger than 19 years. In some German occupational fields, it is almost only adults who have completed academic general upper secondary education in their adolescence who are accepted. As a result, slightly more than 40% of all apprentices are older than 20 years (Cedefop, 2023, forthcoming-b, p. 39; p. 76).

In comparison to the Austrian supra-company training, which has been established as a separate apprenticeship scheme, young adults in Germany perceived as unfit for entering a regular apprenticeship or simply not able to find a proper place with an employer are channelled to a so-called transition system (*Übergangssystem*) (BIBB, 2022), which is not considered as part of VET. Despite the existence of this transition system, the proportion of young adults dropping out of their programmes (including apprenticeships) or failing to pass their final examinations is very high, with little change in

⁽¹⁰⁹⁾ Eurostat. [EDUC_UOE_ENRS04](#).

⁽¹¹⁰⁾ Number of dual study courses increased from over 500 in 2004 to approximately 1 700 in 2019. Number of learners rose from slightly below 41 000 to more than 108 000 over the same period.

the proportion of early school leavers over time (18- to 24-year-olds, 10% in 2019) (Cedefop, 2023, forthcoming-b).

Despite the dynamics of supply and demand of apprenticeship places, VET systems in Germany and Austria are characterised by a high degree of stability compared to other countries (Cedefop, 2022b, p. 35ff). This applies not only to the governance structure but also, to some extent, to curricula. Analysis of an ongoing BIBB project ⁽¹¹¹⁾ on the modernisation of the 324 training occupations since the 1930s shows, for example, that the training ordinances are generally valid for those aged 16 to 24 years. Comparable figures for Austria are not available.

In both countries, the number of apprenticeship occupations has decreased slightly, but there has been no complete overhaul of the system or deliberate restructuring of apprenticeship occupations. The same could be said for school-based VET tracks in Austria. The workload in terms of teaching hours across broad curriculum categories has only changed marginally for higher VET colleges in 20 years, and differences between vocational fields do not show a uniform picture. For instance, the share of general education subjects in higher VET colleges for mechanical engineering increased by four percentage points between 1994 (37%) and 2014 (41%), while it declined by three percentage points in higher VET colleges for business administration in the same period (from 53% to 50%).

Due to the introduction of compulsory work placements in schools for business administration (with the 2014 curriculum) the share of workplace learning increased from zero to 4%, while it has remained around 4% for mechanical engineering (see details Cedefop, 2022b, Box 11). For apprenticeship training in Austria such comparisons across time are not available. However, just to illustrate the difference with respect to higher VET colleges, the share of hours devoted to general subjects (taught in VET schools) for apprenticeship training is around 5% while the share of learning at the workplace is around 75-80% (compare Cedefop, 2022b, Table 7).

The so-called learning field (*Lernfeld*) approach, according to which syllabi for the school-based element of dual VET have been structured in Germany since 1996, make comparisons between general and vocational or practical and theoretical content difficult. Learning fields are derived from

⁽¹¹¹⁾ Bibb (2022). *Systematic observation of the change in competence requirements for the structuring of initial and advanced training occupations* (referred to in abbreviated form as Monitoring).

vocational fields of activity, which should eliminate the traditional separation of subjects.

Against this background, it is difficult to say whether curriculum changes in VET in Austria and Germany promote academic or vocational drift. Given that the learning fields emphasise the concept of work process knowledge, their introduction may be interpreted as a reaffirmation of the distinctive character of VET.

There is a set of regulated (therefore formal) qualifications known as upgrading CVET programmes (*Aufstiegsfortbildungen*) in Germany. These are advanced vocational qualifications at EQF levels 5 to 7 that can be acquired based on a specific vocational qualification and relevant professional experience ⁽¹¹²⁾. While admission to level 7 qualifications requires level 6 qualifications, level 6 qualifications do not require level 5 qualifications, which can be acquired directly after IVET in the dual system and mostly work experience is necessary (master craftsperson, technician or specialist qualifications). For example, graduates of the apprenticeship system rely on these types of formal CVET for their career advancement. Participation in upgrading CVET programmes has been declining which reduces the attractiveness of the (initial) ‘dual system’ as a reliable ladder for supporting careers (Cedefop, 2023, forthcoming-b, p. 92). Recent reforms ⁽¹¹³⁾ aimed at increasing participation include the provision of more public shared funding for individual ‘upgrading’ CVET costs (Cedefop and BIBB, 2022). In addition, as part of an amendment to the Vocational Training Act (*Berufsbildungsgesetz*) in 2020, new designations for the qualifications were introduced: certified professional specialist (EQF level 5), bachelor professional (EQF level 6) or master professional (EQF level 7). Upgrading CVET (*Aufstiegsfortbildung*) was renamed as part of higher VET (*höherqualifizierende Berufsbildung*) making the equivalence of VET and higher education more visible and IVET more attractive for both the young and adults (including migrants and refugees) (Cedefop, 2023, forthcoming-b; Cedefop and BIBB, 2022).

⁽¹¹²⁾ At EQF level 6, qualifications entitle graduates to exercise a trade, to hire and train apprentices, and to enrol in academic bachelor programmes. These qualifications support the acquisition of middle and top management positions in companies.

⁽¹¹³⁾ The regulatory framework – Upgrading Training Assistance Act (*Aufstiegsfortbildungsförderungsgesetz*), was amended in 2019.

Table 13. **Austria and Germany: trends**

Common trends	
<ul style="list-style-type: none"> • Increasing but aging population • Low youth unemployment rate • High employment rate of VET graduates • Distinct stability of the VET systems and structure of training occupations • Modest changes in VET curricula • Introducing progression routes from apprenticeships to HE, but still low overall progression rate (from apprenticeship to HE) 	
Distinctive features	
Austria	<ul style="list-style-type: none"> • High share of VET students • Increasing attractiveness of school-based VET • Introducing separate apprenticeship scheme as an ALMP
Germany	<ul style="list-style-type: none"> • Medium share of VET students, predominantly apprentices • Increasing variation of dual study courses and diversification of higher VET • Increasing share of apprentices with a higher education entrance

Source: Cedefop.

3.4.2. Benelux and France

The Benelux countries – Belgium, Netherlands, and Luxembourg – all have relatively high shares of VET enrolment at upper secondary level, between 56% and 68%. While VET systems in Belgium and Luxembourg are predominantly school-based, the Dutch VET system has more of a mix between school-based and work-based tracks in place (Markowitsch and Hefler, 2019). France can be considered more of a general education type of country, with a significantly lower share of VET enrolment of around 40%.

At the same time, the shares of IVET students have shown a declining tendency over the past years for all countries of the group except Luxembourg. Results from Cedefop’s opinion survey point to an attractiveness issue for VET in the four countries: all belong to the group of countries where respondents are least likely to hold positive views about vocational training.

Demographically, the Benelux countries experienced growth in the population aged 18 to 24 between 2000 and 2020; the development was most pronounced for Luxembourg which experienced a 51% growth rate. In terms of projected growth rates for the period to 2030, Belgium and Luxembourg are expected to experience small rates but still experience growth (as does France). The Netherlands, in contrast, is expected to experience a 6% decline in the population aged 18 to 24.

Despite an increase in the number of those aged 18 to 24 over the past two decades (and a further projected increase projected for the period 2020 to 2030), the share of vocational education enrolments at upper secondary level in Belgium has been falling, which suggests a relatively weak position for VET. Yet large differences among the regions and language communities – with three different VET systems ⁽¹¹⁴⁾ – make it difficult to draw general conclusions regarding the overall development of VET.

The Belgian system is characterised by multilingualism (a characteristic shared with Luxembourg) and many actors in the VET system, considering the three regions (Flanders, Brussels, and Wallonia) and the three communities (Flemish-, French- and German-speaking), which overlap but do not coincide (Cedefop and Bruxelles Formation, 2022).

Over recent years, there has been an expansion of apprenticeship, sometimes intended as a direct measure to mitigate high youth unemployment rates, which remain an issue in the country. Apprenticeship schemes have been adapted or reformed. Overall, however, the share of work-based learners in upper secondary IVET remains modest at 6%.

The German-speaking Community has experienced expansion in apprenticeship programmes, which have a long tradition, to higher levels of education. In French-speaking Belgium, meanwhile, apprenticeship training at upper secondary level used to be provided through two distinct schemes: one governed by the French-speaking Community, and the other by the Wallonia Region and the French Community Commission for Brussels. In 2015, reform was initiated with a view to harmonising the rules governing the two sub-schemes. Since 2016, dual programmes have also been offered at bachelor and master level (Cedefop, 2019f; Cedefop and Bruxelles Formation, 2022).

In 2019, a new apprenticeship pathway called ‘dual learning’ was introduced in the Flemish Community, which will eventually replace the existing apprenticeship scheme.

Participation in lifelong learning remains comparatively low in the country. This applies especially to the region of Wallonia (6.6% in 2019).

The Netherlands is characterised by a high (though slightly declining) percentage of IVET students along with a medium-level share of work-based students, classifying it as a mixed system (cf. Austria). This is complemented by an overall high level of participation of adults in lifelong learning. The

⁽¹¹⁴⁾ Flemish (BE-FL), French-speaking (BE-FR) and German-speaking (BE-DE).

country can be described as an example of relative policy stability. While the period between 2000 and 2020 saw some important reforms, the direction defined in the early and mid-1990s, especially the Vocational Education Act (*Wet educatie en beroepsonderwijs, WEB*), is still largely in evidence today.

Stimulated by the introduction of the Vocational Education Act in 1996 and related preparatory policy actions, hundreds of vocational training centres were merged to form the present regional training centres (*Regionale Opleidings Centra, ROC*), complemented by the introduction of a coherent national qualification structure for all vocational education courses, and the consolidation of school-based and work-based VET tracks. At the same time, VET providers were equipped with a significant level of autonomy to organise their VET programmes. Through this reform, VET became integrated into one system, providing VET for young people and adults. From the perspective of apprenticeship training, the reform represented a move away from the labour market with more emphasis on general education and transversal competences. From the perspective of school-based VET, it led to increased labour market orientation (e.g. through increased workplace training). The strict and clear separation between general education and IVET at upper secondary level prevails, so the two decades after the introduction of the VET Act can be described as more of a linear process, with the system and its institutions growing in maturity and learning from its failures (Broek, 2022).

The number of VET qualifications has declined over time, the result of a process during 2010 to 2015 to rationalise the offer and bring qualifications that are similar together, offering VET learners a broader basis. Increased flexibility and individualisation have been achieved through offering elective modules (*keuzedelen*)⁽¹¹⁵⁾ and, more recently introduced, by so-called cross-over qualifications (*cross-over kwalificaties*). VET institutions can develop and deliver cross-over qualifications as part of a pilot programme that runs between 2017 and 2025, combining existing qualifications from two or more different sectors. Currently, there are 151 cross-over qualifications⁽¹¹⁶⁾.

As a result of this flexibility, it is difficult to measure the extent to which the balance between vocational and more general education has changed over time. The elective modules show a clear emphasis on transversal

⁽¹¹⁵⁾ These are small, unitised qualification files that are not prescribed by the qualification but can be selected freely by the learner. These optional parts allow students to broaden or deepen skills to strengthen students' sectoral labour market positions within a region, and/or enable students to enter higher vocational education.

⁽¹¹⁶⁾ *Cross-over kwalificaties: as of October 2022* [cross-over qualifications].

skills such as innovative thinking, foreign languages and entrepreneurship, although they are not formally included in national qualification files (*kwalificatiedossier*)⁽¹¹⁷⁾. In 2021, more than 1000 elective modules were available.

At higher level VET, the Associate Degree, provided by universities of applied sciences, was piloted in 2006 and formally became part of the higher education system in 2013. The objective behind its introduction was to facilitate the transition from VET to higher education, filling a qualification gap between upper secondary and higher levels. Associate degrees have become increasingly embedded within the education system during the past decade, with increasing numbers of programmes offered and rising student numbers.

