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21.4%
at risk of poverty
or social exclusion

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BREAKING

Skills
shortages
in the EU

How to eradicate skills poverty among the most vulnerable?

STUDY

European Economic
and Social Committee

How to eradicate skills poverty among the most vulnerable?

Final study report

General information

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Foreword

By Séamus Boland

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As we move towards the green and digital transitions, our economies are gradually facing shifts in employment structures. Demand for the skills to drive and implement the twin transitions is increasing. Likewise, demographic changes will lead to increased demand for healthcare workers.

It is therefore paramount that these transitions are paired with specific actions for training, upskilling and reskilling, as highlighted in the context of the European Year of Skills, initiated by the European Commission.

In the Civil Society Organisations' Group of the European Economic and Social Committee (EESC), we have placed the eradication of poverty at the centre of our activities. When addressing the challenges posed by the twin transition, it is crucial that we take into account pre-existing conditions of poverty and social exclusion, those who have fallen out of mainstream learning structures or who are facing inequalities in their access to the labour market.

In this context, the Civil Society Organisations' Group has taken the initiative to request an exploratory study on *How to eradicate skills poverty among the most vulnerable?*. The study examines the novel concept of "skills poverty", proposing a definition, investigating possible drivers and solutions, thus opening the way for further research into this topic in the future. It was carried out by CASE – Center for Social and Economic Research.

The researchers explore the most pressing skill divides for vulnerable groups, taking into account that individuals might face several overlapping barriers in accessing education and the labour market. The study analyses a number of specific and targeted actions in re-skilling and upskilling, with the aim of charting common strengths, weaknesses and opportunities.

At the same time, this study serves as a call to action. We know that the most disadvantaged are less likely to engage in training. Conversely, having decent work enables individuals to climb "the skills ladder", where higher skills lead to "higher levels of trust in others, in institutions and in governments". Therefore, addressing the skills gaps is paramount to social cohesion.

In addition, the study is an invitation to policy makers to cooperate with and support civil society organisations. Alongside technical skills, the researchers emphasise the growing demand for socio-emotional and transversal skills, including working together and communication, but also the need for adaptability. With their flexibility and hands-on experience, civil society organisations can complement traditional education, serving as knowledge hubs for targeted and inclusive approaches, but also helping to teach life skills and enhancing social cohesion.

Table of Contents

List of abbreviations

AI	Artificial Intelligence
ALL	Adult Literacy for Life
AMU	Danish adult vocational-training system
CEDEFOP	European Centre for the Development of Vocational Training
CEFR	Common European Framework of Reference for Languages
CIDIS	Documentation Info Centre and Development Initiative
DESI	Digital Economy and Society Index
DRC	Danish Refugee Council
EC	European Commission
EESC	European Economic and Social Committee
EGD	European Green Deal
EP	European Parliament
EQF	European Qualifications Framework
ESCO	European Skills, Competences, Qualifications, and Occupations
ESF	European Social Fund
ESJS	European Skills and Jobs Survey
ETBs	Education and Training Boards
ETS	Third Sector organisations
EU	European Union
EU-SILC	European Union – Statistics on Income and Living Conditions
Eurostat	Statistical Office of the European Union
FET	Further Education and Training
FETCI	Department of Education and Skills
FMD	Fondazione Mondo Digitale
GDP	Gross Domestic Product
GOL	Guaranteed Employability of Workers
ICT	Information and communication technology
IT	Information technology
IWP	In-work-poverty
LGBTQA+	Lesbian, Gay, Bisexual, Transgender, Queer, and/or questioning, Asexual, and more
NBP	National Bank of Poland
NEET	Not in Education, Employment, or Training
NGO	Non-governmental Organization
NSC	National Skills Council
NSS	Irish National Skills Strategy 2025
OECD	Organization for Economic Cooperation and Development
PES	Public Employment Service
PIAAC	Organization for Economic Cooperation and Development Programme for the International Assessment of Adult Competencies
PISA	Organization for Economic Cooperation and Development Programme for International Student Assessment
RRF	European Recovery and Resilience Facility
RSFs	Regional Skills Fora (RSF Regional Skills Forum)
SEVU	Secretariat for Vocational Welfare Education
SOLAS	Further Education and Skills Service
STEM	science, technology, engineering and mathematics
SWOT	Strengths, Weaknesses, Opportunities and Threats
TVET	Technical and Vocational Education and Training
UK	United Kingdom
VET	Vocational Education and Training
WCAG	Web Content Accessibility Guidelines

Abstract

The shift of employment towards sectors driving the twin (green and digital) transition, alongside long-term demographic trends and geo-political shocks, will influence all professions and sectors, affecting skill requirements. Apart from green and technical skills, transversal and social skills, enabling people to actively participate in social life and adapt to the complex, changing environment must also be reflected in education and training provisions at all levels. However, there are still visible skills inequalities in European society resulting from diverse factors contributing to uneven skills acquisition. The divide exists between those better educated, with relatively secure professional positions cumulatively increasing their advantage through additional educational investments during their life, and those missing out on education, whose hindered access to skills leads to skills poverty. Apart from addressing demand, skills programming should focus more on training disadvantaged groups, including by adapting to their needs where necessary, to ensure nobody is left behind in the ongoing transitions. This study extensively explores (based on qualitative and quantitative analysis) what determinants of unique circumstances of vulnerability most affect access to skills, identifying characteristics conducive to skills poverty. Concrete illustrations from country-based case studies help scrutinize the imperative task of designing inclusive upskilling and reskilling practices.

Executive summary

The European Union (EU) faces multifaceted challenges impacting employment, skills demand and the labour market as a whole, driven by long-term trends such as the twin (green and digital) transitions, demographic changes and digitalisation, as well as sudden geo-political shocks and their implications. Responding to the critical need to address these challenges in an inclusive, demand-oriented manner, the study examines various skills divides (inequalities) and their links to poverty and social exclusion. The study defines and illustrates skills poverty, while also exploring what groups are affected (and to what extent) by the various skills divides and what the drivers are behind those inequalities, finally reviewing a set of policy initiatives counting as good practice examples (such as upskilling and reskilling) that successfully help in overcoming the most pressing skills divides.

The methodology used combines literature review with quantitative analysis, resulting in the identification of skills inequality drivers and enabling a better grasp of how skills inequalities are linked to unique individual characteristics that might make a person at risk of poverty and social exclusion. This dual approach provides insights into the changing nature of work, and creates a solid base for the case-country studies and the design of tailored policy initiatives to tackle skills poverty. Adopting an intersectional approach to the analysis takes into account that individuals or groups of individuals experience multiple forms of disadvantage based on their different social characteristics or identities, which might affect their skills levels. The study concludes with an analysis of policy initiatives and measures that successfully help in overcoming the analysed skills divides among the most vulnerable. It is based on country-specific case studies, completed both through desk research and interviews with selected stakeholders. The focus of this part is narrowed down to five countries: Ireland, Italy, Poland, Denmark, and Belgium.

Current Trends and Future Skills Demands in the European Labour Market
Employment trends in the years up to 2035 will be shaped by the twin digital and green transitions. The jobs of tomorrow require skills for the twin transition, but at the same time, the growing share of older people in the EU will result in increased demand for care services, bringing opportunities in the silver economy. With this regard, not only technical skills linked to the green transition, but also transversal and social skills must be reflected in education and training provision at all qualification levels. The definition of essential competencies for personal fulfilment, health, employability, and social inclusion has evolved over the past decade, influenced by societal and economic changes as well as various European initiatives. In conclusion, **effective labour market integration and poverty alleviation require core skill sets encompassing literacy and numeracy, basic digital skills, multilingualism, transversal skills, and social (life) skills**.

Skills Poverty and Groups at Risk
The presence of skills inequality, characterized by the uneven distribution of individuals' abilities across different domains, results in skills poverty marked by insufficient, outdated, or non-existent proficiency in these skill sets. Those most worried about a state of skills poverty are individuals with particular identities or characteristics, members of certain populations who find it particularly difficult to exercise their rights. **The determinants that might have strong implications for inequalities in the distribution of skills (which are usually related to uneven access to high-level education, considered a strong driver behind skills inequality) include socio-economic status, gender and sexuality, ethnicity, migrant status, disability, age, and geographical (urban-rural) environment**.

It is important to keep in mind that one can be affected by more than one factor based on personal characteristics, creating unique circumstances of vulnerability based on multiple intersecting disadvantages. The skills divide exists, hence both design and implementation of targeted strategies and initiatives aiming to enhance individuals' competencies and skills, apart from addressing demand should be more sensitive to the training of disadvantaged groups. This could include adaptation of training to their needs where necessary, to ensure that nobody is left behind in the ongoing transitions.

When conducting qualitative analysis based on available data in the EU and Member States in the chosen skills categories (literacy and numeracy, basic digital skills, multilingualism, transversal skills and social skills), it becomes clear that certain characteristics have a stronger impact on the unique circumstances of vulnerability to skills poverty. Older individuals with a lower level of education are at highest risk of being affected, followed by foreign (particularly non-EU 27) residents and the rural population. Gender can also play a role, though a rather small one. Lastly, ethnic minorities can suffer from skills poverty, but as in the case of people with disabilities this is very context specific.

Addressing various disadvantages stemming from personal characteristics to achieve a just distribution of skills (through the alleviation of skills poverty) requires inclusive interventions that acknowledge the unique challenges faced by individuals and the intersections of their various attributes, mitigating the risk of falling into social exclusion or poverty. Disparities in access to quality education, leading to the unequal distribution of skills among the population, may contribute to a higher risk of poverty and social exclusion in society through being locked out of the labour market, impaired ability for increasing salary potential, and inactive participation in society.

Importance of Effective Upskilling and Reskilling Measures in Addressing Skills Poverty
Upskilling and reskilling initiatives are of critical importance for an inclusive, strong, and resilient labour force. As the skills divide exists, both the design and implementation of targeted strategies and initiatives aiming to enhance individuals' competencies and skills, apart from addressing demand should be more sensitive to the training of disadvantaged groups.

A comparative analysis of different approaches to the design and implementation of upskilling and reskilling initiatives, focusing on 15 measures or initiatives in five countries [*(1) Belgium: Digibanks, Accessia, SheDIDIT; (2) Poland: Development Strategy of the Lower Silesian Voivodship 2030, A chance – New opportunities for adults, the Ukrainian House in Warsaw; (3) Ireland: Regional Skills Fora, Adult Literacy for Life. You Employment – Generation Ireland.; (4) Italy: Fondazione Mondo Digitale (FMD) Academy, Guaranteed Employability of Workers (GOL), Documentation Info Centre and Development Initiative (CIDIS); (5) Denmark: ReDi School Copenhagen, Danish Refugee Council (DRC) - Job Oriented Efforts, SEVU Joint Committee for Vocational Welfare Education*] revealed several common strengths that are contributing to successful implementation and a positive reduction of skills poverty, including:
- ➢ dedication to supporting marginalized groups such a migrants, refugees, and people with disabilities;
- ➢ customizing methods to address the requirements of particular demographics;
- ➢ achieving tangible outcomes;
- ➢ and engaging in partnerships with external parties.

Conversely, some initiatives prioritize intersectionality, aiming at particular demographic intersections, while others concentrate on specialized sector training or broader efforts.

Conclusions and Key Recommendations for Addressing Skills Poverty

In light of the findings and successful strategies highlighted, there are key recommendations emerging that address the pressing need for upskilling among vulnerable groups:

➢ Firstly, it is imperative to **establish equal access to high-quality education right from early childhood**. By ensuring all children have access to quality education, regardless of their background, we can lay the groundwork for reducing skills poverty in society over the long term. Early intervention in education can equip individuals with the foundational skills necessary to thrive in an increasingly complex and competitive world. In the short term, there's a critical need for the implementation of lifelong learning activities tailored to support disadvantaged individuals. These initiatives should be directly aimed at providing access to high-quality upskilling measures for those who have been and are marginalised or underserved. **By prioritizing lifelong learning opportunities, we can empower individuals to continuously develop their skills and adapt to the changing demands of the job market**.

➢ **National policies play a pivotal role in shaping the landscape of education and skills development.** While efforts to address challenges related to digitalization are essential, it is equally important for policymakers to recognize the broader spectrum of skills required in today's rapidly evolving world of work. Emphasizing a holistic approach to skills development ensures that individuals are equipped not only with digital literacy but also with other essential skills vital for success in diverse industries.

➢ **Moreover, civil society organizations have a unique opportunity to make a significant impact by actively identifying and reaching out to vulnerable individuals in need of upskilling support.** By collaborating with local communities and leveraging their networks, these organizations can play a vital role in ensuring that no one is left behind in the pursuit of education and skills development. In essence, by implementing these recommendations, we can work towards creating a more inclusive and equitable society where all individuals have the opportunity to enhance their skills, unlock their potential, and contribute meaningfully to the workforce and society at large.

This research provides a robust understanding of skills divides, poverty, and social exclusion, presenting evidence-based insights for policymakers. Advocating for tailored policies and initiatives to bridge these gaps, recognizing the dynamic nature of the labour market and the complex interplay of various social characteristics, the findings and recommendations aim to inform strategic decisions at both European and national levels, contributing to a socially fair and inclusive future.

In summary, the study proves that addressing the unequal treatment of disadvantaged individuals to achieve a just distribution of skills (through skills poverty alleviation) requires inclusive interventions that acknowledge the unique challenges faced by individuals and the intersections of their various characteristics, mitigating the risk of them falling into social exclusion or poverty.

However, it is important to highlight that in the analysis, the absence of Lesbian, Gay, Bisexual, Transgender, Queer, and/or questioning, Asexual, and more (LGBTQA+) characteristics, stemming from a data gap at both the EU and Member-State levels, hinders a comprehensive understanding of how diverse identities within the community may impact skills level. Similarly, there were certain limitations with regard to the characteristics of persons with disabilities; the data are to some extent incomplete, and the type of disability plays a major role in whether an individual is less likely to acquire skills. This proves that further research is needed to address the existing data gaps and limitations, aiming for a more nuanced understanding of how various intersecting identities influence skill

development possibilities. By centring on inclusivity and equity in both research and interventions, we can work towards building a fairer and more inclusive society, where everyone has the opportunity to thrive and fulfil their potential.

The analysis underscores some limitations and proposes possible further research directions. Data gaps regarding LGBTQA+ characteristics at EU and Member-State levels impede understanding diverse identities' impact on skill levels. Similarly, varying levels of skills, as well as access to high-level education, among individuals with disabilities (that are not usually reflected in data according to type of disability) highlight the need for nuanced data analysis and further research. While the study examines dimensions of skills poverty affecting labour market integration and state of poverty, it acknowledges a lack of exploration into technical skills and industry-specific competencies, alongside potential discrepancies in interpreting skills poverty. Future research should adopt inclusive approaches, centering vulnerable communities' voices and experiences, and explore intersecting identities' influence on education access and labour market outcomes. Additionally, the study's reliance on available data limits capturing individuals' personal characteristics, necessitating further quantitative research. Lastly, exploring how emerging technologies like AI and automation exacerbate or mitigate skills inequalities warrants attention.

Introduction

Europe faces various challenges that influence lifestyle, employment, and education. The imperative transitions towards environmental sustainability and digitalization necessitate a transformation in skill sets to fully maximize their benefits. Addressing demographic shifts entails tapping into Europe's diverse talents, necessitating the creation of fresh opportunities in the realms of social and care economies.

Many people face exclusion from the labour market as they do not have the right skills or are working in jobs that do not fully match their talents. At the same time, 40% of employers cannot find people with the right skills to fill their vacancies, and too few people have the skill sets and support to view setting up their own business as a realistic route.[1] What is more, a high proportion of Europeans – one in five – struggle with reading and writing, and even more have poor numeracy and digital skills, making it impossible to profit from more advanced, job-oriented learning activities. While everyone should have the chance to upgrade their skills on a regular basis, only 4 in 10 adults take part in learning.[2]

Labour market exclusion is frequently paired with exclusion from social life and people being at risk of poverty. Social exclusion makes it impossible for people to enjoy the same rights and opportunities as the rest of society. Individuals and their families in such situations cannot realize their professional capabilities, neither can they participate equally in society. However, poverty is a multidimensional phenomenon caused both by collective factors, such as economic, social and labour policies and trends, and by individual factors – level of education, skills, health, and integration in society.

However, although having a job can help reduce the risk of poverty, it does not guarantee protection against poverty. Preventing in-work poverty (IWP) is seen as part of the overall goal to reduce poverty in the EU, since the in-work poor represent a substantial group among workers, with their numbers continuing to grow in many European countries, leading to further polarisation within the EU.[3]

On top of that, some disadvantaged people are more at risk of social exclusion and poverty (including in-work poverty) than others.[4] Disadvantaged individuals are being affected because of certain identities or characteristics, making it especially challenging for them to assert their rights – such as access to quality education. Those individuals belong to certain groups and certain populations within society, and are considered vulnerable.

Labour markets are inclusive when everyone of working age can participate in quality paid work, equipped with the necessary skills to respond to current labour-market demands. In order to ensure that upskilling and reskilling opportunities and policy measures align with the objectives of achieving socially fair and inclusive transitions, they should also reach those who are at risk of poverty and social exclusion, those who have fallen out of mainstream learning structures or who are facing inequalities in their access to the labour market.

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[1] EC (n.d.). *Employment, Social Affairs & Inclusion. Skills and qualifications.*
[2] Ibidem.
[3] EC (2019). *In-work poverty in Europe.*
[4] EC (2013). *COMMISSION STAFF WORKING DOCUMENT Follow-up on the implementation by the Member States of the 2008 European Commission recommendation on active inclusion of people excluded from the labour market - Towards a social investment approach.*

This study examines the skills divides present among the most vulnerable groups, the assessing the hypothesis that various personal characteristics contribute to skills divides, while delving into =drivers and consequences of the investigated skills inequalities, with an overreaching aim of providing insights into how we can combat skills poverty and design effective policies to reach the most vulnerable people. Following the understanding that individuals or groups of individuals experience multiple forms of discrimination based on their different social characteristics or identities, this study is adopting an intersectional approach to the analyses performed, aiming to present the most comprehensive recommendations on how to address the most pressing skills inequalities.

This study has been launched at the request of the European Economic and Social Committee's (EESC's) Civil Society Organisations' Group.

Scope of the work, methodology and limitations

The objective of the study is to examine various skills divides (inequalities) and their links to poverty and social exclusion. The study defines and illustrates skills poverty, while also exploring what groups of persons are affected (and to what extent) by the various skills divides, and what the drivers are behind those inequalities, finally reviewing a set of policy initiatives counting as good practice examples (such as upskilling and reskilling) that successfully help in overcoming the most pressing skills divides. The detailed research objectives of the study are given in the box below (Box 1.).

Box 1. Detailed research objectives of the study.

- To investigate the impact of the currently changing nature of work and labour market demands in view of the twin (green and digital) transitions;
- To analyse what the situation is today and what developments are expected within the next decade;
- To investigate what the drivers are behind skills inequalities, considering that the personal characteristics are likely to affect a person's situation and might therefore also have repercussions on inequalities in the distribution of skills, and the mechanisms of how to reduce them effectively;
- To analyse how skills gaps are connected to poverty;
- To investigate what groups of persons are affected (differently) by the various skill divides and to what extent;
- To review projects counting as examples of good practices in 5 EU Member States (using qualitative techniques, desk research, and interviews) in policy initiatives (taken or drawn up in close cooperation with civil society) such as upskilling and reskilling, that successfully help overcome the most pressing skills divides, and to assess what (and why?) initiatives have been successful, determining what the potential barriers are to engaging in learning activities and how these can be reduced.