In recent years, measures have been taken to provide VET institutions (ROCs) with wider opportunities to cater for adult learners. Future plans for the Dutch VET system envisage further development of the VET providers (ROCs) into regional centres for innovation and VET (*regionale centra voor innovatie en beroepsonderwijs: CIB*) (Ministerie van Onderwijs, Cultuur en Wetenschap, 2020a). These centres combine lower-secondary VET, upper secondary VET, and universities of applied sciences, and bring them together with local employers, governments and healthcare institutions with the aim of ensuring collective responsibility for the economic and the social function of VET (Broek, 2022).

With a population of only 645 000 (and a foreign population of 47%)⁽¹¹⁸⁾, Luxembourg possesses a highly differentiated and complex VET system, with a high share of VET enrolment at upper secondary level (62%)⁽¹¹⁹⁾. The skill formation system mixes elements from its two biggest neighbours, France and Germany, and the country compensates for its smallness through extensive cross-border collaboration with neighbouring regions in Belgium, Germany and France, including the provision of cross-border training (Graf and Tröhler, 2017). Multilingualism is one of the country's strengths, and at

⁽¹¹⁷⁾ A qualification file (*kwalificatiedossier*) provides an overview of the qualification standards for one or more VET occupations; it describes the core tasks and work processes (*kerntaken en werkprocessen*) that individuals starting out in their professional field need to be able to master. Following the standard structure of the qualification files, they consist of a basic part (core tasks and work processes) and a profile-part, specifying core tasks and work processes specific to the qualifications separately. Each qualification file can include more than one qualification.

⁽¹¹⁸⁾ [Luxembourg population demographics](#).

⁽¹¹⁹⁾ Note that this includes technical general programmes (*diplôme d'enseignement secondaire general*) which are not regarded as IVET programmes but general education in the national context (Cedefop, 2020).

the same time a challenge for education and training. Learners' performance at school is significantly influenced by their ability to cope with the trilingual system. As a result, grade repetition is widely used, and is particularly frequent in vocational secondary education (European Commission, 2017a).

In 2008, significant reform of the vocational education and training system was initiated. Key features were an increased focus on competences and work processes (instead of subjects and disciplines), and on providing a more modular structure to the training and a more systematic combination of on-the-job and school-based learning phases (Graf and Tröhler, 2015; INFPC, 2016). Parts of the reform have been revised several times since, because it did not help mitigate some of the key challenges, e.g. to reduce dropout rates and high shares of grade repetition (Graf and Tröhler, 2017). The most recent amendment took place in 2019 ⁽¹²⁰⁾.

Over the past decade, enrolment in technical programmes (school-based, providing access to higher education, EQF 4) has increased, while enrolment in vocational programmes at a lower level (DAP and CCP, EQF 3 and 2) has decreased (Cedefop and NFPC, 2019).

Several recent initiatives seek to facilitate the transition between pathways. For instance, in 2020, Diplom+ training was introduced. This targets graduates from secondary education and offers them the opportunity to follow a modular programme over two semesters that will help them prepare for employment or higher studies, focusing on developing their transversal skills and competences ⁽¹²¹⁾. In 2019, plans for the launch of a new hybrid programme (*double diplôme*) were presented. It would combine a vocational aptitude diploma (*diplôme d'aptitude professionnelle*, DAP, EQF 3) with an upper secondary technical diploma (*diplôme de fin d'études secondaires générales*, DFESG, EQF 4) in the same occupational domain (Cedefop, 2020a) ⁽¹²²⁾.

A national school for adults (*Ecole Nationale pour adultes*, ENAD) was set up in 2011 to support young adults and those who have dropped out of school to obtain a qualification at secondary level. The participation of adults generally in lifelong learning is above the EU average.

⁽¹²⁰⁾ Cedefop news: Luxembourg updated labour code and law reforming vocational training. The 2019 amendment brought an extension of training duration for IVET: the duration may be extended by 1 year if needed by the learners.

⁽¹²¹⁾ MENJE (2020). *Diplom+ – Une nouvelle formation après le lycée pour se préparer à la vie active ou aux études supérieures*. Dossier de Presse.

⁽¹²²⁾ MENJE (2019). *Formation professionnelle: un engagement pour la qualité*. Dossier de Presse.

Vocational programmes at upper secondary level in France lead to a professional skills certificate (EQF level 3, *Certificate d'aptitude professionnelle*, CAP) or a vocational baccalaureate (EQF level 4) and can be completed either through a school-based or an apprenticeship pathway. With the latter, the training is carried out in an apprenticeship training centre (*Centre de formation des apprentis*, CFA).

The competition between the school-based and apprenticeship pathways is quite strong. While apprenticeships have expanded in recent years, the school-based VET system has increasingly come under pressure, partly due to poor labour market insertion rates in several fields.

In 2018, VET system reform was launched, which led to changes in governance and funding mechanisms and apprenticeship provision, with a view to improving its attractiveness and responsiveness to the labour market ⁽¹²³⁾.

The sharp increase in apprenticeship contracts recorded both in 2021 and 2020 is linked to the measures introduced through the reform, particularly increased opportunities for companies to offer apprenticeships, simplified administrative procedures and the installation of a coordinating body (*France Compétences*). The main novelty of the apprenticeship system is the liberalisation of the market for providing apprenticeship education: an employer can more easily create its own apprenticeship training centre (Cedefop, 2022e; Cedefop et al., 2022) ⁽¹²⁴⁾.

The 2018 reform also included an overhaul of the curricula for the professional skills certificate (*certificat d'aptitude professionnelle*, CAP, EQF level 3) and the vocational baccalaureate, to link them more closely to vocational specialities. It also introduced joint intervention classes which integrate vocational and general education provision where, for instance, a cooking class may be delivered jointly with a maths teacher ⁽¹²⁵⁾. Overall, the reform has led to shorter programmes, which has entirely taken place to the detriment of general education lessons. At the same time, the vocational lessons may have slightly increased or slightly reduced, depending on the options chosen. The extent of workplace learning, meanwhile, has remained

⁽¹²³⁾ Cedefop (2018). *France: Law No 2018-771 of 5 September 2018 on the freedom to choose one's professional future*. Cedefop national news on VET.

⁽¹²⁴⁾ Before the reform, it was up to the regions to agree to the creation of a CFA or an apprenticeship section in a CFA. With the liberalised market, a training centre in a company can create its internal CFA more easily.

⁽¹²⁵⁾ Eduscol (2022). *La co-intervention dans la voie professionnelle*.

relatively stable over the years in quantitative terms, despite several VET reforms (e.g. in 2009 and 2018). Given the overall shorter programmes, it could be argued that the relative importance of workplace learning has increased over time.

The 2018 reform also introduced a more flexible duration to the professional skills certificate. It can now be obtained within 1, 2 or 3 years, offering flexibility to adapt to the profiles and needs of individual learners.

Lifelong learning has been a major policy objective in France for the past two decades. Participation is above EU average (albeit below the shares for the Nordic countries). Several reforms over the past two decades have aimed at granting various individual rights to active adults who are seeking employment or retraining, including an individual learning account (*compte personnel de formation, CPF*). In 2002, a law established an individual right to the recognition of professional experience (*validation des acquis de l'expérience, VAE*) in obtaining a qualification. This allows an individual to obtain part or all of a qualification based on professional experience.

The lifelong learning approach was further strengthened through the introduction of blocks of competences (*blocs de compétences*). Each block or unit of competences that forms part of a vocational diploma is assessed separately. The approach was introduced in 2014 and became mandatory from January 2019 onwards for all qualifications included in the French National register of professional qualifications (*Répertoire national des certifications professionnelles, RNCP*).

Table 14. **Benelux and France: trends**

Common trends	
<ul style="list-style-type: none"> • Declining shares of IVET (except for LU) • Low levels of attractiveness of VET • High participation in adult learning (except for BE) 	
Distinctive features	
Belgium	<ul style="list-style-type: none"> • Projected population growth in those aged 18 to 24 amid declining share of IVET • Reformed apprenticeship/dual programmes offer
Netherlands	<ul style="list-style-type: none"> • Projected population decline in those aged 18 to 24 (after growth between 2000 and 2020) • Significant reduction in the number of qualifications accompanied by the introduction of elective modules • Further flexibilisation of VET delivery, including more modular provision • Ongoing efforts at policy level to make the VET system better serve adult learners • Associate degrees further embedded within the education system, with an increasing number of students enrolled
Luxembourg	<ul style="list-style-type: none"> • Ongoing reform attempts to improve the attractiveness of VET and reduce dropout • Ongoing initiatives to improve the transition between pathways
France	<ul style="list-style-type: none"> • Recent surge in apprenticeship contracts following 2018 VET reform • Stable shares of workplace learning over time • Greater focus on assessment of units of qualifications (<i>blocs de compétences</i>) • Reforms to grant active adults individual rights (e.g. individual training accounts)

Source: Cedefop.

3.4.3. UK-England and Ireland

The UK and Ireland ⁽¹²⁶⁾ are often used to illustrate the prototype of a liberal market economy, as opposed to coordinated market economies that can be found in countries such as Germany or Austria. In terms of VET, this means that initial training is typically focused on the development of specific vocational skills, but only weakly linked to specific occupations (Cedefop, 2020b). In both countries, VET sectors are characterised by their large diversity and the wide range of choice available to learners.

Demographically, the UK experienced significant growth of 15% in those

⁽¹²⁶⁾ Fieldwork was undertaken for UK-England. For some information and data, however, only aggregate UK data were available.

aged 18 to 24 between 2000 and 2020, while Ireland saw a 2% decline in the same group. Projections for the period until 2030 suggest positive growth rates for both Ireland (+ 18%) and the UK (+ 6%), so the population from which VET providers will draw their prospective learners is likely to increase in the course of this decade ⁽¹²⁷⁾. According to the results of Cedefop's opinion survey on VET, both the UK and Ireland are among the countries with the largest shares of respondents (around 75%) who say that vocational education in their country has a positive image. Yet, only roughly a quarter of respondents from UK and Ireland say they would recommend vocational education (Cedefop, 2017b).

In both countries, VET is generally understood as further education and training (FET); IVET is provided mainly for young adults. This stands in contrast to many other European countries. In Ireland, there is no formal VET at upper secondary level (Cedefop and SOLAS, 2022): VET is predominantly provided by education and training boards (ETBs) in further education and training (FET) colleges. The limited data available about VET providers to inform evaluation of changes over time points to a reduction by almost a quarter in the number of publicly operating VET providers between 2014 and 2021 (Cedefop, 2023, forthcoming-b). In the UK, further education colleges represent the largest group of VET providers and in Ireland most of VET forms part of further education.

VET systems in both countries have gone through considerable changes over the past 20 years. Change has probably been greatest in UK-England, which is an example illustrative of several profound system changes during the past 25 years, with a 'constant remake, remodel policy approach to VET' (Hogarth, 2021). While there are large sections of the VET system which are seen to work well, such as various Level 3 qualifications linked to skills needed in engineering and manufacturing, it is the policy goal of extending VET to new occupations and sectors which has proved most challenging.

In Ireland, the introduction of the Common Awards System (CAS) in 2007 signalled the beginning of a major programme to bring greater coherence to VET awards in Ireland. CAS is a system of further education and training (FET) awards specifications, containing NQF levels 1 to 6 (equivalent to EQF levels 1 to 5). The CAS requires all FETAC/QQI awards to have a common

⁽¹²⁷⁾ Due to unavailability of corresponding Eurostat data, projections for the UK refer to the population aged 20 to 24 (rather than 18 to 24). Data retrieved from WA2-24 and UK Office for National Statistics, dataset: [Principal projection: UK population in age groups](#)

structure. The greatest number of VET awards are issued at NFQ level 5 (EQF 4) each year (Cedefop, 2022b).

Both countries also have a significant apprenticeship system that has undergone major change in recent years. Most apprenticeships are taken by adults. As of 2022, there were 62 national apprenticeship programmes available in Ireland, with the range of apprenticeship opportunities having diversified in recent years. Since 2016, the apprenticeship system has been remodelled and expanded; it includes new programmes which are delivered not only within the FET sector, but also in tertiary level institutions. Apprenticeships introduced from 2016 onward lead to an award between EQF levels 5-8 (NFQ 5-10). The number of school leavers starting an apprenticeship doubled between 2015 and 2020 (Cedefop and SOLAS, Further Education and Training Authority, 2022).

In UK-England, apprenticeship provision ranges from basic training at secondary level to advanced education and training at higher education level (Cedefop and NARIC, 2019). Apprenticeships have been reformed through multiple policy developments in the last decade. In 2015, degree apprenticeships were launched as part of the apprenticeship reform programme ⁽¹²⁸⁾; these provide the opportunity for apprentices to gain a full bachelor or master degree. As part of the reform, apprenticeship frameworks have been increasingly replaced by apprenticeship standards from 2017 onwards. Standards are designed by employers, are less specific with respect to what is to be learned, do not need to include a qualification, and require an end point assessment to determine whether the apprentice has achieved the required level of competence. This presents a significant change in assessment methods given that, under the previous apprenticeship frameworks, apprentices were assessed at various stages of their training with no overall assessment at the end. After years of growth, apprenticeship starts have dropped significantly following the introduction of an apprenticeship levy on employers in 2017 ⁽¹²⁹⁾ (Cedefop et al., 2022).

Alongside apprenticeships there have been various attempts to establish a clear school-based vocational education pathway through upper secondary education throughout the years, to address a situation where there are numerous 'vocational' or more practical qualifications available

⁽¹²⁸⁾ UK. Department for Business, Innovation and Skills (2015). [Apprenticeships in England: vision for 2020](#).

⁽¹²⁹⁾ The drop in apprenticeship starts seems to have mainly come from intermediate and advance level apprenticeships, while higher-level apprenticeship starts increased.

to students. The most recent attempt to provide a predominantly school-based pathway through upper secondary education was launched in the government's Post-16 skills plan ⁽¹³⁰⁾. This led to the introduction of the first T-levels in 2020, as one more attempt to establish a vocational pathway at upper secondary level that has parity of esteem with general education (or, more precisely, with A-levels). Besides a substantial general element, they include an industrial placement (minimum of 315 hours or approximately 45 days) (Hogarth, 2021).

UK-England is one of the few examples from the countries studied where the number of VET qualifications or programmes has risen in recent years. Organisations responsible for delivering qualifications have been independent of government and an important strand of policy has been to encourage competition between awarding bodies, with the aim of driving up quality; this has resulted in many qualifications, including vocational ones. Despite periodic reforms which have sought to reduce them, the number remains large (Cedefop, 2022b).

In Ireland, there was a notable decline of almost 25 percentage points in the number of major awards issued between 2011 and 2019: significant reconfiguration of the system may, or may not, have been an influencing factor on these data. The 2020-24 FET strategy states that the number of FET programmes will be substantially reduced over the lifetime of the strategy (Cedefop, 2020a).

Neither country has a great distinction between IVET and CVET. Participation in CVET has been in constant decline in the UK since the early 2000s. While a decline in learner numbers may explain some of this, it also reflects cutbacks in public expenditure following the financial crisis (Hogarth, 2021). A 2018 report found that one of the greatest challenges facing the UK vocational education sector is the need to increase the emphasis on adult learning, as government policies have frequently been targeted at IVET in the 16-19 age range (Cedefop, 2020a) (Hodgson et al., 2018). Ireland is characterised by a distinctly adult-centred VET system. IVET providers take on a comprehensive role in the sense that they are engaged in various types of adult learning ranging from vocational courses to basic skills programmes and formal VET programmes.

⁽¹³⁰⁾ UK. Department for education (2016). *Post-16 skills plan*.

Table 15. **UK-England and Ireland: trends**

Common trends	
<ul style="list-style-type: none"> • Projected population growth for those aged 18 to 24 • Expanding apprenticeships to higher levels 	
Distinctive features	
UK-England	<ul style="list-style-type: none"> • Medium share of VET students • Introducing T-levels in 2020, as a predominantly school-based VET track aimed at establishing parity of esteem with general education (A-levels) • Participating in CVET in decline since early 2000s • Switch to end-point assessment in apprenticeships
Ireland	<ul style="list-style-type: none"> • Low share of VET students • Developing a consistent structure for VET qualifications • Reducing the number of VET providers • Diversifying VET provision • Continuing development of new apprenticeships and expansion to tertiary level • Steady increase of learners in workplace learning

Source: Cedefop.

3.5. Nordic countries

The Nordic countries – Denmark, Finland, Iceland, Norway and Sweden – have for a long time been considered different from the rest of Europe in whatever classification of welfare states, industrial relations and labour market regimes or political systems has been applied (Cedefop, 2020b, p. 139). Despite many common values and similarities in terms of education indicators, such as increasing populations due to high fertility rates and immigration, high economic performance, high public investment in education, strong traditions in adult education and much higher levels of participation in lifelong learning compared with other European countries, the Nordic countries have taken different approaches to organising the welfare state. Their VET systems have also shown different patterns throughout the years (Antikainen, 2006; Jørgensen et al., 2014; Nylund and Virolainen, 2019).

In the comparative literature, Denmark and Sweden tend to be discussed as examples of different VET systems (Michelsen, 2018). Denmark is described as a strong and well-functioning system based on apprenticeship and company-based learning; Sweden has been considered an example of a statist, egalitarian social-democratic school model, where upper

secondary VET is embedded in a comprehensively organised school system (Busemeyer and Trampusch, 2012).

In contrast to the other Nordic countries (which have a separate school-based VET track or a track combining VET and general education), Denmark has maintained a separate system of apprenticeship leading to a general-vocational divide in upper secondary education. While catering for low youth unemployment and inclusion of the non-academic young, Danish dual VET has tended to transfer students out of the education system and to divert young people from higher education ⁽¹³¹⁾. This trend has been strengthened by the key role Danish social partners used to play in VET governance; this prioritised employability and specific vocational skills over eligibility for higher education, which has resulted in low permeability between dual VET and higher education. In consequence, many young people have started to consider VET a blind alley that does not give access to higher education and so enrolment numbers and the esteem of VET have been falling (Cedefop, 2017b; Jørgensen, 2017).

Access to higher education for apprenticeship graduates has long been a national policy concern, but it has only been in the last 10 to 15 years that it has become a major policy issue. The EUX programme (*Erhvervsuddannelse og gymnasial eksamen, EUX*), introduced in 2011 ⁽¹³²⁾, requires apprentices to undertake off-the-job training for their apprenticeship and to repeat study-oriented education at upper secondary level. This pathway enables young people to obtain a double qualification providing access to the labour market and higher education. It is available for 46 out of 104 occupations. Generally, the programme is of a longer duration (5 years) due to extended off-the-job training (more theoretical instruction and therefore less time in workplace training), which may prove less attractive to employers. Since its introduction, EUX has become quite popular e.g. in 2019, roughly one third of all students choosing VET, wanted an EUX programme in order to obtain a full VET qualification and have access to higher education (Cedefop and University College Copenhagen, 2019, p. 37). Recent Danish VET research has found that students in technical vocational education with EUX differ from those in the corresponding ordinary vocational education (*Erhvervsuddannelse, EUD*)

⁽¹³¹⁾ Revised presentation by Christian Helms Jørgensen, MECVET seminar 25 October 2016 HIOA [unpublished].

⁽¹³²⁾ Similar measures introduced previously included the unification strategy (1970s), the set-up of vocational gymnasiums (1980s) and the introduction of additional academic qualifications (late 1990s and 2000) (see, Jørgensen, 2017).

on several parameters: the young people in EUX generally have higher Danish and mathematics grades from primary school than the students at EUD, they are younger at the start of education, and they drop out less frequently than the EUD students. However, ‘it is more difficult for EUX students to find an apprenticeship, and they therefore end up in school-based internships more often than the EUD students’ (EVA, 2021).

Since maintaining a separate VET system has had limited success and has lost much of its attractiveness, the latest amendment to the law on VET in Denmark (*lov om erhvervsuddannelser*) in 2019 ⁽¹³³⁾ has promoted stronger links between general education and VET as well as between VET and higher education. In relation to the first, general subject knowledge has become more prominent and integrated into the teaching of occupation-specific skills ⁽¹³⁴⁾. In the second, the reform allowed all upper secondary VET students to apply for supplementary examination courses, giving access to higher education (Cedefop, 2020a, DK).

Denmark’s VET system is adult-centred, with more than 60% of all individuals in VET being aged 20 and older (Cedefop, 2023, forthcoming-b). Participation in formal adult education and non-formal education is extremely high: in 2016, 25- to 64-year-olds on average took an estimated 86 hours of learning activities (Cedefop, 2023, forthcoming-b, p. 73). Recent reforms are aimed at making the VET system more attractive, not only for the young but also adults; new pathways in IVET are being introduced, e.g. EUV, initial vocational education for adults (*Erhvervsuddannelse for Voksne, EUV*). EUV programmes for adults are basically identical to the programmes for young people, but the duration of the programme may be shortened following procedures of validation and recognition of prior learning.

In contrast, Sweden has a youth-centred VET system with more than 60% of learners being aged under 20 (Cedefop, 2023, forthcoming-b). The 2011 VET reform, which has led to the present structure of IVET-programmes, has increased the distance between IVET and general upper secondary programmes (Nylund and Virolainen, 2019). At the level of VET curricula, the reform put emphasis on ‘working life’ and employability of students, which resulted in an increase in occupation-specific content at the expense of general subjects (Cedefop, 2020a, p. 2, Sweden). These changes have

⁽¹³³⁾ <https://www.retsinformation.dk/eli/ta/2020/1395>

⁽¹³⁴⁾ For instance, the basic mathematics and algebra a carpenter requires is taught as part of practical training (in a workshop) instead of teaching students theoretical algebra in a classroom (Cedefop, 2020a, DK).

meant that VET programmes have no longer made graduates eligible for higher education ⁽¹³⁵⁾. When eligibility for university studies was abolished, interest in VET fell dramatically, which may relate to reduced opportunities for progression to higher education but also to an overall decline in interest in VET by adolescents. For instance, in the last decade, VET has been portrayed as ‘the second option’ by Swedish media and politics. In 2020/21, only about one third of all upper secondary learners took part in VET, as most students opted for general education (Cedefop and Swedish National Agency for Education, 2022, p. 95).

The increased emphasis on workplace relevance and employability has been illustrated by the introduction of apprenticeship education, which became part of formal IVET in 2011. Since then, the number of apprentices has grown steadily, with an average annual increase of over 1000 learners between 2013/14 and 2020/21 representing around 13% of all VET learners in 2020/21. Despite these positive developments, school-based VET is still the main VET track in Sweden, with apprenticeship participation remaining below the expectations ⁽¹³⁶⁾. This may be related to significant challenges concerning relatively low completion rates and high drop-out rates (Cedefop and Swedish National Agency for Education, 2022, p. 32).

The 2011 reform included local distribution of control, unlike the previous reform (1994) which prioritised a more nationally coherent curriculum (Cedefop, 2020a, Sweden). In 2011 local programme boards took charge of aspects related to programme organisation and content, including workplace practice placements: different courses can be combined to create programme specialisations to meet regional and local labour market needs. This has worked well for some regions and vocations/programmes, while in others and vocations/programmes the local boards have been inactive.

Like the other Nordic countries, Sweden has a strong tradition in adult education: in 2019, participation in lifelong learning was the highest in the EU (34%) (Cedefop and Swedish National Agency for Education, 2022, p. 4).

⁽¹³⁵⁾ For example, VET and general upper secondary education programmes have had different syllabi for many general subjects: Swedish, natural science, social science, history, mathematics, (Cedefop, 2020a, p. 5, Sweden). This hindered vertical permeability.