Source: own elaboration, CASE.

Drawing on the conclusions provided regarding the most effective initiatives, policy recommendations are formulated (applicable at the EU level, in line with EU competencies, and where necessary at the national/regional level) on how to overcome skills divides and effectively combat skills poverty.

The first part of the study provides a theoretical background and rationale of the study, outlining the main labour market trends in the EU as well as future expectations for employment and expected skills demands. This part also provides a definition of the skills – narrowed down in order to identify relevant skills sets to be acquired or valorised in the context of effective labour market integration and poverty alleviation. A definition of "skills poverty" is also proposed in order to address the risks related to skills inequality and the risk of poverty.

The second part of the study presents a theoretical overview of characteristics likely to affect a person's situation, placing one in a more vulnerable situation compared to the general population when it comes to level of skills possessed. Employing an intersectional approach, this chapter investigates the factors shaping skills inequalities, acknowledging the significant influence of individual characteristics and their possible effects on the unequal distribution of skills. Subsequently, the latter part of this chapter delves into the correlation between skills gaps and poverty, emphasizing the critical role of equitable access to education across all levels for the overall wellbeing and welfare of society.

The statistical analysis on trends and skills gaps, examining the extent to which gender, age, socio-economic background, ethnicity, migrant status, disability, and geographical location impact particular skill levels is introduced in the third chapter of the study. This analysis is based on data from the last decade from several databases that provide references to trends in skills poverty among the EU27. Among these databases, the focus is mainly The Statistical Office of the EU (Eurostat), European Union – Statistics on Income and Living Conditions (EU-SILC), and European Centre for the Development of Vocational Training (CEDEFOP), but also the Organization for Economic Cooperation and Development (OECD) Programme for the International Assessment of Adult Competencies (PIAAC), while data from the OECD Programme for International Student Assessment (PISA) complement the analysis in order to achieve an in-depth assessment of the phenomenon of skills gaps. In the analysis, the absence of LGBTQA+ characteristics stems from a data gap at both the EU and Member-State levels, hindering a comprehensive understanding of how diverse identities within the community may impact skills level. Similarly, there were certain limitations with regard to characteristics of persons with disabilities; the data are to some extent incomplete, while the type of disability plays a major role in whether an individual is less likely to acquire skills. It's important to emphasize that the proficiency level of skills and their availability significantly differs based on the nature of the disability. This emphasizes the necessity for a more detailed examination of the data and underscores the significance of additional research to comprehend and cater to the unique skill requirements of these marginalized communities.

Combining quantitative analysis with literature review results in the identification of skills inequality drivers, enabling a better grasp of how skills inequalities are linked to unique individual characteristics and might put a person at risk of poverty and social exclusion. This dual approach provides insights into the changing nature of work, and creates a solid base for the case-country studies and the design of tailored policy initiatives to tackle skills poverty in the given countries.

The last part of the study (Chapter 4) presents an overview of policy initiatives and measures that successfully help in overcoming the analysed skills divides, with the aim to determine what the potential barriers are to engaging in learning activities and how these can be reduced. The focus of this part is narrowed down to five EU Member States: **Ireland, Italy, Poland, Denmark and Belgium,** that are

presented as country-specific case studies in Annex 1 of the study. The approach for the selection of countries for the analysis – apart from ensuring a good cross-section of countries across such typical dimensions as (i) geographical location, and (ii) different national socio-economic structure approximated by different welfare regimes – also takes into consideration such characteristics as (iii) different vocational education and training (VET) formal and informal educational systems allowing for different methods of skilling; (iv) various approaches to skilling addressed to diverse vulnerable groups within national policies and (v) the level of engagement of civil society partners in upskilling strategies (in particular within the Skill Pact). The key component crucial for a meaningful presentation and analysis of 15 case studies (3 per country) was the identification of successful policies and initiatives that support vulnerable groups. They were broken down into the following steps: (1) identifying national educational strategies; (2) identifying successful policy initiatives; (3) an overview of selected initiatives; (4) interviews with selected stakeholders;[5] and (5) structuring the case study.

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[5] The proposed interview scenario and list of interviewed stakeholders is in Annex 2 and Annex 3 of this Report.

1.   Skills for effective labour market integration and the fight against poverty

This chapter provides the theoretical background and rationale of the study, focusing on ongoing transitions in the labour market and their implications for skills demand. It highlights the importance of up and re-skilling provisions for preventing social exclusion and poverty that may stem from rising inequalities in skills distribution in European society.

Examining current conditions and future trends over the next decade, while also providing an overview of European frameworks of skills suitable for the transitions, the study gives a background for introducing a classification of skill sets essential for effective labour market adaptation. It also introduces the core concepts, such as skills poverty, that will be used throughout the document.

1.1. European labour market – current trends and future skills demands

The labour market is facing ongoing change shaped by so-called megatrends[6] – **demographic changes, globalisation, technological progress and digital transition, as well as climate change and the implementation of climate change mitigation policies (green transition).** What is more, Brexit, the COVID-19 pandemic, accompanying health crises and the Russian war of aggression on Ukraine have caused disruption or acceleration of the established demographic patterns, and have highlighted and heightened certain trends and challenges that were already affecting the labour market in Europe. These include digitalisation and automation, the increasing use of artificial intelligence (AI), constraints relating to a shortage of digital skills, and problems concerning the status of platform workers and other workers in non-standard forms of employment.[7]

While some of the demographic trends have been accelerated or disrupted over the last few years, it seems that at least some long-term demographic trends are re-establishing themselves**. European demographics are characterised by several long-term trends, such as rising median age, declining fertility rates, a shrinking working-age population, decreasing population growth and increasing regional disparities, including a growing urban-rural divide**.[8] Moreover, Europe has been a continent of positive net migration, with more people moving into the EU than leaving it, underlining **the fact that migrants play a crucial economic and social role in the European labour market**.[9]

It is crucial for the EU and Member States to address the challenges brought about by the demographic transition, as in the longer-term perspective global warming and environmental deterioration, such as extreme weather events, could have a sizeable impact on demographic change, contributing to rising mortality and chronic illnesses and inducing migratory movements. The shrinking working-age population underlines the need for activating the available talent and for continued investment in skills for all. As skills shortages become more prevalent, additional efforts will be needed to activate more people for the labour market.[10] This applies in particular to groups considered vulnerable.

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[6] OECD (2019). *OECD Employment Outlook 2019: The Future of Work*.
[7] EP (2021). *The future of work. Trends, challenges, and potential initiatives*.
[8] EP (2022). *Demographic Outlook for the European Union*.
[9] EC (2023). *The future of social protection and of the welfare state in the EU*
[10] EC (2023). *Commission Staff Working Document. The impact of demographic change – in changing environment*.

However, the demographic transition also creates opportunities for both individuals and society as a whole. As people live longer and healthier lives, they enjoy more options for personal and professional development. As businesses and employment practices adapt to the shrinking workforce, underrepresented groups may get more opportunities to put their talent to use in the labour market. The **growing share of older people in the EU will result in an increased need for care services, bringing opportunities in the silver economy** – a sector that can help improve the quality of life of older people by providing innovative services, including digital services.[11]

The dynamically changing worldwide economic reality, towards **globalisation**, entails changes in employment in European and specific sectors of the economy. Structural changes in the economy have their sources in modern technologies and digitalisation, as they transform industrial civilisation into a service civilisation created by a knowledge society, putting the spotlight on the importance of mechanisms for anticipating relevant skills.[12]

Globalisation and the ongoing **digital transition** shows potential for creating new employment opportunities not only in the silver economy; over the past decade, 4 in 10 jobs were created in digitally-intensive industries.[13] Nevertheless, even when new jobs emerge, they are often organised in non-standard forms of employment, which do not always guarantee the protection of workers' rights, and so concerns arise as to the jobs' quality. The EU recognises these changes, together with the need for transitioning into a more sustainable, green economy.[14]

The transitions being observed may have opposing impacts on the wealth and wellbeing of individuals. On the one hand, they are creating pressure for people to develop new and higher levels of skills, especially where the transition is taking place rapidly. On the other hand, the transitions can be an opportunity for many to start upskilling throughout life, to use their skills more effectively and in consequence to increase their wellbeing. The changes in skills demand brought about by digitalisation are creating opportunities for some workers while making others vulnerable. A highly skilled workforce is more likely to benefit, as their skills complement technology and they can perform non-routine tasks. Conversely, those with low skill levels are more likely to be unemployed or employed in jobs that are vulnerable to automation, while also facing increasing competition from middle-skilled workers whose jobs have been most affected by the digital transformation.[15]

Alongside the trends in digitalisation and automation, the **shift towards greener and more sustainable economies is   pivotal in EU labour markets**. The green transition is a term that refers to making the European Union more sustainable by reducing environmental impacts, modernizing its economy, and increasing its autonomy by becoming less dependent on energy and raw material imports. Global efforts to fight climate change have been manifested through many international agreements and strategies, with the Paris Agreement laying the groundwork for Europe's new growth strategy aiming to make Europe the first climate-neutral continent by 2050. In December 2019, the European Commission (EC) established the European Green Deal (EGD), addressing climate and environment-related challenges in an integrated and holistic approach – compromising a number of initiatives, strategies, funding

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[11] Ibidem.
[12] Balcerowicz-Szkutnik (2015). *Globalisation process and the labour market. Selected countries and aspects.*
[13] OECD (2019). *OECD Employment Outlook 2019: The Future of Work.*
[14] Von der Leyen (n.d.). *A Union that strives for more. My agenda for Europe.*
[15] OECD (2019). *OECD Skills Strategy 2019.*

programmes, and legislative acts. Russia's aggression on Ukraine has amplified the need for a transition towards sustainable energy, as dependence on fossil fuels has become a geopolitical issue with implications for the strategic autonomy of several Member States. The green transition is necessary to mitigate the consequences of climate change and environmental degradation, and it could decrease the EU dependence on energy imports. The accelerated obsolescence of some technologies and products will affect the structure of labour demand and may result in the obsolescence of some jobs and human capital (more specifically so-called "brown jobs" - highly polluting activities in mining, manufacturing, agriculture, etc.).[16] Equipping current and future workers with the necessary skills is a precondition for a just green transition and the successful implementation of the EGD.[17]

The green transition requires investment in people's skills to increase the number of professionals who build and master green technologies, develop green products, services and business models, and who create innovative nature-based solutions and help minimise the environmental footprint of activities.[18] In addition, according to the EC, only with an informed, socially-aware population and workforce that understands how to think and act "green" will Europe be able to reach the goal of a climate-neutral continent, with a resource-efficient society and a circular economy[19]. Likewise, achieving a human-centric transition calls for a step change in the structure of skills. Already now, Europeans – men and women alike – need skills in life and at work: in some job categories, more than 90% of jobs require specific digital skills, just as they require basic literacy and numeracy skills.[20]

Figure 1. Share in total employment in 2021 (%) with employment change (%) in 2008–21, by sector (EU-27).
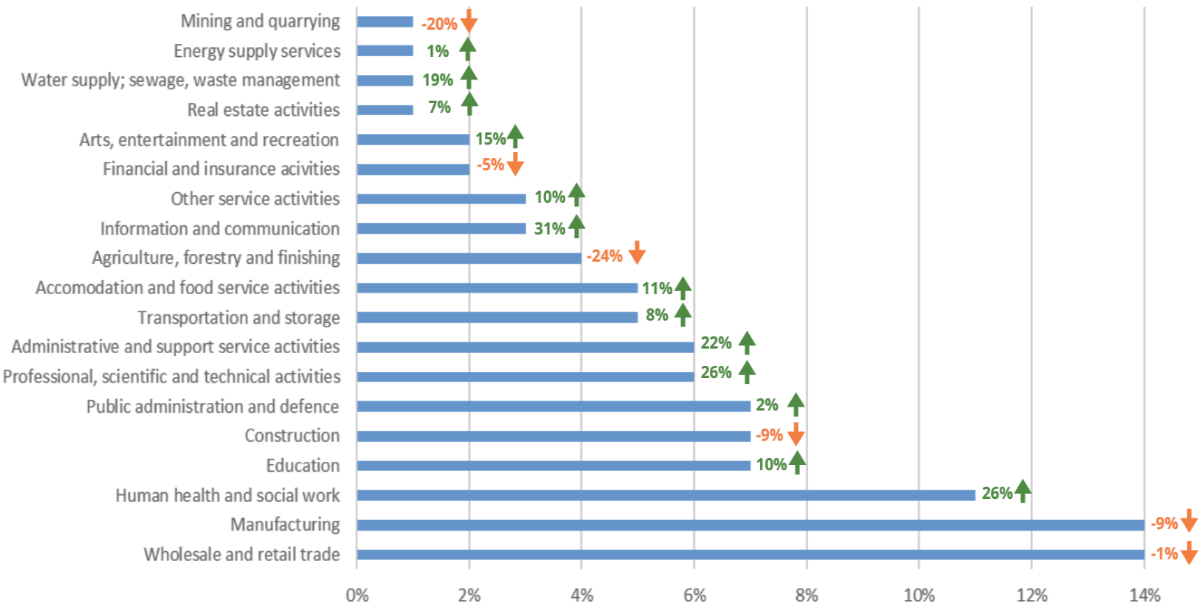
Source: CEDEFOP (2023). Skills in transition: the way to 2035.

[16] EC (2022). *Discussion Paper 176 The Possible Implications of the Green Transition for the EU Labour Market.*
[17] CEDEFOP (2021). *The Green Employment and Skills Transformation. Insights from a European Green Deal skills forecast scenario.*
[18] Ibidem.
[19] EC (2020). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS European Skills Agenda for sustainable competitiveness, social fairness and resilience.*
[20] EC (2023). *Shaping Europe's digital future. Digital Skills.*

As the CEDEFOP statistics show (Figure 2), an increase in employment has been observed in the information and communication sector (31% change between 2008–2021), followed by professional, scientific and technical activities (26% increase), human health and social work (26%) and water supply, waste management (19%). Major decreases have been observed in the mining, quarrying, agriculture, forestry and fishing sectors, mainly due to the introduction of automation processes.

While the highly skilled and mobile "winners" of the undergoing transitions on the labour market can take advantage of this market's current demand, lower income workers and the unemployed face disproportionate barriers to full integration and achieving full potential.[21] The changes might also have a particularly negative impact on vulnerable groups. These are people who are exposed to the risk of poverty due to their more disadvantaged individual situation, and they might possess limited resources and opportunities for undergoing training. They may have limited access to the right skills due to their physical or mental inability to acquire them, poor health, a disadvantageous level of education (primary), or inadequate and disadvantaged housing and social environment. It is especially important to address this effect, as **it is estimated that the twin digital and green transitions will shape employment trends in the years up to 2035**.[22]

According to CEDEFOP's forecast,[23] a big share of job opportunities emerging up to 2035 will be for highly skilled occupations, jointly amounting to about 56% of total job openings (the combination of new/lost jobs and replacement needs). Such openings will be most numerous for high-skilled non-manual occupations (such as business and administration professionals, legal, social and cultural professionals, and science and engineering professionals). Many arising employment opportunities will likely be considered "green", triggered by the implementation of the climate change mitigation policies (requiring a technical or engineering profile), and new regulations will boost demand for roles with legal backgrounds. Similarly, employment losses are likely in primary industries (particularly coal, oil and gas), as demand for these energy supply products declines as other sectors and countries take action towards and achieve carbon emission reduction targets. With an ageing population, employment for health and social care professionals (such as personal service workers and personal care workers) is expected to grow rapidly in the coming years in almost all Member States.

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[21] EP (2020). *Unionisation and the twin transition.*
[22] CEDEFOP (2023). *Skills in transition: the way to 2035.*
[23] Ibidem.

Figure 2. Forecast employment growth (% annual rate) from 2021 to 2035, by sector (EU-27).

Sector	Growth
Information and communication	1.2% ↑
Professional, scientific and technical activities	1% ↑
Human health and social work	0.9% ↑
Accommodation and food services	0.8% ↑
Arts, entertainment and recreation	0.6% ↑
Education	0.5% ↑
Financial and insurance activities	0.4% ↑
Wholesale and retail trade	0.3% ↑
Transportation and storage	0.1% ↑
Water supply; sewage, waste management	0.1% ↑
Construction	-0.1% ↓
Energy supply	-0.3% ↓
Mining and quarrying	-1.9% ↓
Manufacturing fuels	-3.5% ↓
Agriculture, forestry and fishing	-4% ↓

Source: CEDEFOP Skills Forecast (online tool).

Until 2035, employment across most sectors within the EU-27 is projected to grow or stay steady (Figure 2). The exception lies in the primary industries (as mentioned above) and the employment outlook for skilled agricultural, forestry and fishery workers, which is anticipated to decrease by 4.5%. Nonetheless, it is worth noting that CEDEFOP's skills forecasting method might not fully account for the impact of the Farm to Fork Strategy, which could potentially stimulate agricultural employment due to the transition in protein production from animal-based to plant-based sources, which is fundamental to the evolving production and consumption trends.[24] However, job openings are forecast positively in both agriculture and mining and quarrying, where employment decline will be compensated by replacement demand, as many of current workers will retire.

1.2. Skills sets for effective labour market integration and poverty alleviation

Adapting to changes in the labour market requires essential skills. The shift of employment towards sectors that drive the green transition, alongside the shift to sustainable practices in production and consumption, will influence all professions and sectors, leading to alterations in skill demand. Alongside technical skills linked to the green transition, transversal skills must also be reflected in education and training provision at all qualification levels, given the growing demand in the silver economy and the needed competences to interact with digital technologies. **However, as the skills divide exists, skills programming, apart from addressing the skills demand should be more sensitive to the training of disadvantaged groups, including by adapting training to their needs where necessary, to ensure that no one is left behind in the ongoing transitions.**[25]

The jobs of tomorrow require skills for the twin transitions. The green transition requires investments in people's skills to increase the number of professionals who build and master green technologies (including digital), develop green products, services and business models, create innovative nature-based solutions and help minimise the environmental footprint of activities.

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[24] CEDEFOP (2023). *Skills in transition: the way to 2035.*

[25] EESC (2023). *Competence and skill development in the context of the green and digital transition;* ESC (2022). *European Year of Skills 2023.*

On the other hand, the fast-paced adoption of digital technologies has a strong effect on the type of skills that individuals need to master to be able to adapt to the needs of the labour market. There is a need to develop adequate digital and cognitive skills to interact with new technologies, but the importance of socio-emotional skills (traits that differentiate humans from Artificial Intelligence (AI), that is, empathy, intuition, and creativity) is also growing, as AI is being adopted more broadly in society and at work.[26]

Socio-emotional and transversal skills, including working together, critical thinking, problem-solving and adaptation to change in complex environments, are also especially important given the growing silver and care economy due to demographic change, and are in high demand in the labour market. While schools do have a role to play, the said skills are often developed outside formal learning, at work and throughout life. They can be difficult to identify, recognise and communicate, which is why in the next phase of EU action on transversal skills more needs to be done to capture them.[27] As highlighted by the EESC, **the competencies and skills that enable people to actively participate in social life are the key to social and economic progress in our societies.** Transversal skills and social skills should also be considered the skills that citizens (including workers) need to obtain.[28]

On the European level, there have been several campaigns promoting more effective and inclusive investments in training and upskilling, including making 2023 the European Year of Skills,[29] and emphasizing the importance of providing adequate support for skills for the green transition in the European Skills Agenda.

The European Skills, Competences, Qualifications, and Occupations (ESCO)[30] classification compromises the definition of a taxonomy of skills for the green transition, that already includes transversal skills (*core skills and competences, thinking skills and competences, self-management skills and competences, social and communication skills and competences, physical and manual skills and competences, life skills and competences*) – highlighting their importance in the labour market.[31]

*The Key Competences for Lifelong Learnin*g specified in 2006 by the European Parliament and the Council of the European Union, and updated according to current changes in competence requirements in the labour market with *Recommendation on Key Competences for Lifelong Learning* in 2018, which identifies eight key competences needed for personal fulfilment, a healthy and sustainable lifestyle, employability, active citizenship and social inclusion. They are: **(1) literacy; (2) multilingualism; (3) numerical, scientific and engineering skills; (4) digital and technology-based competences; (5) interpersonal skills and the ability to adopt new competences; (6) active citizenship; (7) entrepreneurship; (8) cultural awareness and expression.[32]**

The definition of the set of key competencies needed for personal fulfilment, health, employability and social inclusion has been shaped not only by societal and economic developments but also by various initiatives in Europe during the last decade. **Special attention has been given to improving basic skills,**

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[26] OECD (2022). *Skills for the Digital Transition: Assessing Recent Trends Using Big Data.*
[27] EC (n.d.). *European Skills Agenda for Sustainable Competitiveness, Social Fairness And Resilience.*
[28] EESC (2022). *European Year of Skills 2023.*
[29] EP (2022). *Proposal to make 2023 European Year of Skills.*
[30] EC (n.d.). *European Skills, Competences, Qualifications and Occupations (ESCO).*
[31] Ibidem.
[32] Ibidem.

investing in language learning, improving digital and entrepreneurial competencies, and the relevance of common values in the functioning of our societies.

With an overview of the main categories addressing current labour market needs and challenges, the proposed focus of research is narrowed down to the relevant sets of skills to be acquired or valorised in the context of effective labour market integration. Care and social care sectors, as well as new skills supporting digitalisation, are in particular demand (new work environments and settings are emerging in which care is delivered).[33] Taking into account the relevance of the skills, and possible overlaps of the categories described, the following typology is proposed for further analysis (Table 1).

Table 1. Skills sets for effective labour market integration and poverty alleviation.

Skills set	Description
Literacy and numeracy	Skills to communicate both orally and in writing in a variety of situations, and to monitor and adapt one's own communication to the requirement of the situations; Skills to apply numerical and mathematical content, information, ideas and processes to meet the basic demands of learning and work.
Basic digital skills	Skills that empower individuals to become digitally literate, that can be applied both to the workforce and in general to individuals in the society.
Multilingualism	Mastering languages – communicating through reading, writing, speaking and listening in one's mother tongue and in (a) foreign language(s).
Transversal skills	Skills and competencies with high transferability across different sectors, understood as core skills required across the labour force.
Social (life) skills	Social and communication skills as well as life skills and competencies that are shaping freedom, tolerance, critical spirit, European values and democratic citizenship. This skills set is essential for the future of the EU, in order to combat the increasing intolerance and emerging radical movement.

Source: own elaboration, CASE.

The level of these five categories of skills is assessed among the most vulnerable groups exposed to the risk of **skills mismatch** in regard to the current needs of the labour market. This mismatch of skills is strongly related to the concept of so-called **skills poverty** – a condition in which individuals or communities lack the necessary skills and competencies (in this case, skills core skills necessary for effective labour market integration) required to fully participate in economic, social, and technological advancements. According to the assumptions for this study, skills poverty is manifested through (1) insufficient or obsolete literacy and numeracy skills; (2) no or insufficient basic digital skills; (3) no or insufficient skills related to communication in (a) foreign language (s); (4) a deficit of transversal skills; and (5) a deficit of social (life) skills.

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[33]EC (2023). *The future of social protection and of the welfare state in the EU,* EESC (2022). *Health Workforce and Care Strategy for the future of Europe.*

2.   A theoretical overview of skills inequalities – vulnerable groups, drivers and consequences for poverty

Megatrends of technological change, globalisation, as well as the demographic shift make core skills more crucial than ever for succeeding in today's world.[34] Following the definition of skill – as an ability to perform a specific task or activity to a high level of proficiency[35] – **skills inequality is an uneven distribution of the ability of individuals to perform tasks in various domains in the population**. It can also be interpreted more generally as a disparity between those with higher skill levels and their lower-skilled peers.[36]

Skills inequality has been a persistent phenomenon over recent decades and derives not only from the rapidly changing markets and uneven responses by national public and private educational systems to the transition, but is also the result of a variety of factors contributing to uneven access skills acquisition, and willingness and ability to take part in training activities.[37] This part of the study presents a theoretical overview of characteristics likely to affect a person's situation, placing one in a more vulnerable situation than the general population. Employing an intersectional perspective, the chapter explores the primary factors influencing skills inequalities, recognizing the substantial impact of personal characteristics and their potential repercussions on the uneven distribution of skills. Subsequently, the latter part of this chapter delves into the correlation between skills gaps and poverty, emphasizing the critical role of equitable access to education across all levels for the overall well-being and welfare of society.

2.1. Vulnerable groups

All people have the right to non-discrimination, equality in education and access to skills. Despite advancements achieved over the years and numerous political initiatives at both the EU and Member States levels, disparities persist in the allocation of skills. The divide exists between those better educated, with relatively secure professional positions cumulatively increasing their advantage through additional educational investments during their life course, and those who miss out on education opportunities.[38] These initial educational inequalities persist throughout their lives, making them vulnerable to impaired skills access, and consequently affected by skills poverty.

Vulnerability itself is a multi-faceted term, capturing a seeming paradox that relates to the status of social groups that are part of society, but at an increased risk of social, political or economic exclusion. While there is no established definition of vulnerability in The European Court of Human Rights's (ECtHR's) case law, there have been interpretations of vulnerability under Article 14, related to the **concept of "protected characteristics" that considers vulnerability to stem from the fact that due to certain identities or characteristics, members of some populations find it particularly difficult to exercise their rights. Those vulnerable belong to certain groups and certain populations within society**.[39]

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[34] OECD (2019). *OECD Skills Strategy 2019*.
[35] Van Echtelt (2018). *What are Skills?*
[36] Forbes (2018). *Closing The Skills Inequality Gap*.
[37] Global Deal (2023). *Upskilling and reskilling for the twin transition: The role of social dialogue*.
[38] EC (2022). *Skills training in the age of automation: Reinforcing inequalities?*
[39] Arnardottir (2017). *Vulnerability under Article 14 of the European Convention on Human Rights: Innovation or Business as Usual?*

In the context of European Human Rights Protection, vulnerable and marginalised groups can be categorised into the five following types:

➢ **groups traditionally considered vulnerable**, such as children, the elderly, the disabled and women, who are illustrative of individuals who by their innate or physical conditions are socially construed as "inherently vulnerable";

➢ **vulnerable minorities**, meaning groups whose vulnerability derives from their status as a minority by reference to the dominant cultural, social, ethnical or sexual orientation positions of their society of reference (so primarily ethnic and national minorities, linguistic minorities, religious minorities and sexual minorities);

➢ **non-nationals**, since the fact of being present in a country that is not of one's own nationality has come to be perceived internationally as an element of vulnerability; in this category vulnerability embraces various groups ranging from those deprived of any nationality and those who cannot avail themselves of the protection of their state of nationality, to those awarded the highest level of protection as citizens of the European Union. Particularly vulnerable are the stateless and asylum seekers (the vulnerability of the latter is often exacerbated by such personal circumstances as bad health and old age);

➢ **victims of illegal acts**, as their vulnerability derives from intentional human conduct, turning an individual into a victim (including trafficked migrants, victims of crime, and victims of terrorism);

➢ **the circumstantially vulnerable**, covering three very different groups: prisoners/detainees, irregular immigrants, and socially vulnerable people (in this case meaning financially deprived and at direct risk of social exclusion).[40]

Another approach to defining vulnerability can be supported by data, as according to EU-SILC, in 21.6% of the EU population (95.3 million people) were at risk of poverty or social exclusion in 2022.[41] Across the EU, the risk of poverty or social exclusion was higher for women (than men), young adults (rather than middle-aged or elderly persons), people with a low level of educational attainment (rather than those with a medium or tertiary level of educational attainment) and, in particular, for the unemployed. What is more, throughout the period from 2015 to 2021, the risk of poverty or social exclusion in the EU was lower among national citizens than it was among foreign citizens (the level among citizens of other EU Member States was 27.5%, while that for non-EU citizens was close to half, at 48.4%, compared to 19.5% of EU nationals).

Following the concept of "protected characteristics" and the statistics on the risk of poverty or social exclusion among adults, the determinants likely to affect a person's situation and that might have repercussions on inequalities in the distribution of skills, making them vulnerable – in this case in regard to access to skills – are outlined in the table below (Table 2.). This selection, based on the authors' conclusions, comprises the groups of people traditionally considered vulnerable, minorities, and socially vulnerable groups, who might not only face unequal access to tothe labour market, but also experience difficulties in upskilling and responding to market changes.

The determinants described might have strong implications on inequalities in the distribution of skills, and they are usually related to **uneven access to high-level education that can be considered a**

[40] Ippolito et. al (2015). *Protecting Vulnerable Groups: The European Human Rights Framework.*
[41] At risk of poverty or social exclusion, abbreviated as AROPE, corresponds to the sum of persons who are either at risk of poverty, or severely materially and socially deprived or living in a household with a very low work intensity.

powerful variable (driver) behind skills inequality. The absence of good quality education for individuals (especially from low socioeconomic backgrounds) increases the gaps in chances and skills. Conversely, free quality education has the opposite effect.[42] A solid education can also mitigate stereotypes by fostering tolerance and openness. For instance it has been proven that for women from a poor family background, education reduces the probability of conforming with traditional gender roles.[43] Lastly, place of living, characterised by the degree of urbanisation, and where access to education and lifelong learning services is lower, is also an important factor in increasing skills inequality.[44]

Table 2. Characteristics (determinants) likely to affect a person's situation and that might have repercussions on inequalities in the distribution of skills.

	Characteristics (determinants)	Description
Intersection	**Socio-economic status**	Disadvantaged socio-economic situation; individuals, families and communities often face limited resources and opportunities when it comes to access to education and skills needed for the labour market, including limited access to quality education. Socio-economic status plays a crucial role in childhood development; the disadvantaged may lack early childhood education, a stimulating environment, or even proper living conditions. [45]
	Gender and sexuality	Although subtle and hidden to at least some degree in Europe, gender discrimination is nonetheless pervasive. Women face a number of challenges in accessing and completing quality education and training, and more so in transitioning to decent employment. They are more likely to be in vulnerable employment, such as informal employment and especially unpaid family work.[46] Household, community and care responsibilities often limit their chances of accessing education and training, or participating in the labour force. Consequently, educational and skill or competency disadvantages accumulate throughout women's lives. LGBTQA+ persons face elevated threats of violence and discrimination in (not only) employment and educational opportunities. Educational institutions often have discriminatory policies or practices that directly affect such learners.[47]
	Ethnicity	People from racial and ethnic minority backgrounds face discrimination and its consequences on a daily basis, but the exact scale of the problem is hard to gauge owing to a lack of data and general under-reporting of racist incidents. When it comes to access to education and training, ethnic minorities may face numerous disadvantages connected to limited resources and limited access to

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[42] Oxfam (2019). *The Power of Education to Fight Inequality - How increasing educational equality and quality is crucial to fighting economic and gender inequality.*

[43] Rivera-Garrido (2022). *Can education reduce traditional gender role attitudes?*

[44] EC (2023). *Cohesion Policy.*

[45] OECD (2012). *Equity and Quality in Education: Supporting Disadvantaged Students and Schools.*

[46] EP (2022). *REPORT on women's poverty in Europe.*

[47] OHCHR (2019). *The inclusion of LGBT people in education settings of paramount importance to "leaving no one behind".*

		advanced training opportunities, and barriers relating to cultural and language differences. In some cases, stereotypes and biased skill assessments may be leading to their potential being overlooked.[48]
	Migrant status	The relationship between migration and skills development is complex. Migration can be a means of timely and effective response to the needs of labour supply and demand, can stimulate innovation and development in the countries of origin and destination, and can also further the transfer or updating of skills. Nevertheless, migrant workers face various challenges in accessing quality training and decent jobs, such as the under-utilisation of skills, lack of training and employment opportunities, lack of information, and the exploitation of low-skilled workers. Migrant status is often connected with limited access to education and training, sometimes arising from cultural and language differences.[49]
	Disability	Due to the fact that persons with disabilities are frequently excluded from regular primary and secondary education, few persons with disabilities attend tertiary education. Furthermore, mainstream technical and vocational education and training (TVET) systems are often inaccessible to persons with disabilities, with a lack of disability awareness among teaching staff as well as inaccessible training methods and tools. Many countries still have segregated vocational rehabilitation and training centres that specialise in catering for people with disabilities. These facilities usually only provide a limited set of skills development programmes, which in addition are often either not aligned with labour market demands or are designed based on the belief that persons with disabilities are only capable of working in the informal economy.[50]
	Age	Young people are in a vulnerable state on the labour market as many of them lack the skills needed, especially those not in education, employment, or training (NEETs). Moreover, young people are particularly likely to lack the skills that are acquired non-formally through on-the-job training and work experience.[51] The elderly are highly affected by the digital divide, and are likely to lack skills that are expected on the labour market. What is more, older workers may face difficulties adapting to changing skill requirements due to longer work experience in specific fields or industries.[52]
	Geographical (urban-rural) environment	Individuals and communities residing in rural areas have fewer educational opportunities and face underinvestment when it comes to educational capacity. Urban areas tend to have better access to various educational and training opportunities.[53]

Source: own elaboration based on desk research, CASE.

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[48] EP (2023). *EU legislation and policies to address racial and ethnic discrimination*.
[49] ILO (n.d.) *Skills for migrant workers*.
[50] ILO (n.d.). *Increasing employability of persons with disabilities*.
[51] ILO (n.d.). Skills for Youth Employment.
[52] UNECE (2021). Ageing in the Digital Era.
[53] ILO (n.d.). *Skills for rural employment*.

Good performance in primary education plays a crucial role in obtaining further educational opportunities. Securing equal access to education is a necessity for maintaining equality in societies and giving an equal start to everyone. However, **the fact that inequalities in access to education are often associated with differences in individuals' family background is key to understanding that they are not largely driven by differences in the individuals' abilities**.[54]

The **socio-economic and family background** (described under various names, such as family background, socio-economic background, or intergenerational factors), approximated by family income, parents' education level, and parents' occupation or employment status,[55] have been proved to affect children's educational achievements at an early stage, affecting their educational performance later in their lives.[56] In most countries, the proportion of people who perform below average in reading, mathematics, and science is much larger among individuals with a low socio-economic status than among those from a high socio-economic background. Comparing the bottom quarter of socio-economic status with the top quarter, underachievement rates are 19.3 percentage points higher on average across the EU, with students of low socio-economic status 5.6 times more likely to underachieve in school education than students of high socio-economic status.[57] In a study conducted in Finland, analysing how socioeconomic characteristics of mothers and fathers over the course of children's lives explain occupational outcomes in adulthood, parental education had the largest predetermining impact on children's educational achievements and professional career prospects.[58]

It is important to keep in mind that despite the strong impact of socio-economic background of an individual, **one can be affected by more than one factor of unequal treatment based on personal characteristics**. The disadvantage (in this case – appearing as unequal access to skills and the labour market) can be determined by simultaneous interaction of multiple characteristics. While low-income family background would be a significant determinant, other intersecting factors – such as gender, ethnic background, migrant status, sexual orientation and disability – contribute to the complexity of the challenges faced by individuals. The figure below (Figure 3) illustrates the unique circumstances of vulnerability based on multiple intersecting characteristics.

[54] EC (2023). *Cohesion Policy*
[55] Chen et al. (2018). *Effects of socioeconomic status, parent–child relationship, and learning motivation on reading ability.*
[56] Quigley and Nixon (2016). *5: Parental Investment & Child Development. Equally?*
[57] EC (2022). *Education and Training Monitor.*
[58] Erola, Jalonen, and Lehti (2016). *Parental education, class and income over early life course and children's achievement.*

Figure 3. Intersectional approach to characteristics impacting skills inequalities.
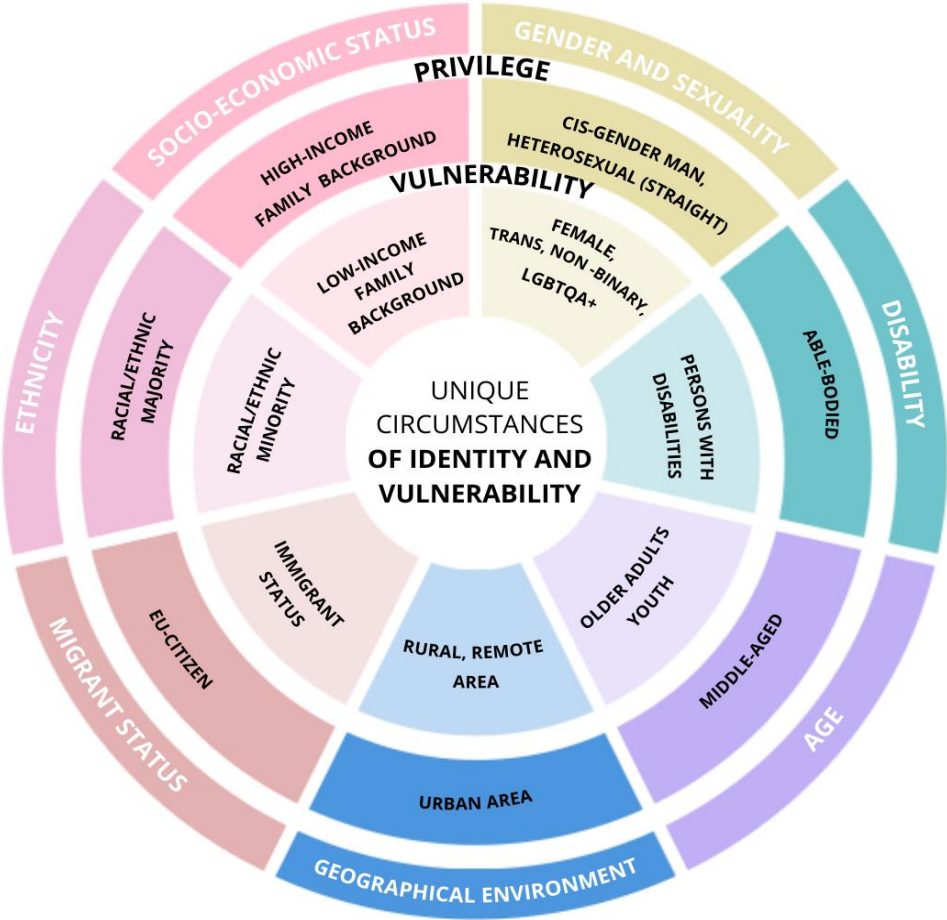
Source: own elaboration, CASE.

For example, a female with migrant status can face greater disadvantage than males with migrant status and EU-national females. While the possession of either attribute alone (that is, the particular gender or ethnic background) would not have led to this level of unequal treatment, it is the combination of gender and migrant status that forms the grounds of the less favourable situation. Similarly, identifying as LGBTQA+ or having a disability would add more barriers, creating even more complex forms of vulnerability.

Addressing such disadvantage to achieve a just distribution of skills (through enabling equal access to skills and skills poverty alleviation) requires inclusive interventions that acknowledge the unique challenges faced by individuals, and the intersections of their various characteristics, thereby mitigating the risk of them falling into social exclusion or poverty.