⁽¹³⁶⁾ Upper secondary VET programmes in Sweden are 3-year programmes leading to an upper secondary vocational diploma at EQF level 4. Each programme can be followed through two pathways: school-based and apprenticeship. Both pathways incorporate mandatory training at the workplace: in school-based programmes the overall share of work-based learning is at least 15%; in apprenticeship the minimum is 50%. (Cedefop and Swedish National Agency for Education, 2022, p. 4)

Adult education is provided in many forms (e.g. municipal adult education) and is characterised by individual modularised pathways. These have become increasingly relevant over the years due to a shift in strategy from upskilling the lowest educated to targeting those who are most in need of education by combining flexibility for the learner with competence provision to meet labour market needs (Cedefop, 2020a, p. 7, Sweden).

A new VET reform is planned in 2023 and foresees an increase in the teaching hours for VET students with courses in general subjects. Following those courses, students will be eligible for university studies. However, since the courses are additional to the current study plan, it remains to be seen whether more students will take additional courses to become eligible for university studies or the majority will not take advantage of this possibility.

The Icelandic VET system shows similar features to the Norwegian one, with VET study programmes combining school and workplace learning. In 2021, VET participation of young people (15-24) was among the lowest in Europe at around 20%; however, when looking at all upper secondary learners, the proportion is around 30%. This reflects the higher average age of VET learners ⁽¹³⁷⁾, many of whom enrol in general education before switching to VET programmes (Cedefop and Ministry of Education and Children, 2022, p. 5). As part of efforts to increase VET participation, in 2020 the government presented a new strategy ⁽¹³⁸⁾ on how to strengthen VET in the country. The strategy proposes allowing VET learners to have the same access to tertiary education as learners who have passed the matriculation exam ⁽¹³⁹⁾ and to make access to VET education in rural areas more flexible. In 2021, State financial contribution to upper secondary schools (with special focus on VET programmes) increased ⁽¹⁴⁰⁾.

The share of general subject knowledge and occupation-specific skills, as well as the allocation of hours for workplace training, differs between schools due to the decentralised approach used ⁽¹⁴¹⁾. This has given greater autonomy, more responsibility and flexibility to schools in the development

⁽¹³⁷⁾ Iceland has an adult-centred VET system with more than 60% of all VET learners aged 20 and older (Cedefop, 2023, forthcoming-b).

⁽¹³⁸⁾ *Nýir tímar í starfs- og tækninámi*. [New times in VET 2020].

⁽¹³⁹⁾ VET students can finish upper secondary school with a vocational and a general degree (matriculation exam), e.g. if they take extra courses to complete the matriculation exam.

⁽¹⁴⁰⁾ *Statement from the Ministry of Education, Science and Culture on the budget for 2021*.

⁽¹⁴¹⁾ The decentralised approach was introduced through the 2008 Upper Secondary Act (2008) which called for VET programmes that better responded to labour market skill needs, and the 2011 National Curriculum Guide for Upper Secondary Schools (2011).

of study programmes and has also led to large variation in VET study offers. Despite this variation, so-called occupational councils (*Starfsgreinaráð*) make sure that all study programmes lead to the same competence requirements for a given job description in a given trade ⁽¹⁴²⁾. The occupational councils also ensure that VET programmes have a strong link to labour market requirements (Cedefop, 2020a, IS).

Iceland has one of the highest lifelong learning participation rates among adults (25-64) in Europe (20% in 2020). Adult learning/CVET is available in upper secondary schools (day classes or special adult evening classes), lifelong learning centres, training centres owned and operated by social partners for skilled workers in certain trades, and in numerous private training institutions (Cedefop; Ministry of Education and Children 2022, p. 5).

Norway has a youth-centred VET system (Cedefop, 2023, forthcoming-b). The main elements of the Norwegian IVET 2+2 model, introduced through Reform 94, remained intact between 1995 and 2020 (Mogstad Aspøy and Hagen Tønder, 2021b) ⁽¹⁴³⁾. The reform led to broader vocational programmes ⁽¹⁴⁴⁾, a trend that the subsequent Knowledge promotion reform in 2006 (*Kunnskapsløftet, KL06*) strengthened. While the introduction of the 2+2 model has contributed to relatively high VET participation, with around half of the youth cohorts in Norway entering an upper secondary vocational programme (Mogstad Aspøy and Hagen Tønder, 2021a), the model has been facing several challenges. First, the lack of apprenticeship contracts has been an issue since 2011, with three out of 10 applicants every year failing to get an apprenticeship contract; students without an apprenticeship contract are more likely to drop out of upper secondary school (Mogstad Aspøy and Hagen Tønder, 2021a). Second, an increasing number of students, in some vocational programmes, have used the opportunity to transfer to general studies through the third supplementary year instead of completing their vocational training (Vibe et al., 2012).

Throughout the years, the aim of building more general VET has led to

⁽¹⁴²⁾ Provided that new study programmes are designed based on job description and competence requirements for a skilled trade it is the responsibility of the occupational councils to agree on qualifications needed for that trade.

⁽¹⁴³⁾ The 2+2 model consists of 2 years of school-based education followed by 2 years of apprenticeship training in a company, which is still the standard model in the Norwegian IVET system.

⁽¹⁴⁴⁾ A common curriculum structure was introduced for all VET programmes with a significant increase in general subjects (from 13% to 31% of the total instruction hours) in the 2 school-based years. (Spetalen, 2017).

greater distancing between vocational education and the corresponding vocational occupation, provoking a response from both employers and expert committees which demand more vocational specialisation and a higher degree of working life relevance (Mogstad Aspøy and Hagen Tønder, 2021a). Earlier vocational specialisation has thus become an important element of the latest reform, which is being implemented gradually, starting from autumn 2020. Typically, vocational programmes in Norway are broad at the start, with gradual specialisation towards a trade; with the 2020 reform, a number of trades got their own second-year programme (e.g. carpenter), instead of having a joint second year programme with other trades. The reform has also highlighted the increasing importance of transversal competences, foreseeing the introduction of three interdisciplinary themes in all subjects: democracy and citizenship, sustainable development, and public health and life skills.

Alongside the shift towards earlier vocational specialisation, there is increasing emphasis on flexibility within the VET system, both for young students and for adults. Besides the regular IVET qualifications being open to adults, employers manage a separate stream through a so-called experience-based trade certification (EBTC) applying only to people who have obtained several years of work experience. In 2008, a new on-the-job trade certificate, was introduced, which does not require the same elaborate work experience as ETBC: candidates in employment can get their training on the job, and obtain a trade certificate based on this training. The new scheme improves possibilities for recognition of prior learning (based on the assessment of competences). This scheme is not offered in all counties, and the opportunity to participate varies between workplaces ⁽¹⁴⁵⁾.

The Finnish VET system is well-established, though a series of reforms have been introduced since the 1990s; the aim is to increase equality between VET and general education in upper secondary education and to provide VET students with eligibility to enter higher education (Virolainen 2021). These reforms have led to: the introduction of more flexible periods of study with more emphasis on individualised study times; increased participation in work-based learning; more varied combinations of learning environments; a trend towards broadening of VET qualifications; more varied forms of assessment through competence (previously known as skills)

⁽¹⁴⁵⁾ Nå blir det mulig å ta fagbrev på jobb. [It will now be possible to take a vocational certificate at work].

demonstrations; and alignment of qualification structures for youths and adults, with abolition of separate laws for young people's VET and adult education (Virolainen, 2021, pp. 13, 14).

The latest Finnish VET reform of 2017-18 (Vocational Education and Training Act 531/2017, *Laki ammatillisesta koulutuksesta 531/2017*) stressed an individual's right to progress at their own pace, introducing more flexible study times based on the accreditation of prior learning and individual starting points for studies ⁽¹⁴⁶⁾. The individualised (learner-centred) approach is reflected also in the relative shares of work-based learning and the possibility to acquire competences in other learning environments, determined for each student individually in a so-called personal competence development plan (Cedefop, 2020a, p. 5, FI).

Over the years, the organisation of work-based learning has shifted from a limited number of learning environments being available to students (e.g. on-the-job training) towards varied combinations of school, workshop and workplace learning, and digital (distance) learning. This was also possible through the introduction of training agreements ⁽¹⁴⁷⁾ and apprenticeship agreements ⁽¹⁴⁸⁾. The increased flexibility in the delivery of work-based learning in terms of duration ⁽¹⁴⁹⁾ and combination of different learning

⁽¹⁴⁶⁾ The time it takes to complete a qualification varies individually, based on how long it takes for the student to achieve the competence specified in the qualification requirements. The scope of the qualifications has been planned around an average study time of 3 years (Cedefop, 2020a, p. 7, Finland).

⁽¹⁴⁷⁾ This type of work-based learning can be offered in all IVET and CVET programmes. Learners are not in an employment relationship with the training company. They do not receive salary and employers do not receive any training compensation. Within this system, learners acquire some experience during their studies and the learner, and the company get to know each other. It is possible to change from a training agreement to an apprenticeship training contract, if prerequisites for concluding an apprenticeship agreement are met (Cedefop; Finnish National Agency for Education 2022, p. 25).

⁽¹⁴⁸⁾ Any qualification can be acquired through apprenticeship training: a work-based form of VET that is based on a written fixed-term employment contract (apprenticeship contract) between an employer and an apprentice, who must be at least 15 years old. Periods of theory and in-company training alternate, but there is no common pattern; it is agreed in the personal competence development plan. Since the 2018 reform, there is no indication in the legislation where the theoretical part should be acquired. If the company can cover all the training needs, there is no need for the learner to attend a school venue at all (Cedefop; Finnish National Agency for Education 2022, p. 25).

⁽¹⁴⁹⁾ Work-based learning may be provided during the whole programme duration and cover the whole qualification, a module/unit, or a smaller part of the programme. The most suitable method for a learner is agreed in the personal competence development plan (Cedefop; Finnish National Agency for Education 2022, p. 23).

environments has led to increased work-based learning (WBL) participation (Cedefop, 2022b).

Flexibility of VET provision has meant increased authority and responsibilities for individual education providers since the 2018 VET reform. Providers are now in charge of the implementation of personal competence development plans, the use of different learning environments and related pedagogical solutions. The redefinition of provider responsibilities has also brought more challenges for them; in developing their activities they need to consider increased flexibility and individual choice in VET delivery (Cedefop, 2020a, p. 12, Finland).

In Finland, 'there has been a shift at the level of the National Core Curriculum from holistic target setting to a greater focus on the targets required for the assessment of the different units' (Cedefop, 2022d, p. 62). This development has led to a more detailed and explicit definition of the sub-goals to be achieved for each unit's level of performance, and there are no final examinations or final project assignments (Finnish National Agency for Education, 2018; Rintala and Nokelainen, 2019). Once learners successfully complete their personal competence development plan, they acquire a qualification.

Finland has an adult-centred VET system (Cedefop, 2023, forthcoming-a), with VET for adults having been organised for several decades ⁽¹⁵⁰⁾. The higher level of participation in formal and non-formal education can be related to the level of public support made available for adult learning (Cedefop, 2023, forthcoming-a) ⁽¹⁵¹⁾. In the VET reform of 2018, the previously separate Acts on vocational education and training for young people and adults were merged into a single piece of legislation; this also established a single funding system with uniform criteria for all VET programmes, including CVET and apprenticeships ⁽¹⁵²⁾. The reform also changed the role of IVET providers, with many of them opening their education provision toward adults. While recent developments indicate a scenario of VET for adults being pluralistic (in the sense that it sees no distinction between IVET and CVET) there are some

⁽¹⁵⁰⁾ It was developed by creating a competence-based qualification system in the mid-1990s.

⁽¹⁵¹⁾ For instance, the provision of formal adult education as such is high in Finland (about 49 hours a year per capita 25-64) and matched only by Denmark and Sweden. Provision of non-formal education is also high, by comparison, at 37 hours per year/capita (Cedefop, 2023, forthcoming-a, p. 74).

⁽¹⁵²⁾ The apprenticeship route in Finland has been mainly taken by adults, which contrasts with other EU countries.

critical voices pointing to the need for more flexibility to accommodate the learning of adults fully in the given structures (Cedefop, 2023, forthcoming-a, p. 120).