2.2. Relation between skills inequality and poverty

Poverty exists when people struggle with their means to satisfy their basic needs. People affected by poverty tend to have lower median incomes.[59] Low-income households in the EU are for instance more strongly impacted by the current inflation affecting their material wellbeing.[60] A number of groups within our societies face a higher risk of poverty and social exclusion compared to the general population.[61]

The relative income situation of the most vulnerable has not notably improved, with recent years being especially challenging, exposing how **low-skilled individuals often fall into risk of poverty and social exclusion – especially in increasingly complex markets where the way we work, learn, take part in society and lead our everyday lives constantly changes** (taking into account the rapid shift towards a climate-neutral Europe, the digital transformation, and the corresponding labour market shifts).

Skills are a pathway to employability and prosperity, and with the right skill sets people are equipped for good-quality jobs and can fulfil their potential as confident, active citizens.[62] Similarly, **disparities in access to quality education leading to the unequal distribution of skills among the population may contribute to a higher risk of poverty and social exclusion in society.** There is a strong relationship between skill inequality and poverty, which can be summarised through three key channels, presented as the following mechanism (Figure 4):

Figure 4. Channels through which skills affect poverty.

MECHANISM	WORK & INCOME	SOCIAL INCLUSION ACTIVE CITIZENSHIP	INTER-GENERATIONAL
LEARNING & SKILLS IMPACT	➢ Employability ➢ Soft skills ➢ Skills ladder ➢ Occupational skills, sectoral skills	➢ Literacy & numeracy ➢ Digital skills ➢ Financial literacy ➢ Health literacy	➢ Boosting parents' skills can benefit children's attainment ➢ Enabling parents to support young people
OUTCOME *(Greater Likelihood of)*	➢ Finding/keeping work ➢ Progressing at work	➢ Civic engagement ➢ Financial capacity	➢ Better children's results ➢ Social inclusion ➢ Work and income

Source: CASE, based on: Learning & Work Institute (2016). Skills and poverty. Building an anti-poverty learning and skills system.

The correlation between the level of skills and employment opportunities is evident, as it affects an individual's work and income. One's level of skills (employability and soft skills, job-specific and occupational skills) impacts on the ability to find and sustain a job, as well progress in the workplace. With a growing supply of high-skilled workforce, employers have more people with qualifications to choose from; thus the skills entry level is rising. **Individuals without basic employment skills will be**

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[59] Lelkes and Gasior (2012). *Income Poverty and Social Exclusion in the EU.*

[60] Eurostat (2023). *Early estimates of income inequalities.*

[61] EC (2010). *Inclusion of Vulnerable Groups.*

[62] EC (2016). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A NEW SKILLS AGENDA FOR EUROPE Working together to strengthen human capital, employability and competitiveness.*

increasingly locked out of the labour market, and in consequence, be at risk of poverty.[63] In 2022, 65.2% of those out of work were at risk of poverty and social exclusion in the EU.[64]

Skills and work create a significant correlation that allows the individual to upskill and increase their salary potential. Having decent work, which allows for the gaining of new skills in the workplace, enables growth on the skills ladder during the course of one's life. It improves an individual's employability, increases their social soft skills, and furthers their job, occupational and sectoral skills. In consequence the person is more likely to maintain a well-paid job, progressing in terms of work and ambitions, and leading a decent life. Working status is one of the main socio-economic characteristics impacting the risk of poverty or social exclusion. In 2022 the risk of poverty and social exclusion in the EU was 11.1% for individuals in employment, compared to 19.1% for retired persons. Comparing this level with unemployed people makes it clear that there is a correlation between the risk of social exclusion, unemployment, and poverty.

Social inclusion and active citizenship are important elements of life, supporting literacy and numeracy skills, digital skills, and also financial and health literacy. Having such skills at a higher standard contributes positively to civil and social engagement, as well as financial capability, and in turn decreases the risk of poverty. Adult skill levels are also associated with levels of social cohesion. **Adults with higher skill levels have higher levels of trust in others, in institutions and in governments, perceive themselves as being in better health, and feel that they are participating actively in society**.

Intergenerational factors such as family background, parental education or parental skills are strong mechanisms affecting a child's wellbeing in the future, and their probability of falling into poverty. **Boosting parents' skills can improve children's educational attainment, which can enable parents to support young people and consequently increase their likelihood of having better work, a higher income, and other outcomes.**

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[63] Learning & Work Institute (2016). *Skills and poverty. Building an anti-poverty learning and skills system.*
[64] Eurostat Statistics Explained (2022) *Living conditions in Europe - income distribution and income inequality.*

3.   Trends in skills poverty among the most vulnerable groups

Having the theoretical overview of personal characteristics likely to affect the unequal distribution of skills, this chapter examines the extent to which gender, age, socio-economic background, ethnicity, migrant status, disability, and geographical location impact particular skill levels. Through in-depth statistical analysis, clear insights are derived, elucidating which attributes predominantly contribute to the phenomenon where certain individuals, on average, possess lower skills than others. In the analysis, the absence of LGBTQA+ characteristics stems from a data gap at both the EU and Member-State levels, hindering a comprehensive understanding of how diverse identities within the community may impact skills level. What is more, the varying levels of skills and especially - access to skills and high-level education, which serves as a significant driver behind skills inequality - among individuals with disabilities emphasize the necessity for a nuanced data analysis approach and further research to comprehend and cater to the specific settings for skill requirements of these marginalised groups.

According to estimates from 2020, **there is a significant pool of 128 million adults in the EU-28+ with potential for upskilling and reskilling, with particularly strong potential in certain states and among certain groups of individuals.**[65] While upskilling or reskilling potential can be identified among over 50% of the adult population in Malta, Portugal, Italy, Spain, Greece, Romania, and Cyprus, rates are below 30% in Czechia and Finland.[66] On top of that, some groups are more vulnerable than others. Looking at the EU-28+ countries, CEDEFOP identified the top subgroups in need of upskilling, which are the unemployed (with low levels of education as a risk factor for unemployment) and inactive people (out of the labour force) aged 55-64, followed by inactive people aged 35-54. Their risk of low skills, in terms of education, digital skills, as well as literacy and numeracy, is between 65% and 73% higher than among the overall population (25-64 years old).[67] Which group is affected the most from skills poverty may therefore differ when looking at various abilities needed for the labour market. Proven that there is a need for upskilling, the analysis aims to precisely answer questions regarding characteristics of the vulnerable groups that contribute more to skills poverty within particular skill sets. As presented above, for the scope of the study skills poverty is defined as a condition in which individuals or communities lack the necessary skills and competencies (in this case – the "right skills" for effective labour market integration) required to participate fully in economic, social, and technological advancements.

Skills poverty is analysed within all five categories of skills relevant for the purposes of this analysis. The magnitude and trends in skills poverty are analysed in regard to people's characteristics that contribute to their unique circumstances of vulnerability: gender, age, socio-economic background, ethnicity, migrant status, disability, and degree of urbanisation, as identified above. An individual's vulnerability is determined by the simultaneous interaction of those (multiple) characteristics affecting a person's situation and that might have repercussions on inequalities in the distribution of skills. Each subchapter provides insights on skills levels within a particular category, and presents the most significant skills gaps that need to be addressed on the European and national levels – beginning with numeracy and literacy skills, followed by digital skills, multilingualism, and transversal and life skills.

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[65] CEDEFOP (2020). *Executive Summary. Empowering adults through upskilling and reskilling pathways Volume 1: adult population with potential for upskilling and reskilling.*
[66] Ibidem.
[67] Ibidem.

3.1. Literacy and numeracy skills

For the scope of this study literacy and numeracy skills are defined as the ability to communicate orally and in writing in a broad scope of situations and to adapt in certain situations, along with the skill to apply basic numerical and mathematical content, information, ideas, and processes to meet basic demands of learning and work.

There are several limitations to assessing literacy and numeracy skills among the adult population in the EU due to considerable data constraints. For instance, contrary to digital skills, multilingualism, and entrepreneurship which is thoroughly measured with recent data, for example by Eurostat, there is no equivalent database that enables us to present the data as comprehensively for literacy and numeracy skills. Nevertheless, there are feasible units of analysis available.

The most comprehensive source to quantitatively outline skill gaps in numeracy and literacy is the **PIAAC**[68], which was created with the aim of collecting information about the literacy, numeracy, and problem-solving skills among the adult population. 20 current EU countries took part in the assessment. The first round of the PIAAC Survey was carried out in 2011/2012 in 17 EU Member States, including the UK, which represented about 83% of the EU population,[69] making it a good source to analyse numeracy and literacy skills at the EU-level. As the UK is no longer an EU member state, its data will not be considered. Additionally, data was taken for Greece, Lithuania and Slovenia in 2014-2015, and for Hungary in 2017. The principal strength of this data is that PIAAC provides a measurable score that allows us to compare the exact skills levels of individuals in numeracy and literacy. Currently, a second Cycle of the Survey is underway, with the first results likely to be published in 2024, making the first round the most recent available for analysing skills gaps among the most vulnerable groups. As the second cycle results will likely be available soon, it is strongly recommended that this opportunity will be taken to enhance the data presented here with further research, taking the new information into account. This will also make it possible to identify trends in numeracy and literacy skills among individuals.

Another possible data source could be the European Skills and Jobs Survey (ESJS) conducted by CEDEFOP. Two waves of the survey have been conducted to date, in 2014 (ESJS1) and in 2021 (ESJS2). The ESJS also includes different angles for each data category, namely an analysis by country, by sector, by age and gender, and by education attainment. While the data are more recent, the questions asked are about how often reading, writing, and mathematical tasks are performed at the workplace, which means that we only obtain information about the frequency these skills are used by different groups, but not about these groups' actual skills level. PIAAC, on the other hand, provides a measurable score that allows us to compare the exact skills levels of individuals in numeracy and literacy. Therefore, PIAAC is more pertinent than CEDEFOP and is our main source of information for this subchapter. Our analysis is enhanced through additional sources of information, for instance **PISA**, the **Education and Training Monitor**[70] as well as **recent national studies.**

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[68] OECD (n.d.). *PIAAC Data and Tools.*
[69] EC (2013). *The Survey of Adult Skills (PIAAC): Implications for education and training policies in Europe.*
note: The 17 EU countries referred to are Austria, Belgium (Flanders), Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Netherlands, Poland, Slovak Republic, Spain, Sweden (and the UK as former EU-member state)
[70] EC (2018). *About the Education and Training Monitor.*

Data are presented by socio-economic characteristics, age, gender, ethnic minorities, migrant status, disability, and degree of urbanization, outlining skills gaps. To round off we present a brief view of the numeracy and literacy skills gaps identified.

The **socio-economic background**, defined as the social class standing resulting from the combination of education, income and occupation,[71] is one of the most important components affecting educational outcomes, especially in the early lives of individuals, and consequently literacy and numeracy skills. As PISA data shows, 15-year-olds from disadvantaged backgrounds are reportedly 6 times more likely to underachieve in basic skills compared to those from advantaged backgrounds.[72] Basic skills in this context also include science skills, in addition to mathematics (numeracy), and reading and writing.[73] As shown in Figure 5, the EU averages 22% of individuals with low socio-economic status who underperform in basic skills, compared to 5% among individuals with high socio-economic status. The basic skills gap differs significantly from country to country, but on average a significant literacy and numeracy skill poverty of around 17 pp is observed among young individuals with a low socio-economic background.

Figure 5. Basic skills underachievement by socio-economic status, by country (EU-27, 2022).
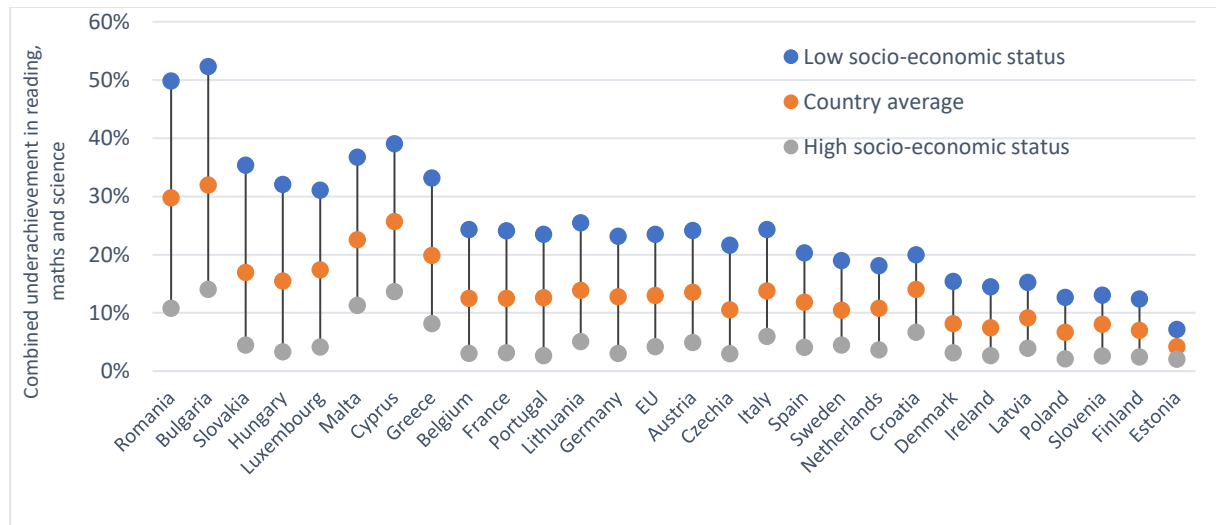
Source: CASE own elaboration, based on EC (2022). Education and Training Monitor.

Educational attainment is one of the key factors that impacts numeracy and literacy performance among adults. PIAAC allows us to analyse and monitor the level and distribution of skills among different groups, such as age, level of education, gender, or country of birth. In the case of numeracy and literacy skills, the survey categorizes results in five different skills levels, from basic to advanced. When taking the average score among different societal groups, most results fall within skills level two (226-276 points) and skills level three (276-326 points). For literacy level two, respondents were able to make matches and to paraphrase information that required low-level inferences, while for level three, individuals needed to be able to understand dense and lengthy texts. In the case of numeracy level two, people showed the ability to carry out basic mathematical processes, including two or more steps or processes, simple measurement, and data interpretation. Numeracy level three required number sense

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[71] EC (2021). *Socioeconomic Status.*
[72] EC (2022). *Education and Training Monitor.*
[73] Ibidem.

and spatial sense, as well as recognizing and working with mathematical relationships, patterns, and proportions.[74]

When looking at the PIAAC results among 25–65-year-olds, we can see that on average only individuals with tertiary educational attainment show the more advanced numeracy and literacy proficiency level number three, with an average score of 293.1 in literacy and 296.6 in numeracy skills.
Scores among EU adults having completed secondary education are significantly lower with 264.7 in literacy and 265 in numeracy, and fall within the rather basic level two. Individuals who have not completed at least upper secondary education are barely reaching level 2, with respectively scores of 234 and 227.4 points. Consequently, we can identify a literacy skills gap of 59.1 points or 20.16%, and a numeracy skills gap of 69.2 points or 23.33% among the most and the least educated individuals in the EU. Our findings are illustrated in Figure 6.

Figure 6: PIAAC Numeracy & Literacy Skills by Educational Attainment, 25–65-year-olds (EU-Average*, 2011–2017).
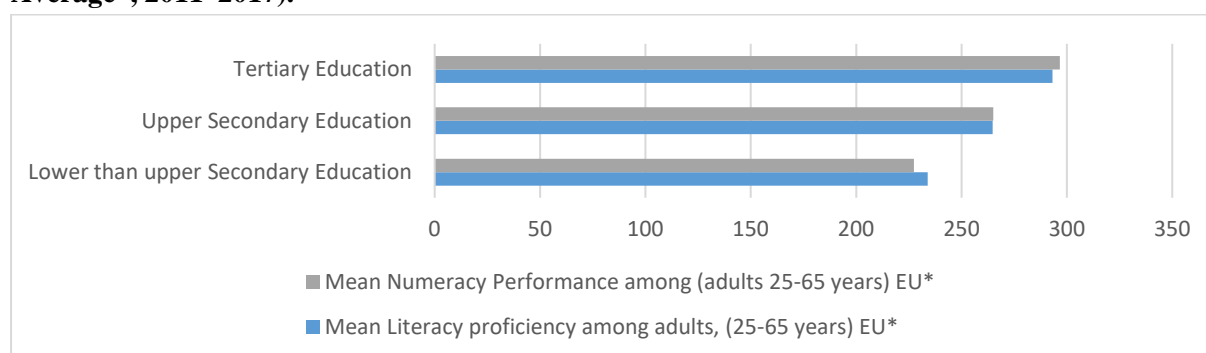
Source: CASE own elaboration, based on OECD (n.d.) PIAAC Data
* The EU Average is calculated from 20 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Cyprus); data for EU member states were collected in 2011-2012, in 2014-2015 in Greece, Lithuania, and Slovenia, and in 2017 in Hungary

In the case of the population between 16 and 24 years of age, the mean performance among individuals in education or with at least upper secondary education was 280.5 score points in literacy and 275.6 score points in numeracy. On the other hand, people not in education and with lower than upper secondary education scored 39.5 points or 14.08% less in literacy, and 42.3 or 15.35% less in numeracy than their higher educated peers.[75]

When looking at different numeracy and literacy skill levels by **age**, it was proven by PIAAC that young adults have better numeracy and literacy skills than older adults. In the case of the EU, the mean score peaks at 279.4 points in literacy and 278.3 points in numeracy among adults aged 25-34, and then decreases gradually down to 251.5 points in literacy and 251 points in numeracy among 55–64-year-olds, signifying a skills gap of 9.99% or 27.9 score points and 9.81% or 27.3 score points among these two cohorts.

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[74] OECD (n.d.). *Key Facts about the Survey of Adult Skills (PIAAC)*.
[75] based on OECD (n.d.) PIAAC Data. *The EU Average is calculated from 20 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Cyprus); data for EU member states were collected in 2011-2012, in 2014-2015 in Greece, Lithuania, and Slovenia, and in 2017 in Hungary.*

Figure 7: PIAAC Numeracy & Literacy Skills by Age (EU-Average*, 2011–2017).
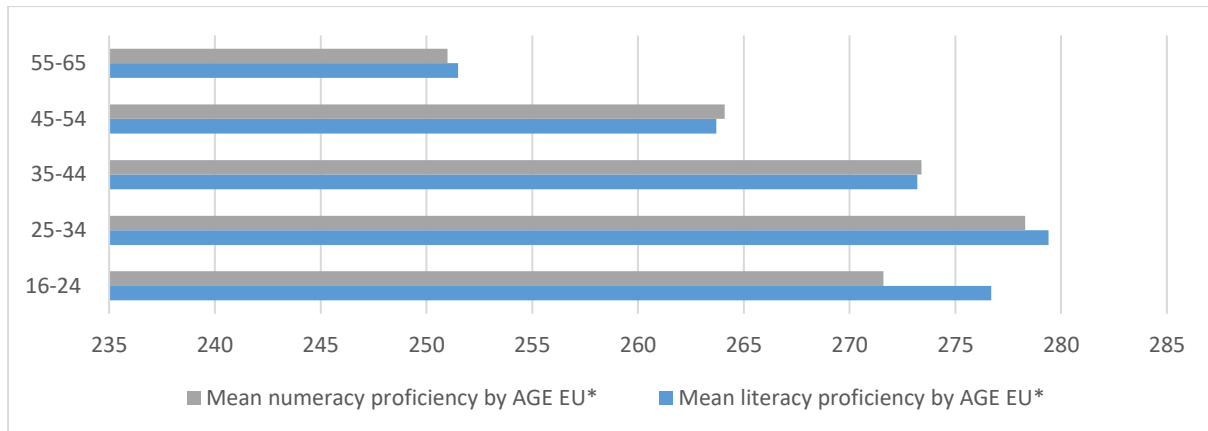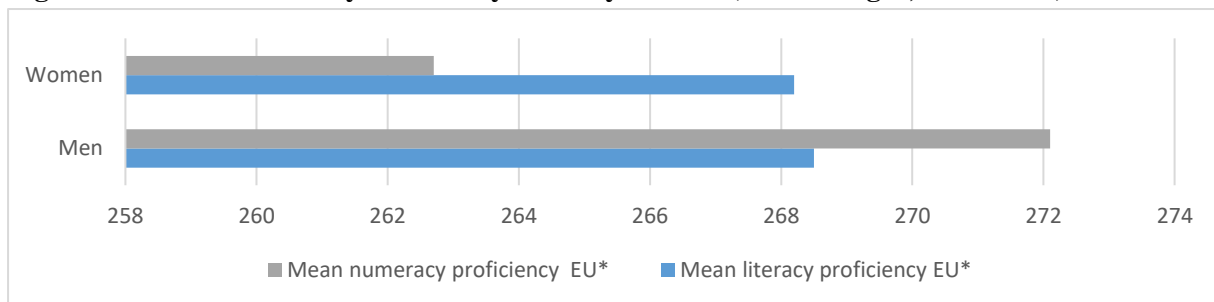

Source: CASE own elaboration, based on OECD (n.d.) PIAAC Data

* The EU Average is calculated from 20 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Cyprus); data for EU member states were collected in 2011-2012, in 2014-2015 in Greece, Lithuania, and Slovenia, and in 2017 in Hungary

Looking at the PIAAC results by **gender**, the difference of 0.3 score points in literacy in favour of men is quasi-insignificant. Regarding numeracy, men scored 9.4 points or 3.45% higher than women.

Figure 8: PIAAC Numeracy & Literacy Skills by Gender (EU-Average*, 2011–2017).

Source: CASE own elaboration, based on OECD (n.d.) PIAAC Data

* The EU Average is calculated from 20 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Cyprus); data for EU member states were collected in 2011-2012, in 2014-2015 in Greece, Lithuania, and Slovenia, and in 2017 in Hungary

As many as 71% of representatives of **ethnic minority groups** declared a good knowledge of literacy skills, approximated by the usage of the national language of their country of residence, including sufficient proficiency in speaking, reading, and writing.[76] This rate is higher for second generation immigrants, irrespective of their parents' countries of origin, and 97% of them declared good proficiency in the country's language in all three aspects. However, the case is different for the Roma minority, a substantial share of whom, despite being commonly proficient at speaking the language in their country of residence (88%), declared weak to no writing and reading skills – 45% and 38% respectively.[77] The situation is even worse among members of the Russian minority, around 60% of whom declared a lack of proficiency in all three aspects.[78]

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[76] FRA (2017). *Second European Union Minorities and Discrimination Survey - Main results.*
[77] Ibidem.
[78] Ibidem.

PIAAC outlines a literacy and numeracy gap between **foreign nationals (migrants)** and native-born adults. The skills gaps are large, at 26.9 score points (approximately 10%) both in numeracy and literacy. To illustrate how large these skills gaps are in reality, a score difference of 24 equals 3.5 years of schooling.[79] This gap varies significantly between countries. Foreign-born adults residing in Scandinavian countries are less proficient in literacy in relation to native-born adults than is the case in Ireland or Greece, for instance.[80] Several factors contribute to this gap, for instance linguistic distance, educational attainment, or integration policies. Consequently, in a country like Sweden, which hosts many individuals who arrived due to humanitarian motives, the literacy gap is higher than in Spain, a country that receives many immigrants who already speak Spanish. Long-settled immigrants and those who arrived as young children in their host countries have better literacy proficiency than other groups of immigrants.[81]

Figure 9: PIAAC Numeracy & Literacy Skills by Country of Birth, 16–65 years old Individuals (EU-Average*, 2011–2017).
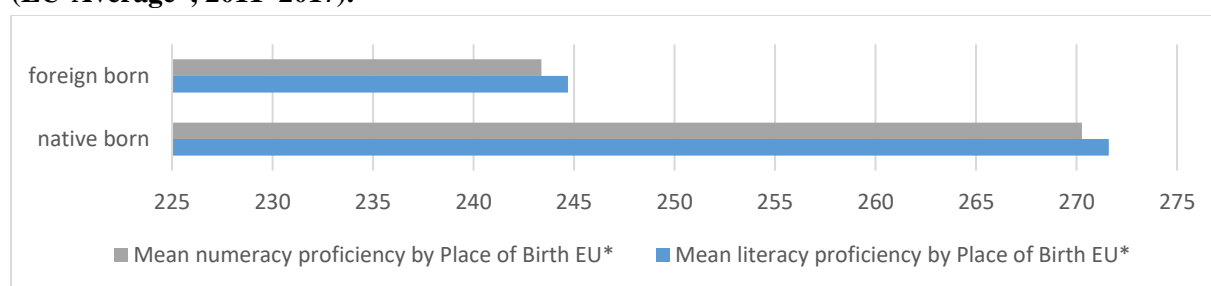
Source: CASE own elaboration, based on OECD (n.d.) PIAAC Data

* The EU Average is calculated from 17 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Ireland, Italy, Lithuania, Netherlands, Slovenia, Spain, Sweden, Cyprus); data for EU member states were collected in 2011-2012, and in 2014-2015 in Greece, Lithuania, and Slovenia

Adults with **disabilities** are less likely to have foundational reading and numeracy skills compared to their non-disabled peers.[82] PIAAC data show that among all adults across OECD countries, about one-fifth can complete only very basic literacy tasks, while a quarter can perform only basic numerical tasks. For people with a permanent disability, one in two individuals have only basic literacy or numeracy skills across OECD countries.[83]   However, it's crucial to note that the level of skills and access to them varies greatly depending on the type of disability. This underscores the need for a more nuanced approach in analysing the data and highlights the importance of further research to understand and address the specific skill needs of these vulnerable groups.

Data on numeracy and literacy levels in the EU by **degree of urbanization** is not available. However, as we have already proved that educational attainment has a vital impact on numeracy and literacy skills, we can take a look at the share of 30–34-year-olds who completed tertiary education in urban and nonurban areas, since this can function as an indicator of the skills level in numeracy and literacy. In 2019, the average tertiary education gap in the EU between rural areas and cities was over 20 pp in favour of urban areas. In 8 member states the difference exceeded 30 pp, while rural areas are less than

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[79] OECD (2017). *Why are immigrants less proficient in literacy than native-born adults? Adult Skills in Focus.*
[80] Ibidem.
[81] Ibidem.
[82] UNICEF (2021). *Seen, Counted, included: Using data to shed light on the well-being of children with disabilities.*
[83] OECD (2022). *Disability, Work, and Inclusion: Mainstreaming in All Policies and Practices.*

15 pp behind cities in Belgium and Slovakia. These gaps are rising in many places, for instance in 2009 no country had a gap above 30 pp, with the largest difference only 19 pp.[84]

**Skills Gaps in Numeracy and Literacy at a Glance**

Looking at **future trends** in numeracy and literacy skills, it can be emphasised that generally speaking a larger range of jobs advertised will require a higher skills level than nowadays. According to the 2023 CEDEFOP Skills Forecast, openings for jobs requiring low or medium qualifications, with the exception of certain service tasks, are at risk of replacement by higher skilled professions. The lion's share of a total of 56% of job opportunities in 2035 is forecast to be precisely for such high-skilled professions. Additionally, 26% of job openings are likely to be for technicians and associated professionals, while service workers will also be in high demand.[85] In this context, a high level of proficiency in numeracy and literacy is vital for individuals to secure employment in the future. As our data analysis outlines, some people are better equipped with numeracy and literacy skills than others. Education provides the base for solid numeracy and literacy skills; however, educational outcomes are unequal due to people's socioeconomic background. Significant skills gaps can be found among people with disabilities, although whether this is the case and to what extent largely depends on the context and type of disability. There are some examples of ethnic minorities lacking proficient understanding of the majority language, which may have a negative impact on job prospects. Additionally, the degree of urbanization can play a role, but to what extent would be the subject of further investigation.

To underline further skills gaps, and to make them more comparable, we used data from PIAAC. We took the average of participating EU Member States, and compared whether factors like gender, country of birth, age, and level of education play a role in the creation of skills gaps. While doing so we were able to identify skills gaps and could formulate statements regarding which characteristics determine numeracy and literacy skills the most. Among the quantitatively measurable and comparable skills gaps, level of education plays the most significant role, leading to a performance gap of 23% in numeracy and 20% in literacy between the lowest and the highest educated individuals aged between 25 and 65. Educational attainment gaps are also strong among 16–24-year-olds. Figure 10 shows that age and country of birth also have a significant impact on PIAAC scores in numeracy and literacy, creating a difference of 10%. The gender gap in literacy is insignificant, while men perform slightly better than women in numeracy (3%)

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[84] EC (2020). *Education and Training Monitor. Chapter 2.*
[85] CEDEFOP (2023). *Skills in transition. The way to 2035.*

Figure 10: PIAAC Numeracy and Literacy Skill Gaps at a Glance (EU* Average, 2011–2017).
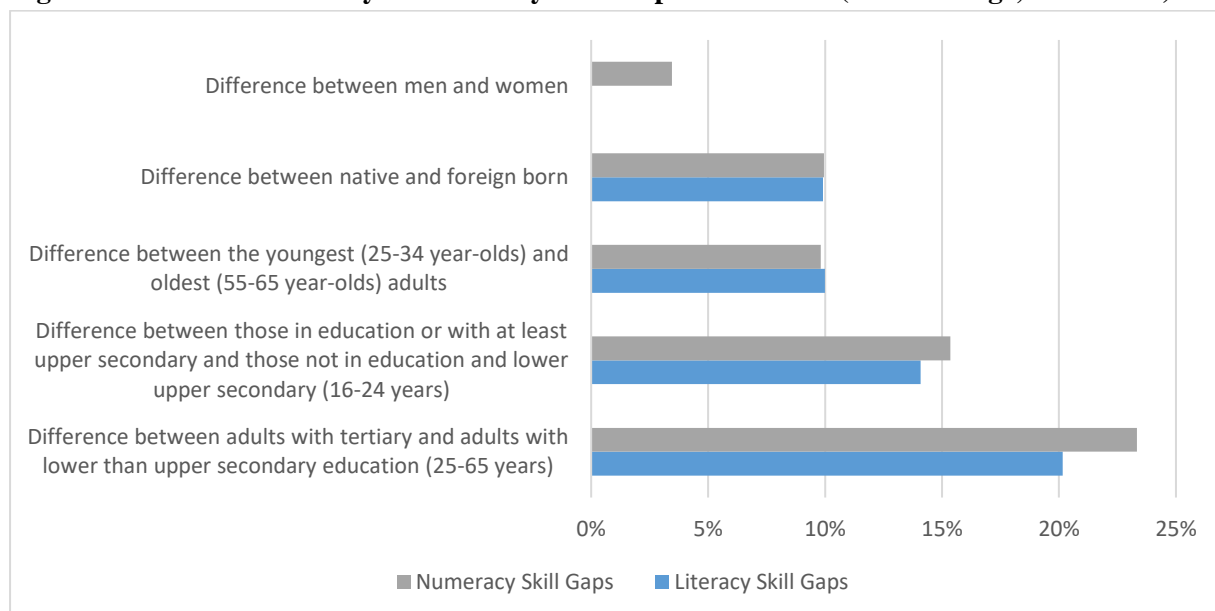
Source: CASE own elaboration, based on OECD (n.d.) PIAAC Data
* The EU Average is calculated from 20 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Cyprus); data for EU member states were collected in 2011-2012, in 2014-2015 in Greece, Lithuania, and Slovenia, and in 2017 in Hungary. In the case of the difference between native and foreign born, the EU Average is calculated from 17 member states that participated in PIAAC (Austria, Czechia, Denmark, Estonia, Finland, Belgium (Flanders), France, Germany, Greece, Ireland, Italy, Lithuania, Netherlands, Slovenia, Spain, Sweden, Cyprus)

Our desk research has proved that there is a strong need for upskilling of vulnerable individuals in terms of numeracy and literacy, particularly for lower educated, older, and foreign-born individuals. Policy makers as well as civil society should engage in initiatives tackling skill gaps in these basic skills, which are fundamental for building on when acquiring further abilities useful for labour market integration. Some good practices targeting an improvement in numeracy and literacy skills among individuals, such as Adult Literacy for Life, will be presented in the section with case studies.

3.2. Basic digital skills

Digital skills are defined as individuals' ability to become digitally literate. While 87% of people aged 16-74 in the EU used the internet regularly in 2021, only 54.45% possessed at least basic digital skills. A huge part of the EU population still lacks basic digital skills. The percentage of individuals possessing basic digital skills increased in general from 50.17% in 2015 to 54.45% in 2022,[86] but there are certain groups in a disadvantaged position. The percentage of individuals possessing at least basic digital skills differs by age, urban density, education, employment, and gender (Table 3). For each category (age, urban density, etc.,) the best and least skilled group is highlighted in Table 3. The strongest digital skills gaps can be seen when looking at age, education, and employment, and they are presented along with other skills gaps identified throughout this section in "digital skills at a glance", the section that concludes this subchapter.

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[86] EC (n.d.). *Shaping Europe's digital future.*

Table 3. At least basic digital skills by Age, Urban Density, Level of Education, Employment, and Sex: % of all individuals (EU-27, 2021).

Factor	Characteristics	At least Basic Digital Skills in 2021 – the EU average
AGE	*Individuals 16 to 24 years old (best skilled)*	*71%*
	Individuals 25 to 34 years old	69%
	Individuals 35 to 44 years old	64%
	Individuals 45 to 54 years old	55%
	Individuals 55 to 64 years old	42%
	Individuals 65 to 74 years old (least skilled)	*25%*
DENSITY	*living in a predominantly urban area (best skilled)*	*61%*
	living in an intermediate area	52%
	living in a predominantly rural area (least skilled)	*46%*
EDUCATION	*Individuals with no or low formal education (least skilled)*	*32%*
	Individuals with medium formal education	50%
	Individuals with high formal education (best skilled)	*79%*
EMPLOYMENT	Active labour force (employed and unemployed)	62%
	Retired and other inactive (least skilled)	*29%*
	Employees, self-employed, family workers	63%
	Students (best skilled)	*77%*
	Unemployed	49%
GENDER	*Females, 16 to 74 years old (least skilled)*	*52%*
	Males, 16 to 74 years old (best skilled)	*56%*

Source: CASE own elaboration, based on EC (2022). Digital Economy and Society Index (DESI) 2022. European Analysis 2022.

The **socioeconomic status** approximated by a combination of education, income and occupation significantly affects the digital skills divide. Students usually possess an elevated knowledge of digital skills (77%), contrary to retired and other inactive individuals (29%). 79% of individuals with high formal education possessed at least basic digital skills, as opposed to 50% of individuals with medium educational attainment and 32% of those with a low level of education. Consequently, we can observe a digital skills gap of 47 pp between the least and the most educated EU citizens, and a 48 pp skills gap between students and retired or other inactive individuals (Figure 11).

Figure 11: Individuals with at least basic digital Skills by Socioeconomic Characteristics (EU 2021).
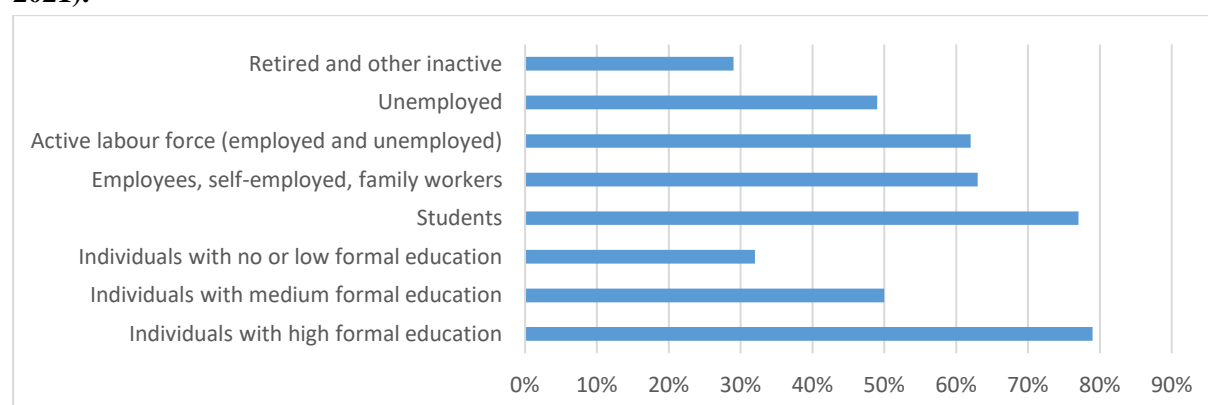
Source: CASE own elaboration, based on EC (2022). Digital Economy and Society Index (DESI) 2022. European Analysis 2022.

Another minor factor determining digital skills is **gender.** While in 2021 almost 54% of the population in the EU possessed basic digital skills, the corresponding figures for women and men were respectively 52% and 56% (Figure 8), signifying a skills gap of 4 pp between males and females.

Figure 12. Share of individuals having at least basic digital skills, by sex in % (EU-27, 2021).
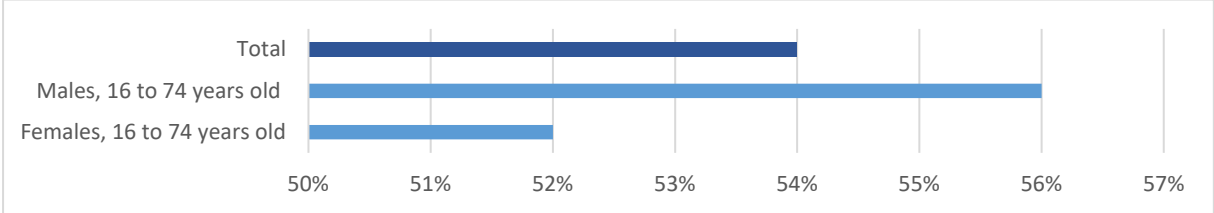
Source: CASE own elaboration, based on EC (2022). Digital Economy and Society Index (DESI) 2022. European Analysis 2022.

Going into greater detail, both women's and men's digital skills increase with their level of education. This discrepancy is particularly noticeable among older individuals, aged 55 and above. The highest proportion of women with advanced digital skills is observed in Finland, the Netherlands, Denmark, the United Kingdom, and Sweden, while the lowest percentage is found in Greece, Poland, Italy, Bulgaria, and Romania.[87]

Assessing skills poverty among **ethnicity** groups is extremely challenging due to the limited data presenting their level of digital skills in a manger comparable within the EU. Therefore, in order to analyse their level of digital skills we approximated it by using existing national studies and data. For example, a survey conducted in 2022 and released in 2023 in Finland, Italy, Macedonia and Serbia shows that while almost all Roma people use smartphones, their access to laptops and computers is highly limited, with only around 15% using such devices.[88] Research among Spanish Roma teenagers has yielded similar results, with most respondents declaring ownership and frequent use of mobile phones, but not computers, laptops or tablets.[89] Both studies have also shown that digital devices are mostly used for communication and recreation. However, the activities in which the Roma people engage do not allow them to gain digital skills or to participate in digital services, since most respondents claimed not to have skills in areas such as using the Office package or using e-services.[90] In addition, Garmendia and Karrera add that there is an intergenerational transmission of digital skills poverty, since in the case of Roma mothers in particular, many of those possessing a smartphone do not know how to make the most of it. This absence of skills among their parents means that many Roma children have needed to self-train basic digital skills.[91]

Figure 13. displays the percentage of **foreign nationals (individuals with migrant status)** with basic or above-basic digital skills compared to other EU citizens. A significant number of migrants encounter challenges due to limited digital skills and obstacles related to socio-economic status, language, and cultural differences that impede their usage of technology. Data indicate that EU citizens have greater competencies in basic and advanced digital skills, with 55% of EU nationals, 52% of nationals from

[87] European Institute for Gender Equality (2020). *Gender Equality Index 2020: Digitalization and the future of work.*
[88] DIRA (2022). *Digital Skills in the Roma Community.*
[89] Karrera and Garmendia (2019). *ICT use and digital inclusion among Roma/Gitano adolescents.*
[90] DIRA (2022). *Digital Skills in the Roma Community.*
[91] Karrera and Garmendia (2019). *ICT use and digital inclusion among Roma/Gitano adolescents.*

other EU member states, and 42% of non-EU citizens exhibiting proficiency.[92] As a result, there is a skills gap of 13 pp between non-EU-nationals and EU-nationals.