Table 16. **Nordic countries: trends**

Common trends	
<ul style="list-style-type: none"> • Increasing populations; high economic performance • High public investment in education • Medium share of VET students in Denmark, Norway and Sweden, high share in Finland and low share in Iceland • IVET students are predominantly apprentices in Denmark and Iceland; they are mostly in school-based VET in Finland and Sweden and mostly in a combined VET pathway in Norway • Broadening of VET programmes (Finland and Norway) opposed to vocational specialisation trend (Sweden) • Long tradition in adult education; higher level of participation • Denmark, Finland and Iceland have adult-centred VET system as compared to Norway and Sweden (youth-centred) 	
Distinctive features	
Denmark	<ul style="list-style-type: none"> • Decreasing numbers and public esteem of VET • Introducing hybrid qualifications to improve vertical permeability
Finland	<ul style="list-style-type: none"> • Emphasis on individual competence development • Increased participation in work-based learning • Broadening of VET qualifications • Increased authority and responsibility of education providers
Iceland	<ul style="list-style-type: none"> • Higher average age of VET learners • Increase in State financial contribution for VET • Decentralised approach in VET curriculum design
Norway	<ul style="list-style-type: none"> • High permeability between GE and VET • Increasing importance of transversal competences • Strengthening of adults' right to IVET
Sweden	<ul style="list-style-type: none"> • Low permeability between VET and higher education • Increased (but still low) participation in apprenticeship • Modularised structure of upper secondary education

Source: Cedefop.

CHAPTER 4.

Reflections and research on the future of VET

This chapter brings together key results from the two preceding chapters, the cross-country analysis and the country-by-country analysis. We take up the discussion on country trajectories from the previous project, and the discussion of convergence or divergence in Europe. We also reflect on the work with the scenario method and its application to the national context. Finally, we conclude with ideas for further research.

4.1. Trends in VET in Europe

This chapter starts with some general considerations regarding the identification of trends, brings together key insights from the four project assignments and, complemented by individual country findings from Chapter 3, compares these insights with the big picture drawn in the previous project.

4.1.1. Pendulum effect in VET

Previous Cedefop research has identified several key trends in European VET: broadening of the conception of VET, blurring of vocational and general education, and the increasing importance of higher VET. Many of these trends, identified at system level, can be confirmed when looking at deeper levels. However, with the new focus of the current project on what's happening at the provider level, and how curricula and assessment practices have changed over time, additional complexity has been introduced. On a second consideration, some of the most important trends seem less clear, even contradictory in some cases.

One reason for this complexity is that the evolution of VET does not necessarily take place in an unbroken chain of developments leading in one direction but may be interrupted by changes of course and reversals in policies and practices. For instance, in Poland a long period of de-vocationalisation has been followed by renewed emphasis on VET, like a pendulum swinging

back. In Germany and Austria, the effects of academisation are now less pronounced than they were before. However, in both cases, the long arm of history, a strong path dependency and the different traditions of VET can also be seen.

Another reason for the increased complexity may be methodological. The longer the time frame, the more likely we are to observe bigger movements in the pendulum (some of our analysis covers 1989 until 2022). Analysis of more than 100 years of VET history in Switzerland shows how the balance of the different aims of VET – economic, social and educational – has been changing at long intervals of 20 or 30 years, often associated with historic events, such as the two world wars, the Sputnik shock ⁽¹⁵³⁾ and the like (Bonoli and Gonon, 2022). Thus, the trajectories that we simplified as clear unidirectional vectors in the earlier study turn out to be, on closer inspection and over longer periods of investigation, the markings of a pendulum that is magnetically attracted or repelled between economic, social and educational goals in a multidimensional space.

All this shows that it should not be assumed that existing trends will continue. Recent events such as the COVID pandemic, the war in Ukraine, the energy crisis and historic inflation highlight the importance of taking a long-term view and accommodating hard-to-predict developments. Although the contours of these changes are not yet clear, it can be expected that some trends, which have been taken for granted for a long time, for instance the increasing number and share of university students and graduates, cannot be simply further extrapolated into the future. This makes it more essential that we continue to work on, and with, scenarios.

A pendulum effect is very visible in the area of assessment. In many countries the emphasis on standardised external written examinations with a high degree of reliability (often introduced to meet the requirements of accountability) has been combined with other forms of assessment better suited to ensuring the validity of the assessment and emphasising authenticity; these include skills demonstrations at the workplace assessed by senior members of the professional community. The argument to strengthen the value and image of VET is brought forward for both approaches. Similarly, the expansion of summative assessment inevitably seems to call for countermeasures to strengthen formative assessment, such as providing

⁽¹⁵³⁾ When the Soviet Union launched Sputnik during the Cold War, it was perceived by western nations as a wake-up call to step up their development of advanced technologies.

better feedback to learners and facilitating the planning of future learning and teaching.

The evidence collected on the role of general skills and subjects within VET curricula also shows a pendulum movement in many countries rather than a one-way trend. Although, most countries for which reliable comparative data are available show an expansion of general subjects in curricula of upper secondary VET (particularly for VET programmes qualifying also for higher education), there are counterexamples. For instance, a 2019 VET law in Lithuania (*Lietuvos Respublikos profesinio mokymo įstatymo Nr. VIII-450 pakeitimo įstatymas*), reduced general subject knowledge from 80% to 50% in VET programmes. Recent curriculum reform in Norway (*Læreplanverket for Kunnskapsløftet 2020, LK20*) points to renewed emphasis on vocational skills. The history of VET in UK-England over the last two decades could even be described as a struggle for the balance between occupation-specific and general education content.

Why shifts in the pendulum take place is a difficult question to address? Did previous policies and practices get it so wrong that they had to be reversed or pulled back? Evidently part of the answer lies in the inter-play of the ‘mega-drivers’ that underpin our analysis of change: at different points in time different drivers are important or less important. But such drivers also impact policy and practice through the way in which they are interpreted by politicians and policy-makers, causing pendula to swing this way and that at different times, depending on the relative weight given to different factors. This is not just a technical matter, but subject to political debate and choice; the pendulum effect highlights how important it is that VET is informed by high quality evidence to ensure good choices are made. To answer the question in part, policies and practice might not be getting it ‘wrong’: rather the influence of drivers, and the political goals may have changed and/or there may simply be a lack of evidence to inform the policy choices being made. Another factor is also the complexity and difficulties inherent in change itself. Changing course in VET, as in education in general, may be likened to trying to change course in a supertanker: it takes so long to turn that, by the time a new direction is adopted, the weather conditions (the drivers) might have shifted.

VET is often presented as the antithesis of general or higher education. However, the comparative analysis presented here points towards a sort of dialectic within VET, a deeper, hidden unity or belonging together of its diverse aspects. As such, general subjects and general skills form an

essential part, while a changing conception of VET does not leave general education or higher education untouched. Apart from being in contention with general and higher education as a sector, VET in its broader conception is constantly in contention with itself in finding the right balance as regards its key aims, teaching and assessment approaches, its relationship to occupations and employment or the role in society. The three-perspective model and related framework, further developed in this project, provides a tool to clarify different positions and perspectives on VET, to structure debates about it, and to determine the current situation as well as possible and desirable future situations.

Equally, VET does not exist in a vacuum, and the debates, policies and practices in other domains of education may leak into it along with concrete effects. For example, in the question of VET's status compared to general and higher education, it is unlikely to be simply a question of developing pathways between the respective systems (though that, in itself, is not a simple matter, as this and many other studies have shown): it is also a question of how far general and higher education, by being the higher status forms of education in most European VET systems, shape debates around matters such as curricula and assessment. Standardised external written examinations are becoming more prominent in VET for several reasons, and we cannot exclude the possibility that one reason may be the status attached to this form of assessment compared to teacher-marked assessments and work demonstrations in some countries. Debates around this topic swirled around general secondary level qualifications in UK-England during a recent period of reform.

4.1.2. Increasing institutional diversification, autonomy and expansion despite unfavourable conditions

Looking at the trends of the last three decades or so, highlighted in Chapter 1, it would seem that, in many respects, they have not provided conditions in which we would have expected VET, especially apprenticeships, to flourish. Since the 1980s, Europe has seen a remarkable shift towards a service and knowledge society which has affected the traditional sectors of VET. Further, the automation and computerisation of the economy, or digitalisation as it is now called, has led to polarisation of the labour market in many countries, with declines especially in the VET core segment of middle skill levels. More recently we have been experiencing a small, but by no means trivial, trend towards micro-work and platform economies. These task markets, in which

work is broken down into ‘bites’ of a few seconds and cents, do not require extensive training; although they have so far affected only a small fraction of the workforce, they have somehow become emblematic of wider trends. None of these developments seem to form a conducive environment but, despite them and other unfavourable conditions, an expansion of VET was observed in the previous study.

The current study has been able to examine some aspects of the previous one in greater depth, shedding light on some of the key dimensions of VET. In some cases, we have confirmed trends; in others we have been able to probe new aspects. Together, the analysis of institutional features and qualifications helps to illuminate the road ahead.

The number of VET schools has decreased in many countries, either due to demographics (pupil number decline) or school mergers. In some countries mergers have been a feature, even though the number of VET learners is on the increase, with efficiency and effectiveness reasons looming large. There is pressure to deliver vocational skills more efficiently (achieving better value for money for national exchequers); it is impossible to escape basic maths in education which means that larger schools can provide more options, a simple feature of class size and pupil-teacher ratios. The scale of and significance of these changes should not be underestimated.

We can confirm that the number of VET qualifications over time has fallen in most countries, as observed in the previous study. However, a reduction in the number of VET qualifications is not necessarily linked to deliberate broadening of profiles. In some cases, such developments seem to appear ‘less planned’ and simply reflect changing demand. In countries with relatively stable youth populations and shares of VET, such as Germany, France and Austria, the number of qualifications has remained stable. Relying solely on information on the number of qualifications without further analysis can lead to false assumptions.

VET retains a strong distinct identity at upper secondary level and, to a lesser extent, at higher levels. Despite the increased demand for general, transferable skills to facilitate labour market mobility across occupations and sectors, and despite some blurring of boundaries between VET and general education, there appears to be little evidence of the vocational and general pathways becoming indistinguishable from one another. There have been initiatives which have sought to combine general and vocational pathways, allowing students to pick and choose from each pathway as part of the increased individualisation of learners’ education and training programmes,

but they are generally small scale and rare across Europe.

A corollary of this is that hybrid pathways and hybrid schools are becoming more common but they are not a major new trend. In some countries, it has been the norm for schools in upper secondary education to offer both vocational and general courses (e.g. Finland, Norway and UK-England). In others, there has been, and continues to be, strict institutional separation between general and vocational education (e.g. Netherlands). For others, there has been a degree of policy development over recent years to increase the extent to which learners in one pathway can select options from the other (e.g. Lithuania). But the general stasis regarding the institutional arrangements for VET seems to highlight a key area of path dependency.

The autonomy of IVET providers has increased in respect of curriculum design and delivery. Schools and training companies (and the teachers and instructors involved) enjoy more space for individual and local adjustment and innovation. This space varies between countries but gives vocational providers the opportunity to tailor their provision to local labour market needs. For example, we could identify the increasing importance of regional VET provision in Czechia and Italy. Increases in the autonomy of providers also often entail the retention of, or renewed emphasis on, responsibilities at national level. Local decisions on curricula typically take place in the context of national curricula determined by stakeholders (including social partners), with the scope for local autonomy clearly specified, as in Finland's VET curriculum structure. Rising provider autonomy may imply a growing emphasis on accountability; this in turn may explain the trends towards growing standardisation of assessment, as well as the externalisation of assessment we identified, and the fact that assessment results are used to monitor the performance of VET institutions as part of quality assurance (see further below). The study also found some indications that the overall level of autonomy of IVET providers helps to explain how far they are involved in orientating learning towards adults alongside formal (I)VET programmes (see further below).