Figure 13. Migrants compared to EU citizens with basic or above-basic overall digital skills (2021).
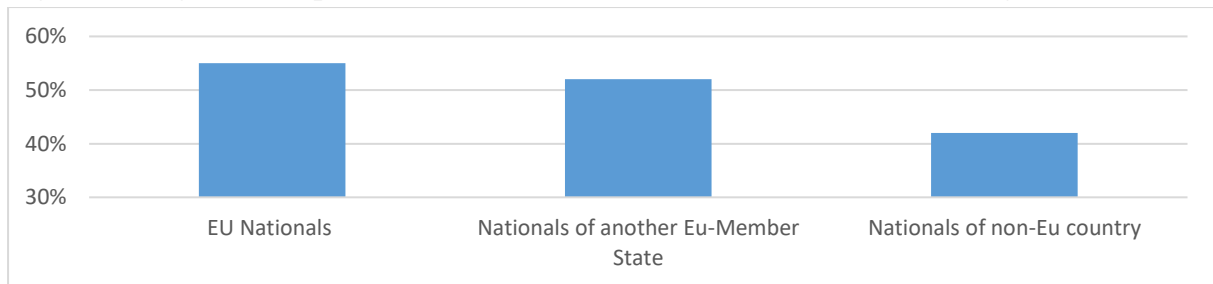
Source: CASE own elaboration, based on Eurostat Data Browser (2023) How many citizens had basic digital skills in 2021?

Survey findings also highlight the digital skills gap among refugees. Even though there are no specific data available regarding refugees who have been resettled, a study focusing on digital proficiency in technologically advanced countries within the OECD – where refugees are commonly resettled – revealed that 13% of foreign-born individuals with a different native language lacked any computer experience, compared to 8% of native-born individuals who spoke the same language as their country of residence. Moreover, only 17% of the former group exhibited a high level of proficiency in digital problem-solving, such as managing multiple apps, assessing web search results and troubleshooting, compared to roughly one-third of the latter group. For example, a survey among nearly 200 refugee service providers across the United States underscored the demand for training in digital access and literacy. It emerged as the most frequently requested area of training, chosen by 57% of respondents, along with mental health training – requested by 58%.[93]

No comparable data on digital skills among **people with disability** is available at the EU level, but information is available in the literature, which describes well the concept of digital skills poverty. For instance, persons with disabilities are found to use less Information and communication technology (ICT) solutions in their daily activities compared to the average population (Figure 14.). While almost 90% of individuals had been online during the last 12 months in 2016, the corresponding level was 78% among the disabled, giving a 12 pp difference. The same trend is observed when it comes to the usage of digital tools in other activities in life (e-commerce, online banking, e-government). [94]

[92] Eurostat (n.d.). *Individuals' level of digital skills.*
[93] Potocky (2021). *The role of digital skills in refugee integration: a state-of-the-art review.*
[94] OECD (2022). *Disability, Work and Inclusion: Mainstreaming in All Policies and Practices.*

**Figure 14. The usage of online services by disability status in selected European countries (2016).**
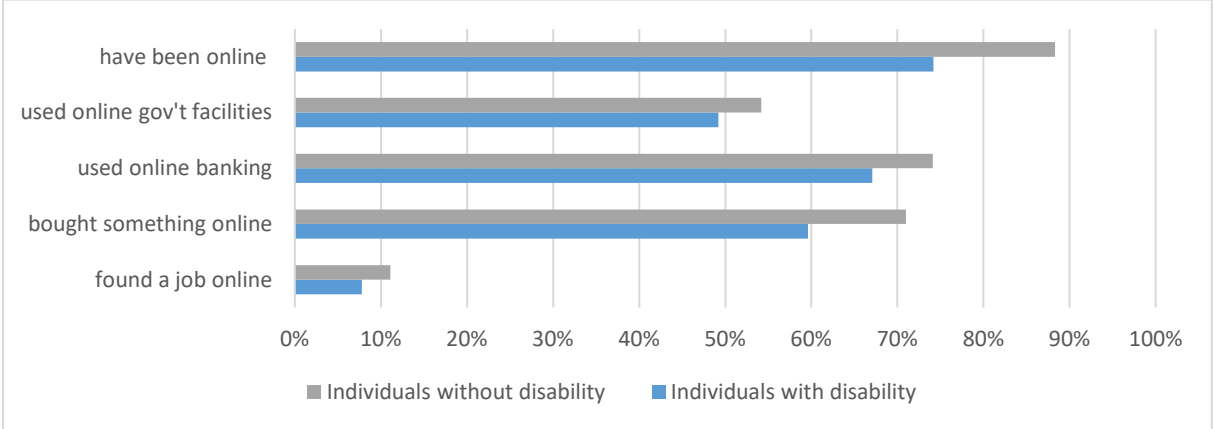
Source: CASE own elaboration, based on OECD (2022). Disability, Work, and Inclusion: Mainstreaming in All Policies and Practices.

The countries covered were Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Turkey and the United Kingdom.

Looking at age, in 2022, 96% of young EU citizens used the internet daily, which is 12 pp higher than in the total population.[95] Young individuals tend to be those who use technology more often and who are likely to benefit the most from it, as for many of them technology has become an important way to experience a sense of autonomy and personal control over various aspects of their lives.[96] Older generations are more vulnerable regarding digital skills poverty. The The Digital Economy and Society Index (DESI) identifies substantial digital skills gaps between generations. While only 25% of EU citizens between the age of 65 and 74 claimed to have basic digital skills, the level is almost three times as high for 16–24-year-olds (71%). At the same time more than one in two individuals aged 25–34 (69%), 35–44 (64%), and 45–54 (55%) possessed basic digital skills. The rate among 55–64-year-olds was only 42% (Figure 11). Considering all this data, we can highlight a 46 pp skills gap between individuals aged 16–24 and 65–74.

Figure 15. Basic digital skills by age (EU-27, 2021).
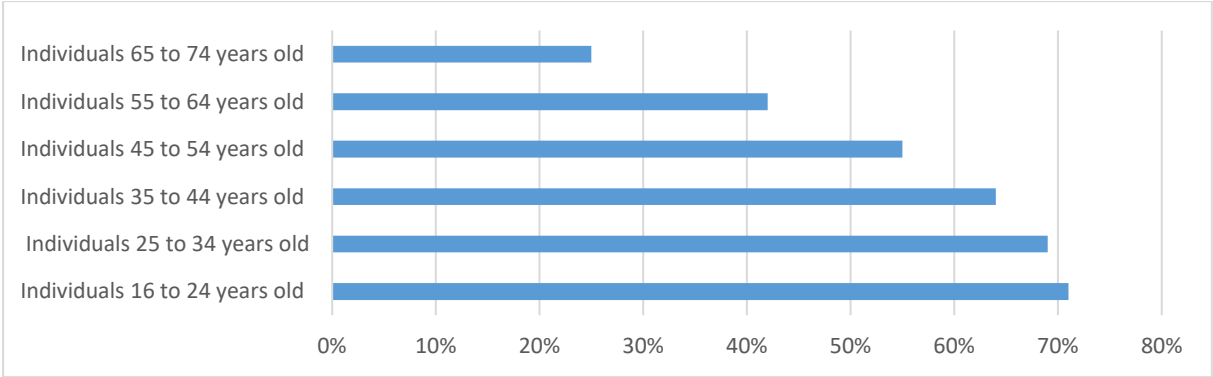
Source: CASE own elaboration, based on EC (2022). Digital Economy and Society Index (DESI) 2022. European Analysis 2022.

A significant digital skills gap can be seen between individuals living in rural, urban, and semi-urban regions in the EU **(degree of urbanization).** The EU-level share of adults reporting at least basic digital

[95] Eurostat Statistics Explained (2023). *Being Young in Europe Today.*
[96] Burns and Gottschalk (eds.) (2020). *Education in the Digital Age: Healthy and Happy Children.*

skills is 15 percentage points higher in cities (61%) than in rural areas (46%).[97] A digital skills divide by degree of urbanisation can also be found by looking at relevant indicators for overall digital skills. Eurostat provides data on the percentage of individuals with above-basic problem-solving skills in a digital context. In 2021, 59.5% of EU citizens living in urban areas could perform such tasks, which is 8.8 pp more than in towns and suburbs, and 14.8 pp higher than in rural areas. The digital skills gap between urban and non-urban areas among individuals with above-basic digital communication and collaboration skills was 10.9 percentage points, and residents of rural areas were also 11.4 pp less likely to have above-basic information and data literacy skills.

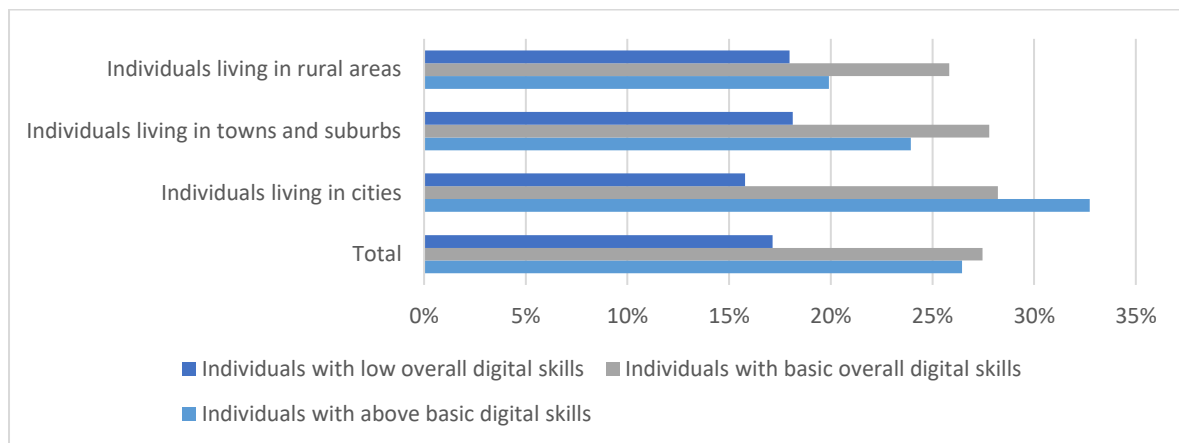**Figure 16. Selected digital skills by degree of urbanisation in % (EU-27, 2021).**
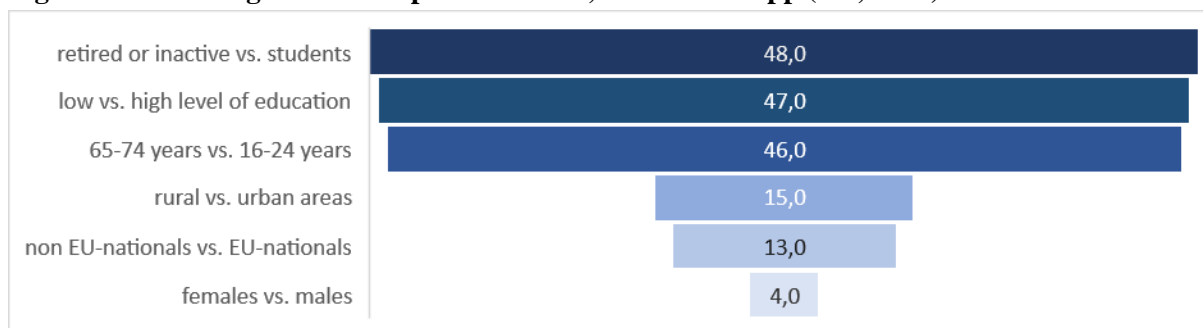

Source: CASE own elaboration, based on EC (2022). Digital Economy and Society Index (DESI) 2022. European Analysis 2022.

Digital Skill Gaps at a Glance

Our research has highlighted several digital skills gaps between individuals. Factors of vulnerability that are highly context-specific and cannot be easily quantified are disability, ethnic minority, and refugee status. Overall, people belonging to these groups may be of significant risk of digital skills poverty. On top of that, we investigated the digital skills levels among individuals sharing certain characteristics. While doing so, important skills gaps could be identified and presented. Looking at Figure 13, which highlights factors of vulnerability and its intensity, we can point out three cases where skills gaps are abysmal; two of them are connected to socioeconomic characteristics, and one to age. Students are 48 percentage points (77% vs. 29%) more likely to have at least basic digital skills compared to inactive or retired individuals. It is 47 pp less probable that low-educated individuals possess at least basic digital skills compared to individuals with tertiary educational attainment (32% vs. 79%), while 16-24 years olds are 46 pp more likely to have basic digital skills than 65–74-year-olds (71% vs. 25%). These three skills gaps are by far the strongest, and should be considered when comprehensively addressing digital skills poverty. Other significant digital skills gaps can be observed between rural and urban areas (15-pp.), as well as between non-EU nationals and EU nationals (13 pp), whereas gender seems to play a limited role (4 pp).

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[97] EC (2022). *Education and Training Monitor.*

Figure 17. Basic Digital Skill Gaps at a Glance, difference in pp (EU, 202*)*.

retired or inactive vs. students	48,0
low vs. high level of education	47,0
65-74 years vs. 16-24 years	46,0
rural vs. urban areas	15,0
non EU-nationals vs. EU-nationals	13,0
females vs. males	4,0

Source: CASE own elaboration, based on EC (2022). Digital Economy and Society Index (DESI) 2022. European Analysis 2022. and Eurostat Data Browser (2023) How many citizens had basic digital skills in 2021?
* the lower skilled group is mentioned first, followed by the higher skilled group, the percentage points in between are the skills gap, in the case of EU nationals vs. non-EU nationals the skills gap concerns basic and above digital skills

3.3. Multilingualism

Multilingualism is the ability of individuals to communicate through reading, writing, speaking and listening in their mother tongue and in one or more foreign languages. It is considered a key competence for lifelong learning, needed for personal fulfilment, a healthy and sustainable lifestyle, employability, active citizenship, and social inclusion.[98]

In 2016, almost one third (31.8%) of adults of working age (25–64-year-olds) in the EU-27 reported no knowledge of any foreign language. 37.3% claimed to know one foreign language, while 22.2% knew two foreign languages, and 8.6% of all working-age adults knew three or more foreign languages.[99] This situation differs between the various vulnerable groups.

56.8% of the EU-27 working-age population (aged 25–64) with a low level of socio-economic background (approximated by educational attainment) did not know any foreign language. This level is 23.5 pp higher than for individuals with a medium level of education, and 45.7 pp higher than among people with tertiary educational attainment.

In regard to **socioeconomic characteristics**, while 72.2% of employed individuals in the EU-27 in 2016 knew at least one foreign language, the corresponding level is 61% among unemployed people and 56.7% among the economically inactive. This lets us identify a skills gap in the knowledge of at least one foreign language of 15.5 pp between employed people and individuals outside the labour force. While approximately one in three individuals in employment (33%) knew two or more foreign languages, this level was 7.7 pp lower (25.3%) among people who were unemployed and outside the labour force. In Romania and Hungary, less than half of those in employment (aged 25–64) knew at least one foreign language, as opposed to more than 95% in Luxembourg, Denmark, Latvia, Lithuania, and Sweden.[100] Another important determinator of foreign language skills is the level of education. There was a skills gap of 45.7 pp between high and low educated individuals knowing at least one foreign language. 88.9% of all individuals with tertiary education had such skills, compared to only

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[98] EC (n.d.). *Multilingualism as Key Competence.*
[99] Eurostat Data Browser (2023). *Number of Foreign Languages Known.*
[100] Eurostat Statistics Explained (2023). *Foreign Language Skills Statistics.*

43.20% of individuals with a low level of education. Among the tertiary educated, almost 50% spoke two or more foreign languages.
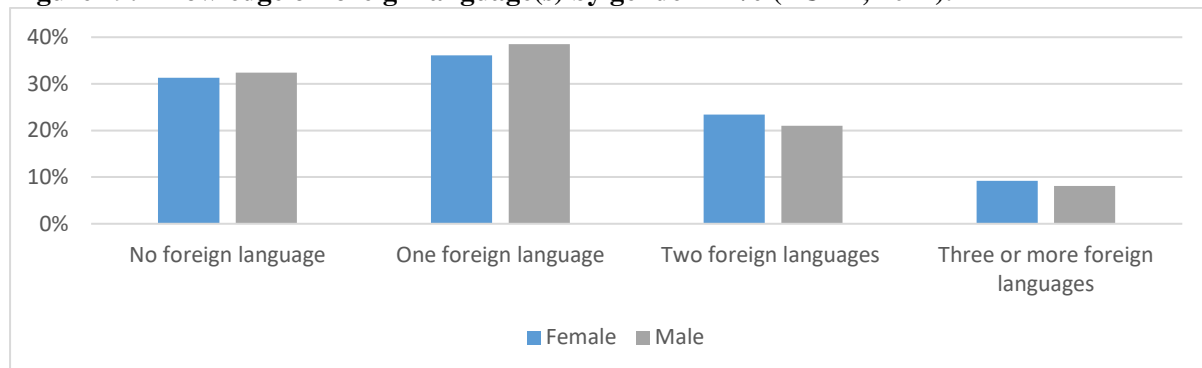
Figure 18. Knowledge of foreign languages by socio-economic characteristics in % (EU-27, 2016).
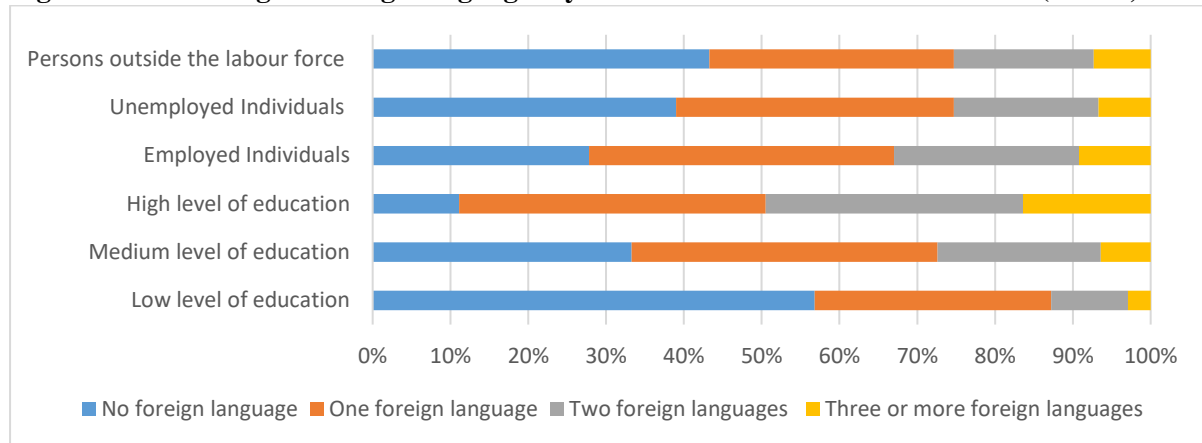
Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Number of foreign languages known (self-reported) by educational attainment level. and Eurostat Data Browser (2023). Number of foreign languages known (self-reported) by labour status.

In terms of **gender** and language acquisition, women perform slightly better than men. In 2016, 67.6% of working-age males in the EU-27 were able to speak at least one foreign language, compared to 68.7% of women, giving a skills gap of 1.1-pp. in favour of working-aged females. When it comes to the ability to speak more than one foreign language, women – at 32.6% – were 3.5 pp more likely to do so.

Figure 19. Knowledge of foreign language(s) by gender in % (EU-27, 2017).

Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Number of foreign languages known (self-reported) by sex.

Ethnic minorities show a limited ability to speak more than one language. Approximately 50 million people, about 14% of the European population, use a language other than that spoken by the majority of their country's population,[101] but the status of their language's recognition and its use at work or home varies strongly. For example, Roma communities long established in a territory generally speak the national language, though not always fluently.[102] Exact data on foreign language learning among the Roma are not available, although certain indicators show that they are likely to underperform. While enrolment in primary education among Romas is generally above 90% or close to 100%, only 69% of Roma children were attending school in 2016. In the United Kingdom, students from the Roma community had the lowest educational performance and attainment among all ethnic minorities in the

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[101] ARLEF (2023). *Multilingualism and Ethnic Minorities in Europe.*
[102] OECD (2020). *Working Paper: Inclusion of Roma Students in Europe: A literature review and examples of policy initiatives.*

country, and in some contexts Roma students also performed worse than students with an immigrant background.[103]

The situation becomes more complex when talking about **migrants** in the EU. Among the foreign-born population residing in EU Member States (including migrants and descendants of migrants from both inside and outside the EU), only 20% consider the language used in their countries of residence to be their mother tongue.[104] This rate is higher among those migrants who have their host countries' citizenship (31.5%), and lower among those who do not (12%).

Very limited reliable data on persons with **disabilities** is available at the EU level,[105] and language learning is not an exception. A recent study with 204 English language teachers from Portugal, Romania, Serbia, and Spain working at a regular school, university or language school indicated that a significant number of language teachers (34% to 59.5%) stated that they never teach students with special educational needs.[106] The interviewed teachers stated they had most such experience teaching English to people with intellectual disability (20.5%) followed by dyslexia (19%). On the other hand, more than 50% said they had never taught languages to individuals with autism, or with visual or hearing disability.[107] This small portion of available research gives us an idea that language learning for people with disabilities is complex and less common than for individuals without disabilities. To what extent depends highly on the type of disability, and on the subject of qualitative analysis.

Age turns out to be a principal factor determining vulnerabilities where skills poverty in multilingualism is concerned. More younger people speak more than one language. In 2016, 68.7% of EU-27 individuals knew at least one foreign language, in contrast to only 57.1% among people between 55 and 64 years of age. Competence in more than one foreign language was declared by 36.8% of individuals aged between 25-34, which is 3.6 pp higher than for individuals aged 35 to 44, and 7.4 pp higher than for 45–54-year-olds. Among those aged 55 to 64, the percentage of individuals knowing more than one foreign language was only 24.1%, accounting for less than one in four people (Figure 16). The largest skills gap concerning knowledge of at least one foreign language is with 21.6-pp. between individuals aged 25-34 and 55-64.

Figure 20. Knowledge of foreign language(s) by age - % (EU-27, 2016).
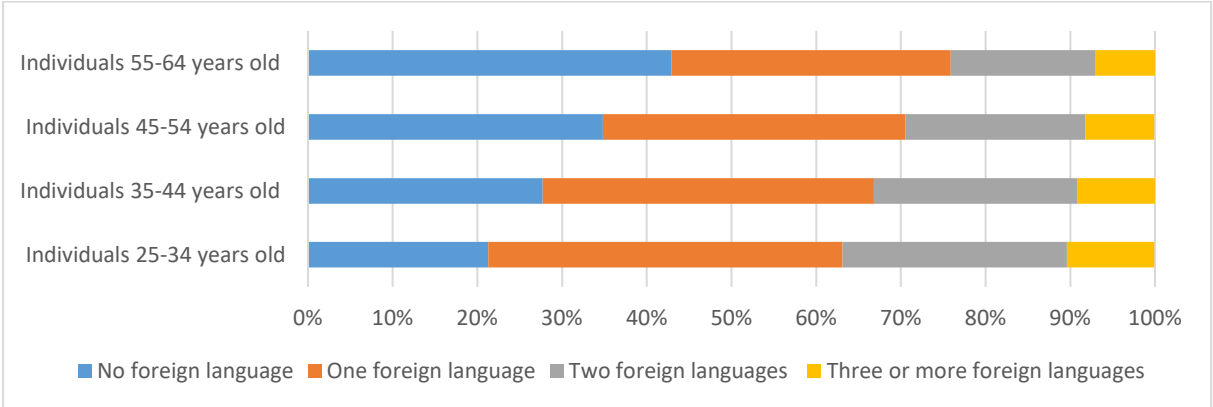
Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Number of foreign languages known (self-reported) by age.

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[103] Ibidem.
[104] Eurostat Data Browser (2023). *Foreign-born population by level of skills in the main host country language before migrating, sex, age, country of birth and educational attainment level*.
[105] European Disability Forum (2022). *Alternative Report for the second review of the EU by the CRPD Committee*.
[106] EN-abilities (n.d.). *Teaching and Learning Foreign Languages for People with Special Needs: Highlights*.
[107] Ibidem.

Substantial differences in levels of multilingualism can be seen from the geographical perspective **(degree of urbanization).** People living in rural regions are considerably more likely to have lesser skills in foreign languages than people living in towns and suburbs, or in urban areas (Figure 17). While 26.2% of EU-27 working-age people living in an urban area and 31.7% of town and suburb residents did not know any foreign language, 40.6% of rural residents lacked such skills (skills gap of 14.,4 pp). Moreover, the percentage of individuals able to speak more than one foreign language was – at 36.1%, 12.6 pp higher in urban than in non-urban areas.

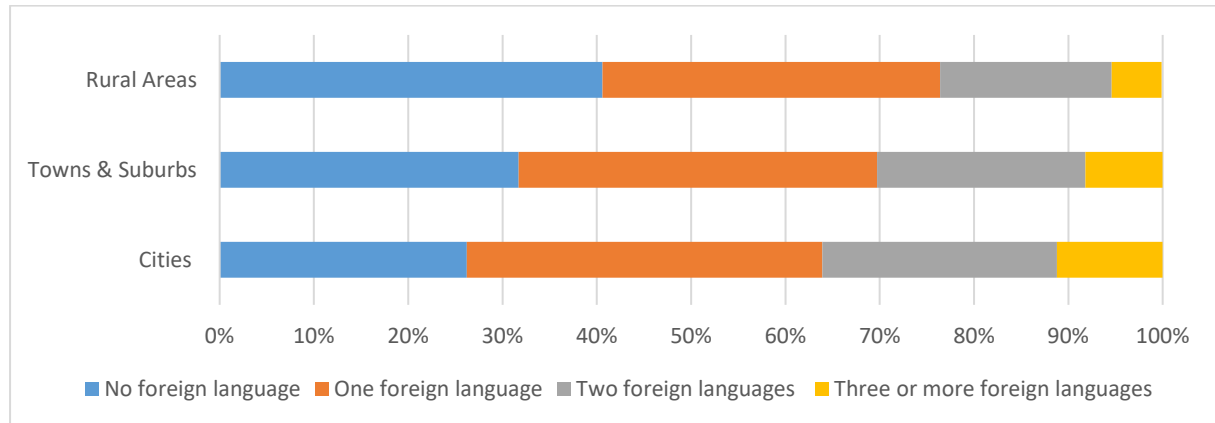**Figure 21. Knowledge of foreign languages by degree of urbanisation - % (EU-27, 2016).**

Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Number of foreign languages known (self-reported) by degree of urbanization.

Skill Gaps in Multilingualism at a Glance

Our research has highlighted unequal knowledge of foreign languages among individuals living in the EU. While ethnic minorities and migrants often know multiple languages, their mother tongue might not always be of high relevance for employment in the EU. The strongest determinant of whether a person knows at least one foreign language is the level of education. We could identify a skills gap of 45.7 pp among the highest (88.9%) and the lowest educated individuals (43.2%). Other significant factors are age, where a knowledge gap of 21.6 pp can be observed between those aged 55-64 and 25-24, in favour of the younger cohort. Being employed and living in an urban area increases the likeliness of knowing at least one foreign language by more than 10 pp, while being inactive or outside the labour force and residing in a rural area decreases it. Lastly, the gender gap of 1.2 pp in favour of females seems rather insignificant.

Figure 22. Gaps in knowledge of at least one foreign language at a Glance, difference in pp (EU 2021).*
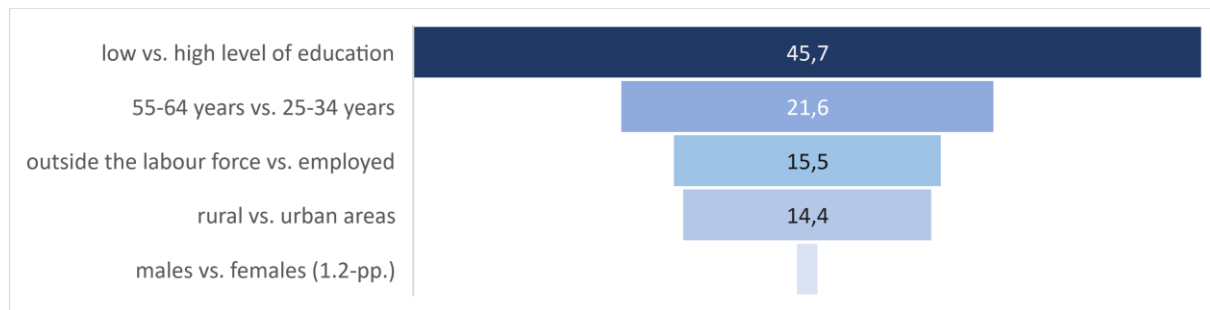
low vs. high level of education	45,7
55-64 years vs. 25-34 years	21,6
outside the labour force vs. employed	15,5
rural vs. urban areas	14,4
males vs. females (1.2-pp.)	

Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Number of foreign languages known.
* the lower skilled group is mentioned first, followed by the higher skilled group, the percentage points in between are the skills gap

3.4. Social (life) skills and Transversal skills

Social (life) skills and transversal skills are seen as relevant competencies needed in the recently dynamic labour markets. Rapid change in the world of work might require individuals to adapt quickly, changing employment and reskilling, while the increase in importance of healthcare and social sectors caused by aging populations requires more competent employees in these sectors.

Social skills (life skills) are defined as social and communication skills and competencies, and life skills needed for shaping freedom, tolerance, critical spirit, European values, and democratic citizenship. **Transversal skills** are competencies with high transferability across different jobs and sectors are understood as core skills required across the labour force.

In the literature and databases, the concepts of transversal and social (life skills) sometimes overlap, defining both types of skills as cognitive skills, interpersonal skills, as well as social skills.[108] Therefore, it should be noted that some skill sets fit into both the category of life skills and transversal skills, and that overlaps when addressing the concepts are inevitable. For instance, while we consider entrepreneurship and problem-solving skills as feasible indicators for illustrating transversal skills, they also contain elements of life skills. On the other hand, interpersonal skills, political participation, and volunteering are primarily classifiable as life skills, although some elements within them are transversal.

We will firstly assess **transversal skills** by approximating them with the elements of **entrepreneurship and problem solving**, followed by **life skills**, for which we use **interpersonal skills, political participation, and volunteering** to provide suitable estimations to identify skills gaps.

Entrepreneurship (transversal skill)

In many EU policies entrepreneurship is seen as an essential driver of societal health, wealth, and innovation. Successful entrepreneurship requires a broad set of skills, among them management, communication, financial and analytical skills, problem-solving, critical thinking, strategic planning, time management, and organizational and networking skills.[109] Many of these abilities can be considered transversal and (social) life skills. In Europe, entrepreneurial rates tend to be lower than in other regions of the world, but often reflect a higher level of gender parity.[110] Among European countries, early-stage entrepreneurial activities are below 8% of all individuals from 18 to 64 years of age in Poland, Greece,

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[108] OECD (2021). *OECD Skills Outlook 2021: Learning for Life.*
[109] Herrity (2023) *A Guide to Entrepreneurial Skills: Definition and Examples.*
[110] Global Entrepreneurship Monitor (2022). *The world's most foreword study on entrepreneurship since 1999.*

Spain, and Austria. Higher levels can be found in Lithuania, Latvia, the Netherlands, and Croatia, all with between 10% and 15%.[111] The European average ratio between males and females engaging in entrepreneurial start-up activities is 1:0.78, varying strongly between EU member states. While the W/M ratio is 1.04 in Spain, it is 0.63 in Germany and only 0.51 in Sweden.[112] Furthermore, there are noticeable differences among entrepreneurship activities when taking factors such as level of education, gender, age, degree of urbanization, and migrant status into account.

When looking at all EU-27 countries, approximately 13% of all individuals active in the labour market are self-employed. Strong determinants of whether an individual is self-employed are age, degree of urbanization, and gender. Among the 15–24-year-old population living in the EU, only 4% of individuals in this age group are entrepreneurs, compared to 17.2% of people between the ages of 55 and 64, making entrepreneurship among the highest age group active in the labour market more than four times more likely than among the youngest age group. Another noteworthy aspect is that, according to Eurostat, the overall share of self-employment is most common among people with low educational attainment (15.5%), followed by highest educated (13.1%) and medium educated (12.4%) individuals. Besides these numbers, there is a clear overall trend in Europe towards a stronger share of the higher educated in self-employment,[113] particularly outside agriculture, which is an important sector for self-employment of individuals with lower formal educational attainment. Another important indicator of entrepreneurial activity is country of birth, along with gender. In 2022, 16.2% of all males aged from 15 to 64 were entrepreneurs, compared to only 9.4% of all females. These rates are lower among migrants who were not born in the EU-27. Entrepreneurship rates among foreign-born males are 13.2%, and 8.5% among migrant women, making them one of the most vulnerable groups in regard to entrepreneurial skills. For this reason, it is important to look at initiatives such as "#SheDIDIT" in Belgium, which is one of our case studies, to learn how to boost entrepreneurship skills among this particularly vulnerable group. Lastly, entrepreneurial activities are more common in nonurban areas than in major cities. While in rural areas 16.2% of individuals are self-employed, it is only 11.6% in cities and 12.6% in towns and suburbs.

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[111] Global Entrepreneurship Monitor (2022). *The world's most foreword study on entrepreneurship since 1999.*
[112] Ibidem.
[113] Van Stel and Van der Zwan (2020). *Analyzing the changing education distributions of solo self-employed workers and employer entrepreneurs in Europe.*

Figure 23. Self-Employment by Degree of Urbanization, Migrant Background, Gender, Level of Education, and Age, 15-64 years (EU-27, 2022).
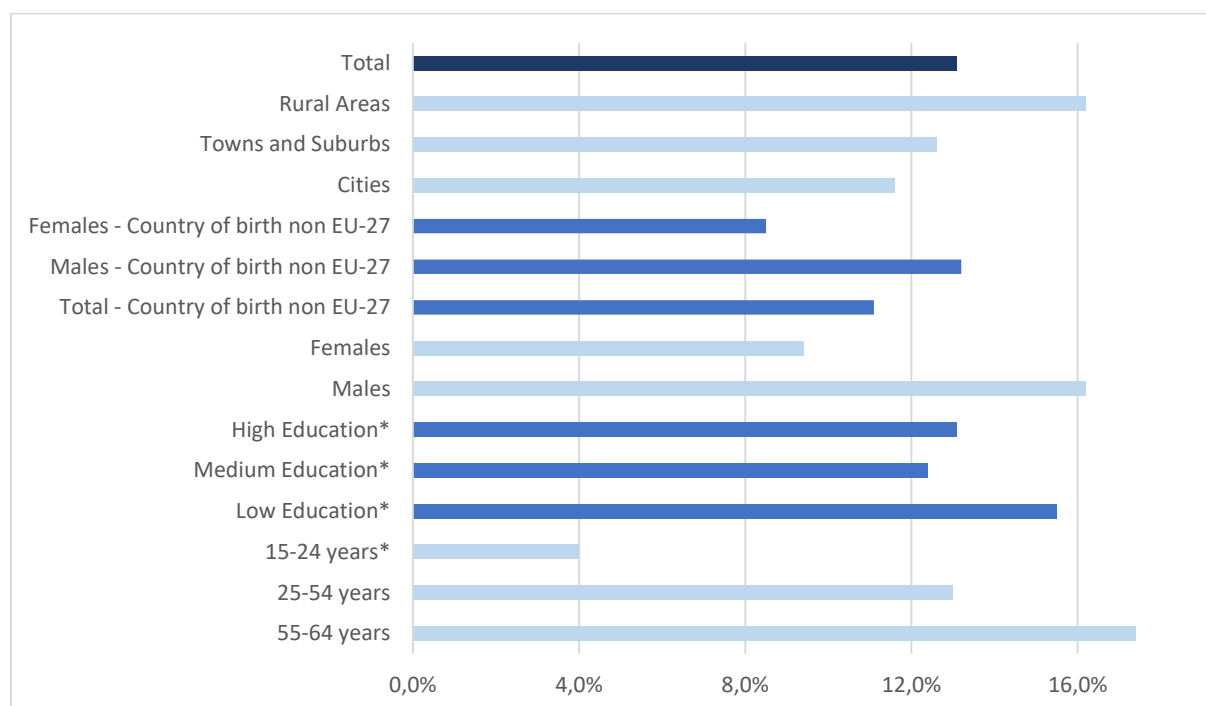
Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Self-employment by sex, age and country of birth, and Eurostat (2021). Majority of the self-employed in the EU are men.
*Data for these measures are from 2021, with an age interval of 20-65 years

In addition disability can be a factor hindering self-employment, and people with severe or multiple disability are affected the most. Furthermore, the gender gap in entrepreneurship for people with disabilities is approximately the same as among the overall population with no disabilities, making females with disability particularly vulnerable.[114] Currently, around 5% of people with a disability available for work in European OECD countries are self-employed.[115] People with disabilities face considerable challenges in regard to successful entrepreneurship. They include regulatory disincentives, individual barriers to business creation, low levels of awareness of disability issues in the entrepreneurship support system, and lower skills levels.[116]

To conclude, for a considerable number of groups, being self-employed appears to be more herculean than for others. Our data analysis identified young individuals, females with disability, and females with a migrant background as groups in strong need of action to foster entrepreneurship among them.

Problem Solving (transversal skill)

Problem solving skills can be defined as the ability to determine the source of a problem and to develop solutions to overcome the detected issue. To do so, analytical, research, communication, team building, or decision-making skills can play an important role,[117] hence there is no universally accepted definition of problem solving. Problem solving skills are transversal as they can be easily transferred between

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[114] OECD (2023). *Supporting persons with disabilities in entrepreneurship: Ensuring inclusion in a post COVID-19 economy.*
[115] Ibidem.
[116] Ibidem.
[117] Herrity (2023). *What Are Problem-Solving Skills? Definitions and Examples.*

different occupations, and are therefore of critical importance due to the changing nature of work. To estimate problem solving skills among individuals with different characteristics, we use data provided by the CEDEFOP European Skills and Jobs survey.