An important consequence of greater curriculum autonomy is that it has enabled increasing modularisation and individualisation and the use of methods for the validation of non-formal and informal learning; this is likely to continue and is also reflected in assessment. Several countries have introduced more flexible approaches allowing learners to accumulate smaller parts of qualifications that are assessed separately. This highlights the importance of the role of local stakeholders in the development of

localised pathways in the context of national frameworks, not least national qualifications frameworks. These developments often go hand-in-hand with expansion of opportunities for validating and recognising non-formal and informal learning (e.g. work experience) which can be observed in many countries. Modularisation of VET curricula and opening up of VET is particularly notable in school-based VET systems such as the Baltic States, the Nordic countries and Portugal.

4.1.3. More general knowledge and skills and more work-based learning

At the level of knowledge and skills, important changes are taking place in VET to meet modern labour market demands. VET's traditional role in developing practical, technical skills for specific occupations is being augmented with a greater emphasis on general knowledge and skills to raise levels of literacy and numeracy, bring in digital skills and to better equip learners with transversal skills like teamwork and critical thinking. VET has probably always been an effective environment in which to learn such transversal skills because work-based learning (especially high-quality work-based learning) will often expose learners to collaboration, problem-solving and to project-based inter-disciplinary working. Such skills are woven into the fabric of VET in dual system countries where they are key to the concept of *Beruf* ⁽¹⁵⁴⁾, which underpins the whole system. But in many countries they have been acquired tacitly, finding little expression in qualification or curriculum documentation. But now it seems there is a new emphasis on both these general skills and on deepening and expanding opportunities for work-based learning.

There is an increasing emphasis on both general subjects and transversal skills in VET. Several countries have strengthened the general education component of VET programmes, and this has taken place either by increasing the extent of teaching general subjects or by better integrating them into the vocational curriculum. An increase in the occupational skills component is reported only in a few cases and usually due to an initially low level of VET content or shortcomings in the practical skills of VET students. Transversal skills are increasingly emphasised in VET policies across Europe, but it is difficult to determine the extent to which they have to date been integrated

⁽¹⁵⁴⁾ The concept of *Beruf*, or occupational concept, means that occupations requiring formal training should be oriented to the groups of qualifications that are typical for the relevant work processes.

into VET, as they are usually not specifically identified in VET qualifications and curricula.

There are considerable variations in how far transversal skills are integrated into VET programmes. At first glance, it seems that transversal skills are mostly integrated into general knowledge, but the analysis shows that they are also included in vocational content. And even in cases where transversal skills are considered part of the general subjects of VET, some of them, such as entrepreneurship, career management or digital skills, might be more associated with vocational content. This confirms a previous conclusion (Cedefop, 2020b) that an emphasis on transversal skills could be a sign of either vocational or academic drift, depending on the type of skill. Curricula which do not place strong emphasis on skill types, such as the German framework curricula in the dual system, largely avoid any decomposition into general/vocational, practical/theoretical or transversal/occupation-specific skills. In other cases, e.g. Ireland, transversal skills might be captured specifically in some modules of qualifications/programmes, e.g. teamwork or entrepreneurship, but there is no systematic national approach to classifying them; the picture varies across qualifications/programmes. More holistic approaches to learning, and increased modularisation and curricular choices for learners (see below) will make future comparative analysis of VET curricula even more difficult.

An increase in workplace learning as part of IVET curricula has been ubiquitous, although it becomes increasingly difficult to assess the exact extent, due to increased flexibility allowed at provider/individual level in the combination of different learning environments. A parallel increase in workplace learning and general skills development is not a contradiction, because either general skills are more integrated into workplace-related learning, or the extent of general subjects in school can be increased at the expense of theoretical VET content. The emphasis on workplace learning is also reflected in assessment. Skills demonstrations carried out in real work environments are increasingly common and employers or other labour market stakeholders are increasingly involved in the assessment of VET learners.

This sort of double upgrade seems to be currently the solution most preferred for raising the attractiveness and quality of VET, with the aims of the recent T-level reform in UK-England presenting a good example. However, how far expanding both general education content and practical training at the same time is an attempt to square a circle, and may be pulling the VET pendulum in different directions, should be considered.

4.1.4. Changing IVET interaction with CVET and higher education

The need for workers to update their skills frequently is now well established in the labour market, as is the need for workers to acquire higher levels of skill. In some countries, like Ireland and the UK, the relationship between VET and the labour market means that upskilling and reskilling have always been inherent features of the wider skills formation system. But the need for upskilling and reskilling has intensified and now raises important questions across Europe about the role of VET in respect of adults and hence how IVET, where the bulk of VET provision is concentrated, should best interact with and develop its role in CVET and at higher levels.

Evidence suggests that, across Europe, IVET is becoming much less focused around young people, though, historically, as now, there has been variation between countries in the share of learners who are adults. Currently, there are countries that are mainly youth-centred (more than 60% of VET learners younger than 20); adult-centred (more than 60% of learners 20+); and mixed. However, in all countries, IVET at upper secondary or post-secondary includes substantial proportions of young adults (20-24) or adults (25 and older) and these shares are increasing for various reasons (longer schooling, youth guarantee, migrants). Since most work-related learning by adults, much of which may meet skills needs but often does not lead to a formal qualification or certificate, has historically not taken place in the formal, State-funded VET system, the wider education and training environment for CVET is very different to that of IVET. This characteristic has arguably been thrown into sharp relief by the recent growth in the use of (digitally supported) microcredentials amongst adults.

In relation to adult learning, the role played by IVET providers (whether they provide formal, non-formal CVET, basic skills training or even general education) does not correlate with the share of adults participating in education and training in general or, more specifically, in VET. In countries where the participation is high and the role of IVET providers is limited, separate systems serve the adult learners (see for instance Belgium, Denmark and Germany) or learners have their needs met through the private training market, with employers playing an important role in purchasing training.

Where IVET providers make provision for adults, they mostly deliver VET programmes leading to a (full) qualification/certificate. However, this does not necessarily mean that they always take adult learning principles (e.g. flexible provision) into account. Despite the expansion in the share of adult learners in IVET programmes, the role played by IVET providers in up- and

reskilling of adults is still limited. Overall, the study shows that opening-up IVET for adults is a slow and uneven process across countries and across economic sectors. At the same time, IVET providers can be involved in different types of adult learning and are not necessarily confined by national traditions, though much depends on the degree of autonomy they possess within national structures. Comparisons between countries have the potential to enable policy-makers and VET stakeholders to see new opportunities to open up more to adults and to offer more, different and tailored adult learning programmes, in partnership with other organisations.

Strengthening the links to higher levels of education has been a key strategy in many countries to make VET more attractive to students. Sometimes this has been done through providing access to universities offering general studies or to universities of applied science where the focus is sometimes more on higher vocational studies (and which is also motivated by the wish to meet the need for higher skill levels in the economy better). This has resulted in some reconfiguration of VET curricula at upper secondary level where it provides, sometimes through the availability of additional modules or extra years of study, the opportunity to meet the entry requirements of higher education institutions. But question marks remain about how popular these pathways have become so far (some have been in existence for many years), whether young people still prefer to use IVET for labour market entry, and whether there are barriers to transferring into and staying in general higher education (e.g. different pedagogies, different environments) which require students coming from VET to be (better) supported.

4.1.5. Convergence or divergence? Harmonisation or diversity?

Despite the growing complexity and apparent contradictions observable in VET (e.g. academic drift at system level, and vocational drift at curriculum level), the ups and downs (e.g. in enrolments) and twist and turns (e.g. in emphasis on general knowledge in VET curricula) depicted in the previous study, the broader picture of trends can be largely confirmed. At the same time, along any one dimension of VET it is difficult to see how far we are witnessing convergence or divergence between countries. It is also hard to see whether, within countries, we are witnessing the emergence of more harmonious systems in which VET and general secondary and higher education function like well-oiled gears in an engine, or greater diversity which is setting up unintended tensions.

Besides different policy choices, the reason for this uncertainty might be rooted in different economic and social conditions. Some are the same for all countries, while others differ strongly. For instance, ageing has been a concern for all countries. In contrast, net emigration and decreasing populations have been major concerns in eastern Europe countries, while the main concern in the south has been youth unemployment. However, the south and the east are catching up with the west and north in terms of GDP and living standards. Western and northern Europe have benefited economically from labour migration from eastern Europe as well as countries outside Europe. The effects of the war in the Ukraine, the current energy crisis and inflation affect countries in Europe to different degrees and what is considered a common threat may have different implications at country level. Skills shortages and financial pressures forcing VET systems to work efficiently and offer better value for (public) money are among the key drivers of current change.

In the enrolment data of the previous study we observed convergence between countries regarding academic and vocational drift. In the last three decades, the share of VET at upper secondary level has decreased in countries which had a significant share in the early and mid-1990s, while it has increased significantly in countries with traditionally low shares in VET. This is best illustrated by comparing the trajectories of the Visegrád countries (decreasing shares) with the west Mediterranean countries (increasing shares). However, while the share of those choosing VET in the latter has continued to grow, the decline in VET in the former seems to have stabilised in the last 5 to 10 years. The same halting of decline can be observed for countries with dual systems such as Austria and Germany. Reasons for this include changes in skills demand and probably also a slowing down of the trend towards higher education.

Changes in curricula partly reinforce academic or vocational drift identified in enrolment numbers, though not universally. For instance, in Czechia, as in many other countries, we observe that young people prefer longer, more theoretical VET programmes, which provide access to higher education, instead of more practical programmes directly preparing for the labour market. At the same time, we have found that the general subjects taught in these more theoretical programmes have been further expanded, fostering academic drift, while the same has not happened for more practical programmes, arguably increasing the difference between these types of programme.

In almost all countries school-based VET is increasingly moving towards broader vocational domains and qualifications, providing access to higher education at the expense of more specific practical VET. Partly, the lower VET tracks (EQF 3 and/or ISCED 3a) have become even more practical, as in the case of Hungary, while programmes at higher levels (EQF 4 and/or ISCED3b) have expanded their shares of general education content and become more theoretical as the example of Czechia above illustrates. This points to a possible and risky polarisation at upper secondary level within VET which exacerbates a key dilemma for vocational education. Upgrading may raise the esteem of vocational education but it may dilute VET and also put at a disadvantage those whose strength is in acquiring manual and practical skills and who prefer non-academic learning environments and pedagogies. It may also abet developments which have been observed in the previous decade, such as the turning of vocational schools initially into vocational gymnasias, which eventually end up as academic pathways. This provides a pertinent illustration of how different forces can affect the VET pendulum at any one moment, and underlines the importance of looking at the history of VET institutions hidden behind numbers and statistical categorisations.

There is a growing number of mixed systems where work-based tracks exist side-by-side with school-based tracks, pointing to continuing diversification of pathways. The introduction of apprenticeship tracks in Bulgaria, Spain, Malta, Romania, Slovakia and the Baltic States, as well as changes in Belgium, illustrate the trend towards an increasing role for work-based elements. However, this increasing workplace learning does not need to happen at the expense of general studies as illustrated by Denmark or Sweden.

In parallel to increasing diversification, approaches to creating better structured education systems (in relation to the interfaces between general and vocational as well as secondary and higher education) have been observed in the previous project, with qualifications frameworks playing an important role in this process. Further investigation in this project shows that there are also tendencies in bringing IVET and CVET closer together, for instance in Spain, Lithuania and Finland. In Lithuania, vocational labour market training was integrated into IVET and IVET providers were stimulated to create larger institutions to meet regional labour market needs better, as well as becoming a stronger regional player. In Finland, adult education institutions and IVET providers have been brought together under one legislative and governing framework, causing mergers in less populated regions. The idea of realising

a vision of VET as a lifelong learning system, by improving permeability and creating new pathways between IVET and CVET, may be one reason for that; however, instead the rationale behind is often (financial) efficiency.

4.2. Reflection on future VET scenarios

Chapter 4 deals with trends in vocational education and training. All the trends summarised in the preceding part of the chapter could be used further in the development of the scenario methodology and its applications. The pendulum effect, institutional diversification, autonomy and expansion, the double upgrade and convergences versus divergence would be almost perfectly suited to the development of different VET scenarios based on observable trends in Europe and at Member State level.

However, since we worked on the content-related tasks of the project and the identification of the aforementioned trends until the end of the project, we decided on a different procedure with regard to the further development of the scenario method. We took another careful look at various scenario projects in VET and evaluated them according to theoretical criteria from the methodological discussion on scenario building; and we dedicated ourselves to further development by applying the method in two national contexts, Norway and Slovenia.

Thanks to a meta-analysis of previous (Cedefop-)scenario projects we were able to identify different methodological characteristics that have led to advantages and disadvantages that can be considered when applying the methodology in the future (Grollmann and Markowitsch, 2022; Markowitsch and Bjørnåvold, 2022) ⁽¹⁵⁵⁾. The two most important points concern how the relationship of the VET system is modelled regarding more overarching political, economic, social or technological trends (PESTLE), and how far general – more or less universal – expectations of the future (so-called scenario archetypes) shape the content of scenarios, independently of the actual institution or topic that is subject to the scenario-process. Continued growth could be a scenario archetype, a general future expectation that involves steady economic growth and the further development of wealth and wellbeing in economy and society.

⁽¹⁵⁵⁾ More detail can be found by reference to the two contributions; here we restrict ourselves to the most important findings.

For the first point, the answer from our research is that it depends on the purpose of the scenario-process as to whether scenarios are modelled in a way that sees VET mainly as responding to external challenges (e.g. to trends such as global economic crises, COVID-19 etc.), or as a means of influencing and partly shaping the future development of certain socioeconomic and environmental trends (e.g. by reducing skills shortages or influencing the development of greener mindsets and behaviours). In any case, at the beginning of a process that intends to formulate future scenarios of VET, an explicit decision needs to be made on the relationship between VET and so-called PESTLE drivers or trends.

The notion of scenario archetypes can play a role in different phases of the scenario process. Archetypes of future expectations, if carefully considered, could facilitate sampling when making up scenario teams or when surveying attitudes as a preparatory step to scenario construction. They can also offer an effective way of looking at the implications of VET scenarios in relation to more overarching future developments at the end of the scenario process.

The preceding project *The Changing nature and role of VET in Europe* (2015-18) developed three overarching scenarios:

- (a) pluralistic scenario, where VET is understood as vocationally oriented learning in various contexts and organised around a range of qualifications at different levels;
- (b) distinctive scenario, where professional competence is the key concept and there is a focus on professional entry associated with medium- to high- skilled professionals;
- (c) special purpose VET scenario, where the emphasis of VET is mainly to serve special target groups, e.g. disadvantaged learners, to enter the labour market (Cedefop, 2020b).

According to national and European stakeholders, a key added value of how the scenarios were presented was their ability to challenge taken-for-granted ways of thinking, notably by moving beyond the traditional institutional and national dividing lines. As example, Special purpose VET could also involve a distinctive VET pathway that is exclusive and elitist in terms of target groups, but that does not unfold larger systemic relevance as a popular educational pathway. The scenarios also made it possible to reflect systematically on alternative development paths and their relationship to different policy priorities. In this project, the scenario approach was tested in two national environments, Norway and Slovenia, in order to get a better understanding of how the methodology can be applied by Cedefop and

national stakeholders in the context of national VET reforms. The workshop in Norway's capital, Oslo ⁽¹⁵⁶⁾, involved 50 participants representing all system sectors and stakeholders. The participants were familiarised with the scenarios and the work in the Cedefop project and then, in four groups, developed and discussed scenarios about vocational education in Norway up until 2035. Despite splitting into four groups, the scenarios that were developed were quite similar. Basically, the groups chose the distinctive VET scenario as the most appropriate for the Norwegian context and added some specifications in order to represent the specific situation and potential ways of development of Norwegian VET. Issues of specific concern within these discussions were the wish to accommodate diverse individual needs within the system, permeability between different pathways, and the need to expand VET in higher education, e.g. by making VET a more distinctive part of the HE system. VET was seen as an important lever for addressing future skill needs, and the distinct nature of a comprehensive (and not modularised) VET system was emphasised. Specific needs were identified in making VET in the higher education sector more distinctive and in the interlinking of initial and continuing education. The outcomes of the Norwegian national scenario workshop were to be presented to the national committee for VET after the workshop.

The Workshop in Ljubljana, Slovenia, was introduced with a welcome by Cedefop, insights from the current project, an introduction to the scenario methodologies, and the identification of substantial challenges facing the Slovenian VET system through experts from CPI ⁽¹⁵⁷⁾, the national institute for VET in Slovenia. The major challenges to the Slovenian VET system were identified: improving the match between vocational education programmes and occupations by developing social partnership; enhancing preparation for further education; and the student's status as learners, which provides for good social and economic integration in contrast to a more labour market-oriented roles, such as apprentice or trainee. While the first function of VET is losing significance in Slovenia, the other two functions of VET are on the rise.

After the introduction, discussions were held in four break-out groups. The different scenarios that were developed all represented a positive vision of the future of vocational education but they differed in terms of their main features. For example, one of the scenarios focused on the permeability

⁽¹⁵⁶⁾ The workshop in Oslo was carried out on 1 November 2022. The workshop in Ljubljana took place on 17 November 2022.

⁽¹⁵⁷⁾ [Center RS za poklicno izobraževanje](#) [Slovenian Institut for VET].

between general and vocational education, another on the diversity of target groups, and another on institutional autonomy as a driving force of a modern VET system. Based on the conclusions of this procedure, the groups were asked to explain the conditions, pathways, key events and consequences of the visions identified for the future; then they presented their main findings and conclusions.

Following this, participants were invited to reflect on the main questions of the workshop. What decisions need to be taken to strengthen and further develop vocational education up to and beyond 2035? Will vocational education be developed separately in different segments or is it time for a coordinated national strategy for vocational skills development? According to participants, the workshop produced fruitful discussions and strong impressions on these questions. The different scenarios constructed will provide good information and insights when thinking about the future changes in Slovenian VET. It is seen as a first step towards more involvement in future strategic discussions, with an emphasis on change management. CPI and national actors are willing to use the methodology in accompanying current reforms.

Based on the experiences and reports from the two national scenario workshops, we think that the following issues should be considered in further applications of the methodology.

First, for European scenarios there are two conflicting challenges. There is a danger that the national scenario process may be too closely aligned with the necessarily more general European scenarios. This may mean that certain national challenges are not considered to the extent that they become the subject of several alternative pictures of the future. It might also happen that the discussion becomes a strategic one revolving around existing scenarios instead of a genuine exercise of developing own-country scenarios and the intended joint strategic understanding of issues at stake. However, the European scenarios were found to be helpful in providing an example and a reference as to what the end-product of a scenario process can look like. However, if scenarios are based only on the analysis of national trends and dimensions of change, it may be difficult to connect them to the broader scenarios. This would, at least, be useful for the further establishment of strategic dialogue on VET at the European level.

Second, given the complexity of the methodology and the topic, a clear message from the two examples is that proper and thorough preparation of the participants and the event is necessary, such as through briefings of

the moderators, or the timely distribution of preparatory materials. Also, it might be useful to carry out a series of several workshops, or to use a more extensive format (e.g. 2 days) or a mixture of the two. This would allow more time for final presentation and discussion and drawing conclusions from the scenario exercise.

Third, the optimal context for applying the scenario methodology is where it is integrated into a longer-term process of strategic discussion. This allows for the possibility to come back to the scenarios in an iterative process and might involve the possibility to delineate better the joint development of future visions and the corresponding analysis of robust practical and political strategies.

Fourth, depending on the time and resources available, it might also be useful to include a wider variety of stakeholders, in order to arrive at more diverse representations of the future (e.g. from the higher education system or labour market and employment specialists). In the two national workshops there was a reluctance to generate more provocative, pessimistic scenarios, which might be useful for a comprehensive discussion of future strategies. To support the latter, it might be useful to enrich the pool of participants with experts who are not representing mainstream VET stakeholders.

At European level it might be useful to consider cooperation with and linkage to other foresight activities, as expressed by the Expert Group on Foresight Modelling of the European Commission (2015) that promotes a system of concurrent design forecast. In light of the major and long-term challenges that VET in Europe is currently facing, including digitalisation and decarbonisation, there is a need to look at how VET can be adapted and/or how VET can contribute to tackling these challenges. The potential utility of scenarios on VET in the European Union and its Member States has never been higher.

4.3. Future VET Research

This section briefly examines current weaknesses in available data and how they might be addressed, new perspectives that could be added to future research, and how methods for comparative analysis of curricula and assessment might be improved. It draws upon the discussion at a research workshop organised jointly by Cedefop, 3s and BIBB in Bonn on 8-9 Sep-

tember 2022. It also collects suggestions for future research from the individual work assignments.

4.3.1. Improving comparative data and a research base on VET institutions

The UOE statistics ⁽¹⁵⁸⁾, despite providing comprehensive data from class sizes to teacher salaries, seem to have removed the institution from the equation. We know much about VET enrolment, outcomes and governance, but we lack information about very basic though important differences between IVET providers: their size and structure, whether they have their own location or share the building or campus with others, whether they provide only IVET programmes, or also general programmes and programmes for adults. Even what should be considered an IVET provider is not clear. Classifying providers based on the programmes, qualifications and certifications that they offer to different target groups (e.g. young and/or adult learners) could be a way forward.

This would be important additional information that would complement information on the underlying governance model or legal framework. Our provider survey was a first step in addressing this knowledge gap, but it was an explorative study and not representative. Considering the significance of the institutional level for the development of VET (e.g. centres of excellence) research is needed that explores types of institutions and the comparability of data for a few countries and then suggests how to integrate findings into international statistics.

In addition to improving data about VET institutions, it could be useful to study the historical developments of selected types of VET institutions across selected countries. Many institutions have similar origins but have taken different routes: compare for instance higher technical colleges in Austria and Switzerland (where they have been upgraded to universities of applied sciences). The various forms of vocational gymnasias in Denmark, Germany and Hungary would form another interesting case.

Research on Czechia revealed that a country's VET system may appear stable when looked at from a bird's eye view (the macro level), substantial changes may have taken place unnoticed at the local (micro) level: overall enrolment in VET changed little but some schools and programmes in some regions changed dramatically. While many schools previously had just one

⁽¹⁵⁸⁾ Joint data collection of Eurostat, OECD and the UNESCO Institute for Statistics.

specific VET programme, today fewer schools offer a wider variety. The Czechia example also illustrates the need to push further back in time so that we can see better where VET has come from, in this instance to develop a more balanced view of VET in communist times. It was interesting to see in this example (Chapter 2.3) that during the first decade after the ‘velvet revolution’⁽¹⁵⁹⁾ the number of VET qualifications exploded to over 1 000 while it was reduced in the following two decades to about 250, just as it was at the end of the communist era. This is a good example of a pendulum swing to be explored further.

4.3.2. Further development of sector perspectives

The study has shown that we need to develop economic sector perspectives further and analyse how, at sectoral level, the IVET-CVET link is forged. This would require closer examination of the segmentation and polarisation of the economy (i.e. increasing skills disparities between types of jobs and between sectors) and further examination of the polarisation thesis, in terms of jobs, at pan-European sector level instead of at the national level, with discussion of its potential impact on the fragmentation and polarisation of VET supply.

The case studies on the manufacturing and retail sectors support the idea that the retail sector requires less re- and upskilling compared to manufacturing: there is less investment in skills retail. Correspondingly, IVET and CVET providers in retail may play a much more limited role compared to the manufacturing sector. Research for Slovenia (Pavlin et al., 2022) shows that growing differences between sectors in terms of work organisation and skills demand are pushing VET programmes in different directions, reinforcing polarisation of VET. Diverse developments between sectors are also accompanied by occupational differentiation. For example, there is research from Switzerland which shows that certain apprenticeship occupations, such as computer specialist, have a high vocational baccalaureate rate and a higher school orientation, while others are tending to become more practically based, e.g. cooks or carpenters (Kriesi et al., 2022, p. 21ff). The Blueprint initiative for sectoral cooperation on skills⁽¹⁶⁰⁾, first introduced by the Skills Agenda for Europe 2016, could provide interesting material for

⁽¹⁵⁹⁾ The ‘velvet revolution’ in November 1989 was a non-violent transition of power in what was then the country of Czechoslovakia (later split into the Czech Republic and the Slovak Republic). It marked the country’s transition to a market economy and democratic society after the collapse of communism.

⁽¹⁶⁰⁾ [European Commission. Blueprint initiative for sectoral cooperation skills.](#)

researching these growing sectoral and occupational differences. A meta-analysis of the different projects under the Blueprint umbrella might be useful in order to get further insight into this development.

These differences between sectors and occupations are also clearly related to gender segregation in the labour market and in VET, which the study has not sufficiently addressed. Within the EU, women are overrepresented in social work, health care, education, residential care and retail. The occupations with the highest share of women are cleaners, early childhood teachers, care workers, nurses, secretaries and retail salespeople. Around a quarter of all female employment is concentrated in these six occupations, many of which are low paid (Eurofound, 2020). So far, gender differences have mostly been highlighted between service and manufacturing. However, the data point to potentially worsening polarisation within the service industry itself, with better paid male knowledge workers, on the one hand, and lower paid female personal service workers on the other. This has implications for IVET and CVET and is an issue that deserves a study of its own.

4.3.3. Further development of methods and contents of comparative research on VET curricula

While advances have been made in comparing VET qualifications, comparative research on VET processes is marginal considering the importance it has for education in general. There are various areas where this situation could be improved. One is to improve the conceptual basis for comparative vocational curriculum research. The top-down conceptual work, which has started to develop a theoretically robust taxonomy of vocational knowledge, skills and competences, needs to be continued, but should be complemented with a bottom-up empirical approach in which a small research team that shares a common understanding of the issues at stake jointly scrutinises a small sample of VET curricula. This should include examining how, and through which models and concepts, professional practices and learning are represented in specific curricula. For this purpose, a bootcamp approach, where experts come together for a few days to work out a solution, seems to be more promising than delegating the task to disconnected individuals. Following up this idea in cooperation with the current work on VET-PISA⁽¹⁶¹⁾ should be foreseen.

⁽¹⁶¹⁾ PISA is the OECD's Programme for international student assessment. PISA measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges.

Another way forward would be to improve access to curricula and securing continuity of research by building up a European database for a sample of well-selected curricula. While access to national curricula for national experts is usually easy, problems arise when they are used for international comparison. For each project, documents need to be searched for, retrieved and classified and questions of comparability considered. Future projects would benefit from the setting up of an archive or online repository of curricula and related documents for well-selected reference occupations in selected countries. This could start with a few occupations and a few countries. Such an archive would be helpful for various Cedefop projects, not just those which conduct curriculum research; cooperation with the work on VET-PISA should again be foreseen, as a VET-PISA would certainly benefit from a curriculum database, since the written curriculum is a fundamental element in understanding differences in learners' achievements.

Building on the previous suggestions, a rudimentary monitoring system for curriculum change in VET could be considered. Based on the information collected, some basic analysis of the changes in reference occupations (such as the share of vocational and general content) could be conducted regularly (e.g. every 3 or 5 years). This could be complemented by the regular collection of some easy-to-obtain indicators, such as the number of regulated qualifications, and the frequency and extent of the renewal of qualifications and curricula. This could become an important addendum to Cedefop's VET in Europe database and should be able to be implemented by ReferNet. Eventually, cooperation with Eurydice could be also foreseen. A pilot study for a small group of countries would be needed to test the feasibility of such an approach.

Further comparative curriculum analysis of initial VET should focus on the role of citizenship education in light of the social trends noted in Section 1.2. Comparing the role of citizenship education and its delivery in VET across Europe would be a specific project within comparative curriculum research and form part of the agenda set out above, but we signpost the idea here because such a project seems fruitful on several levels. From a methodological perspective, the extent of citizenship education and how it is integrated into VET is potentially a very strong indicator for characterising differences in between countries. From a policy point of view, citizenship education is essential to be able to deal with the political and social upheavals of today and tomorrow.

While the current project has covered a broad landscape and probed in

depth the areas of curriculum and assessment, there are inevitably key areas that it has not been able to address. Notable amongst these are teaching and learning methods as well as issues of quality, excellence and inclusion.

4.3.4. Researching teaching and learning methods (VET pedagogy and didactics)

Teaching and learning methods (didactics) have been – like assessment – a much neglected area from the point of view of research and comparative analysis, despite their significance in achieving EU policy goals. This is undoubtedly a challenging area for analysis. As the OECD has pointed out, a significant part of the challenge lies in trying to define pedagogical categories between, on the one hand, broad theoretical models like constructivism and behaviouralism and, on the other hand, specific teaching and learning methods at teacher/classroom level (Paniagua and Istance, 2018). To address this problem, they have developed broad clusters of pedagogical approaches which combine theory and practice, such as experiential learning, gamification, and discussion-based teaching. Understanding which types of broad pedagogies have traditionally been used in VET and how they are evolving – if at all – under recent pressures, is a vital part of the jigsaw for determining where VET has been and where it might go in the future. Has, for example, the move towards transversal skills had repercussions in terms of pedagogies? What sort of pedagogies are used in work-based learning and do they support or contradict pedagogical innovation to support transversal skills development? And how do teachers and trainers ensure that learning at the workplace and in vocational colleges integrate into a coherent learning experience?

4.3.5. Looking behind VET changes through transdisciplinary research

While we have been able to investigate VET in some depth at the level of providers and curricula, much of the research we have presented is still descriptive. For instance, the assessment landscape is now better understood but work still needs to be done to identify the rationale behind decisions on assessment design and related reforms. This requires other research methods. The decision for a particular assessment approach is clearly based on values and norms, so such underlying aspects would need to be explored in detail: have countries chosen certain practices and what are the interests behind their choices (e.g. for retaining and strengthening or rejecting and

discarding certain assessment approaches), or to what extent are reforms related to different (and changing) policy preferences? One way to address such questions would be to conduct a study which looks into the history of curricula or assessment reforms in a few selected countries; this would be based on a larger number of interviews with stakeholders, or even detailed analysis of shifts and changes in practices, than we were able to carry out within the case studies for this project.

Based on the experience of this 7-year research journey, we can say one thing with certainty for the work on these and similar topics: in order to understand and explain the development of VET, research teams must be international and transdisciplinary. Only in this way can the three basic perspectives that we have set out from the beginning of the project – socioeconomic, education system and epistemological and pedagogical – be adequately represented.

Acronyms

ACTV	Advisory Committee on Vocational Training
ALMP	active labour market policies
AMU	<i>Arbejdsmarkedsuddannelser</i> (DK) [adult vocational training programmes]
ASCOT+	Assessment of skills and competences in VET
BBiG	<i>Berufsbildungsgesetz</i> (DE) [Vocational Training Act]
BIBB	<i>Bundesinstitut für Berufsbildung</i> (DE) [Federal Institute for VET]
CAP	<i>Certificat d'aptitude professionnelle</i> (FR) [Certificate of professional competence]
CAS	Common awards system (IE)
CCP	<i>Certificat de capacité professionnelle</i> (FR) [Certificate of professional competence]
Cedefop	European Centre for the Development of Vocational Training
CEE	central and eastern Europe
CFA	Centre de formation des apprentis (FR) [apprenticeship training centre]
CIB	Regionale centra voor innovatie en beroepsonderwijs (NL) [regional centres for innovation and VET]
CPF	<i>Compte personnel de formation</i> (FR) [individual learning account]
CPIA	Centri provinciali per l'istruzione degli adulti (IT) [provincial centres for adult education]
CROQF	Croatian qualifications framework
CVET	Continuing vocational education and training
DAP	<i>Diplôme d'aptitude professionnelle</i> (FR) [Vocational aptitude diploma]
DT	<i>Diplôme de technicien</i> (FR) [Technician diploma]
EBTC	experience-based trade certification
ECVET	European Credit System for Vocational Education and Training
EPAL	Epaggelmatiko Lykeio (EL) [upper secondary school]
EQAVET	European Quality Assurance in Vocational Education and Training

EQF	European qualifications framework
ESCO	European Skills/Competences, qualifications and Occupations
ETB	education and training boards
EU	European Union
EUD	<i>Erhvervsuddannelse</i> (DK) [vocational upper secondary education programme]
EUV	<i>Erhvervsuddannelse for Voksne</i> (DK) [vocational education for adults]
EUX	<i>Erhvervsuddannelse og gymnasial eksamen</i> (DK) [combined vocational and general upper secondary education]
FET	further education and training
FETAC	Further Education and Training Awards Council (IE)
GDP	gross domestic product
GNVQ	General national vocational qualification (UK)
HE	higher education
ICT	information and communications technology
IeFP	<i>Istruzione e Formazione Professionale</i> (IT) Education and professional training
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
IT	information technology
IVET	Initial vocational education and training
KH	knowing how
KSC	knowledge, skills and competences
KT	knowing that
LO	learning outcomes
LTQF	Lithuanian qualifications framework (LT)
MCAST	Malta College of Arts, Science and Technology (MT)
MEDE	Ministry of Education and Employment of Malta (MT)
MQF	Malta qualifications framework (MT)
NAVET	National Agency for VET of Bulgaria (BG)
NCFHE	National Commission for Further and Higher Education (MT)

NEETS	not in education, employment or training
NFQ	National Framework of Qualifications (IE)
NGO	non-governmental organisation
NPM	new public management
NVQ	National Vocational Qualification (UK)
OECD	Organisation for Economic Cooperation and Development
PES	public employment service
PESTLE	political, economic, social, technological, legal and environmental trends
PISA	Programme for international student assessment
QMS	quality management system
QQI	Quality and Qualifications Ireland
RNCP	<i>Répertoire national des certifications professionnelles</i> (FR) [French National register of professional qualifications]
ROC	<i>Regionaal opleidingscentrum</i> (NL) [regional training centre]
SASE	Specification of apprenticeship standards for England (UK)
STAP	<i>Stimulerend Arbeidsmarktpositie</i> (NL) [Incentive labour market position]
STEM	science, technology, engineering and mathematics
TSC	transversal skills and competences
UAS	university of applied sciences
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
UOE	UNESCO-UIS/OECD/EUROSTAT
US	United States of America
VAE	<i>Validation des acquis de l'expérience</i> (FR) [procedure for the validation of non-formal and informal learning]
VET	vocational education and training
VOŠ	<i>Vyšší odborné školy</i> (CZ) [post-secondary vocational school]
WBL	work-based learning
WEB	<i>Wet educatie en beroepsonderwijs</i> (NL) [Vocational Education Act]

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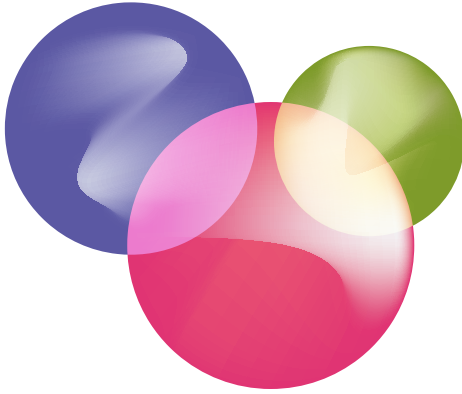
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The future of vocational education and training in Europe

Synthesis report

The *Future of VET* study examined how vocational education and training (VET) has changed since the mid-1990s, and how this may influence future opportunities and challenges.

This synthesis report summarises 3 years of research involving researchers and VET experts across Europe, with discussion of findings on the content and delivery of VET, assessment practices, and the link between initial and continuing VET. In addition to connecting and synthesising the series of research papers and case studies already published, it features an analysis by country. The study provides important insights into how VET in Europe has developed over the past three decades, illustrating observed trends and developments, as well as tendencies of convergence between countries and systems.

The research has also shown that the development of VET does not necessarily form an unbroken chain leading in one direction but can be interrupted by changes of course and even reversals in policy and practice. The future of VET is still unwritten. This report aims to provide a stimulus for developing future research in this area.

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