However, there is one important limitation in the data presented by CEDEFOP, which was also outlined when introducing numeracy and literacy skills. CEDEFOP's data provide insights on the frequency of individuals performing three important tasks indicating problem solving at work, namely: 1) developing or creating new products or services; 2) developing new work methods; and 3) trying out new ideas.[118] While we have precise information on how often individuals use these skill sets, we do not know their actual skills level. In the case of numeracy and literacy, PIAAC was a feasible alternative, but in regard to problem solving, despite the limitations stated above, using CEDEFOP data remains the most feasible approach for identifying potential skill gaps. The same applies to interpersonal skills, presented after this section.

Data on the percentage of individuals who performed the activities mentioned above as part of their main job, at least often (or very often), is presented in Table 4 and Figure 24. We also take the average of these three abilities to make problem solving skills more easily comparable. The data presented distinguish by gender, level of education, and age. As an important note to be emphasized, the data presented here cover people in employment (excluding current job seekers). Besides this small limitation, valuable conclusions can be drawn in regard to skills poverty among vulnerable groups. The same applies to interpersonal skills, presented after this section.

Table 4: Individuals who used Problem Solving Skills at work, at least often, within the last month by Gender, Level of Education, and Age (EU-27, 2018-2022).

Problem Solving Skills	Developing or Creating New Products or Services	Developing new Work Methods	Trying out new Ideas	Average
Female	27%	39%	42%	**36.0%**
Male	31%	41%	42%	**38.0%**
Low Education	23%	34%	36%	**31.0%**
Medium Education	24%	36%	36%	**32.0%**
High Education	35%	47%	49%	**43.7%**
25-34 years	36%	48%	51%	**45.0%**
35-44 years	32%	44%	44%	**40.0%**
45-54 years	24%	35%	37%	**32.0%**
55-64 years	22%	32%	33%	**29.0%**

Source: CASE: own elaboration, based on CEDEFOP (2023). European Skills and Jobs Survey. Problem Solving Skills.

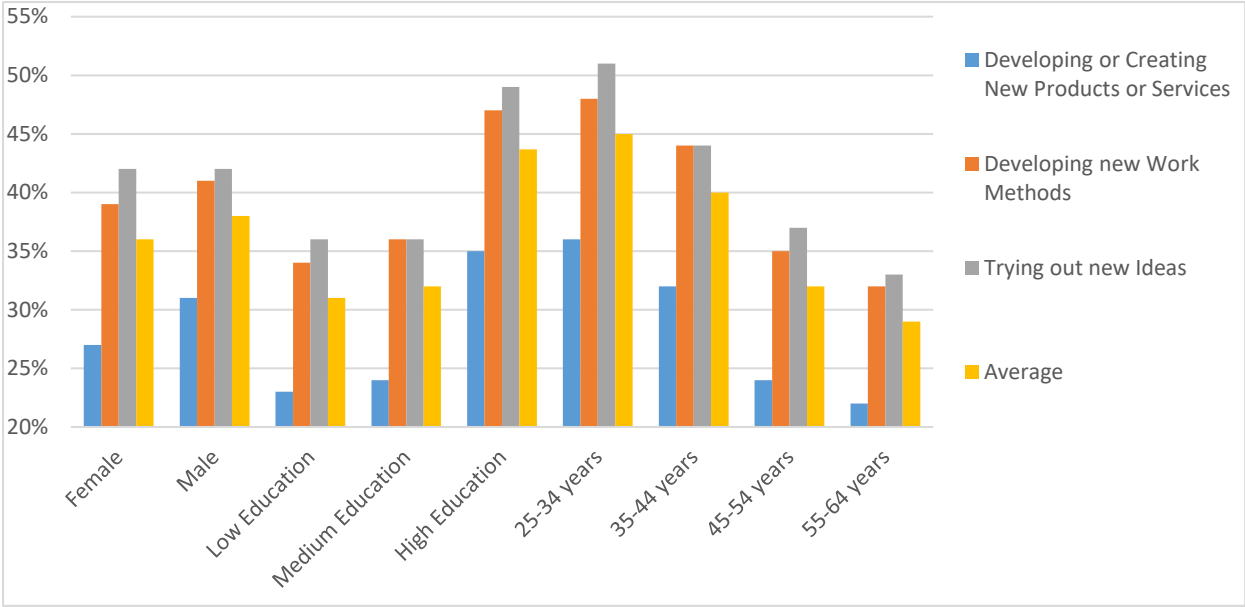[118] CEDEFOP (2023). *European Jobs and Skills Survey. Trying out new ideas.*

Figure 24: Individuals who used Problem Solving Skills at work, at least often, within the last month by Gender, Level of Education, and Age (EU-27).

Source: CASE: own elaboration, based on CEDEFOP (2023). European Skills and Jobs Survey. Problem Solving Skills.

In general there is a relatively small gender gap of 2pp in favour of males when it comes to problem solving at work (38% vs. 36%). Skills gaps are larger when looking at the level of education. Among individuals with tertiary educational attainment, problem-solving skills as defined by CEDEFOP are 11.7 pp more common at work than among individuals with medium educational attainment. The difference between low and medium educational attainment, at 1pp, is quasi-negligible. When analysing the data by age, we can highlight abysmal gaps in problem-solving skills among older individuals. In the group of 55–64-year-old individuals, only 29% of individuals use problem-solving at work at least often, compared to 45% of the youngest cohort (15-24 years). Figure 25 summarizes skills gaps in problem solving once more.

Figure 25: Problem Solving Skills among Individuals in Employment by Gender, Level of Education, and Age (EU-27); Percentage who used a set of Problem-Solving Skills at Work (Average)
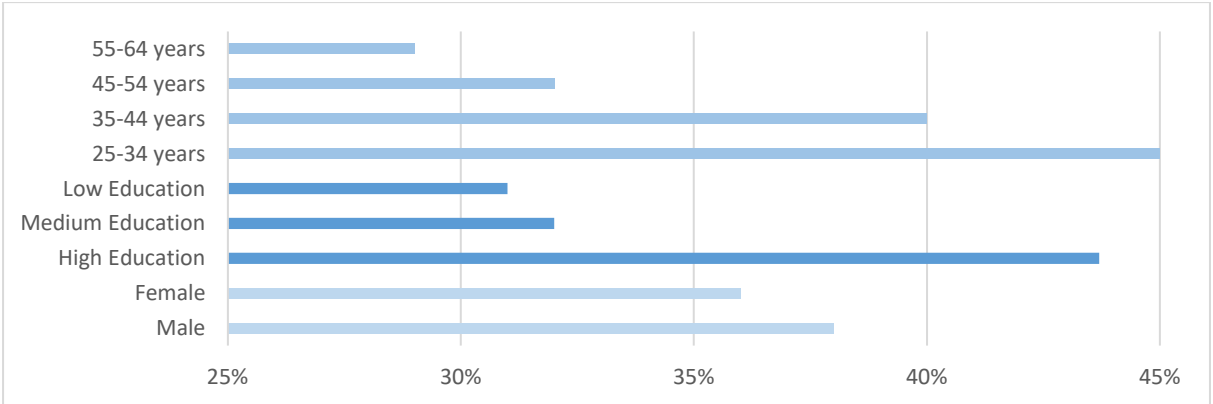
Source: CASE: own elaboration, based on CEDEFOP (2023). European Skills and Jobs Survey. Problem Solving Skills.

Unlike with entrepreneurship, precise EU data on the impact of migrant status on problem-solving is not available on EU databases, therefore PIAAC data was used as a primary source. In this case, problem solving in a technology-rich environment was measured. The data illustrate that on average in OECD countries adult migrants are less proficient in problem-solving skills than native-born adults, with the gap in problem-solving proficiency at 12 percentage points.[119] When looking at EU countries only, the skills gap of migrants in problem solving is 5.28 pp,[120] hence it is still significant. Similarly to the case of migrant population, the data available on problem solving by degree of urbanization concentrate on problem solving within a digital environment. According to Eurostat, in 2021, 59.50% of individuals had above basic digital problem-solving skills, compared to 44.72% in rural areas.[121] It should be kept in mind that the data presented here are only valid for the digital sector; nevertheless, they outline important gaps in digital problem-solving skills among residents of rural areas and migrants. In regard to individuals with disability, it is feasible to look at the degree of disability, as well as whether it is physical or mental. Depending on these variables, skills gaps in problem solving may appear.

Summarizing this section, we could outline the strongest skill gaps in problem solving among individuals belonging to older population cohorts who have a low or medium level of educational attainment. Females are slightly more affected than males. Data for migrants and by degree of urbanization are only available for digital problem solving, enabling us to outline weaker performance among migrants and residents from rural areas compared to nationals living in cities.

Interpersonal Skills (life skills)

The ability to communicate and build relationships with others can be described as interpersonal or people skills.[122] Interpersonal skills are primarily social and life skills, and may include active listening, leadership, motivation, responsibility, teamwork, flexibility, patience, and empathy. The definitions may therefore vary, as with the case of problem solving. In our analysis we once again take the comprehensive definition by CEDEFOP, which describes the ability of providing advice or counselling, giving presentations, dealing with outsiders, teaching or training, caring for others, selling, and teamworking as interpersonal skills. Table 5 and Figure 26 highlight the percentage of individuals by gender, level of education, and age, who used selected interpersonal skills at work within the last month, at least often. To outline who makes use of these skills the most, the average of all indicators for interpersonal skills was taken and compared.

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[119] OECD (n.d). *Measuring Migrants Actual Skills*.
[120] Calculation, based on data from OECD (n.d). *Measuring Migrants Actual Skills*.
[121] Eurostat Data Browser (2023). *Individuals' level of digital skills (from 2021 onwards)*.
[122] Herrity (2023). *Interpersonal Skills: Definitions, Examples and How to Improve*.

Table 5: Individuals who used Interpersonal Skills at work, at least often, by Gender, Level of Education, and Age (EU-27).

Interpersonal Skills	Providing Advice or Counselling	Giving a Presentation	Dealing with Outsiders	Teaching or Training	Caring for Others	Selling	Teamwork	Average
Female	57%	32%	54%	28%	40%	25%	63%	**42.7%**
Male	53%	34%	53%	29%	27%	26%	67%	**41.3%**
Low Education	44%	26%	44%	23%	28%	22%	56%	**34.7%**
Medium Education	50%	29%	51%	23%	31%	23%	63%	**38.6%**
High Education	65%	40%	57%	36%	38%	29%	70%	**47.9%**
25-34 years	60%	39%	58%	33%	37%	32%	69%	**46.9%**
35-44 years	58%	35%	56%	31%	35%	26%	67%	**44.0%**
45-54 years	53%	30%	50%	26%	31%	22%	63%	**39.3%**
55-64 years	51%	28%	48%	23%	31%	20%	61%	**37.4%**

Source: CASE: own elaboration, based on CEDEFOP (2023). European Skills and Jobs Survey. Interpersonal Skills.

Our indicators show that females use interpersonal skills slightly more often (by 1.4 pp). Individuals with lower educational attainment are 13.2 pp less likely to use interpersonal skills at work. Moreover, interpersonal skills are used more often by individuals in the youngest cohort (25-34 years), at 46.9% compared to 37.4% of all 55–64-year-olds. The findings are described once more in Figure 26.

Figure 26: Interpersonal Skills among Individuals in Employment by Gender, Level of Education, and Age, EU-27; Percentage who used a set of Interpersonal Skills at Work (Average)
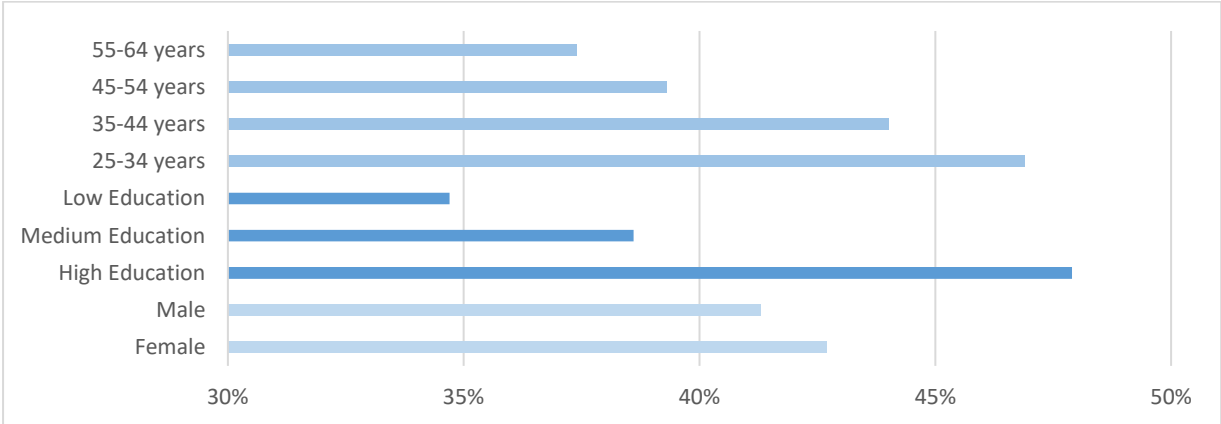
Source: CASE: own elaboration, based on CEDEFOP (2023). European Skills and Jobs Survey. Interpersonal Skills.

Political Participation (life skill)

Political participation is a fundamental pillar of every functioning democracy. In our context, we consider it an important life skill. Depending on which group we are looking at, political participation differs. Despite the fact that all countries in the European Union are democratic, the organizational form of government may vary. For instance, while the political system in France is semi-presidential, Germany has a parliamentary republic. Depending on the form of political organization, the importance of presidential elections compared to parliamentary elections may differ, and national election turnouts are therefore incomparable without bearing this limitation in mind. For this reason, the most feasible data for comparing rates of political participation are the most recent EU elections held in 2019. For these elections, the overall turnout in the EU-28 (including the UK) was 50.66% among all eligible

voters, which was more that 8 pp higher than in 2014.[123] When looking at turnouts by country, the results vary considerably. In Belgium, where voting is compulsory, 88.47% voted in the 2019 EU elections, compared to only 22.74% in Slovakia.[124]

An examination of the 2019 EU electoral turnout according to various characteristics shows that, unsurprisingly, those with a positive opinion of the EU (58%) we 13 pp more likely to vote in the European elections than EU sceptics (45%). Risk of poverty is another indicator as to whether an individual is politically active at the European level. While only 38% of individuals struggling to pay their bills voted in the 2019 EU elections, the level was 54% among those with more stable finances, which results in a gap of 16 pp. In regard to economic activity, the self-employed and the retired population (both 55%) was 18 pp more likely to vote than the unemployed (37%) and 13 pp more likely than manual workers. Those who remained longer in education have higher political participation rates in comparison to individuals leaving education at an early age. Additionally, there is a worryingly lower rate of participation in EU elections among the youngest cohort allowed to vote (42%) than among individuals older than 55 (54%). We can also observe a minimal gender gap of approximately 3% in favour of men participating more in these elections. Figure 27 reiterates what was stated above.

Figure 27. Turnout of the 2019 EU-Elections by Opinion about the EU, Socioeconomic Characteristics, Year of Leaving Education, Age, and Gender.
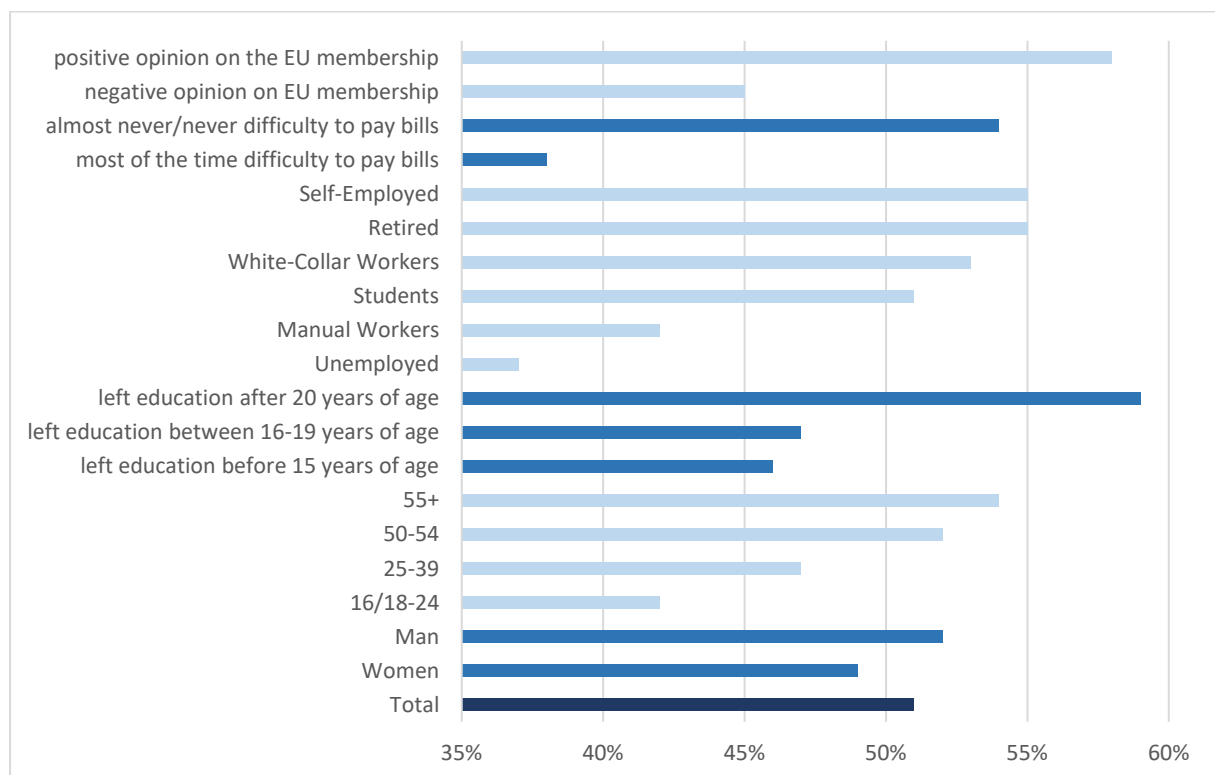
Source: CASE: own elaboration, based on EP (2019). Eurobarometer Survey 91.5 of the European Parliament. A Public Opinion Monitoring Study. The 2019 Post-Electoral Survey.

The OECD analysed voter turnout in regional, urban, and rural areas, and could not identify any clear trend in favour of political participation by degree of urbanization.[125]

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[123] EP and Kantar (2019). *2019 European Election Results Turnout by Year.*
[124] Ibidem.
[125] OECD (2009). *Voter turnout in national elections. In OECD Regions at a Glance 2009.*

In the vast majority of states, foreign citizens are not regularly informed or enfranchised, consulted, or involved in local civil society or public life. Political participation can be seen as the weakest area of integration policy, with immigrants having little say in policies that affect them as well in their current place of residence.[126] In the case of EU-countries, non-EU-citizens in particular have limited local voting rights. In general, the Nordic EU countries grant foreign nationals more political participation rights. In Denmark, Finland, Ireland, Luxembourg, Netherlands and Sweden non-EU nationals can vote in local elections and also run as a candidate.[127]

Contrary to some individuals with migrant status, political participation in elections is fully ensured and a fundamental right for people with disabilities, yet a number of challenges have the potential to hamper their political participation, for instance though discriminatory barriers of a legal and administrative nature, as well as inaccessible procedures or information.[128] A study using data from the 2012 European Quality of Life Survey furthermore outlined that severe impairment decreased voting probability by 8 percentage points compared to individuals without disability.[129]

Volunteering (life skill)

In 2015, almost one in five EU citizens at least 16 years old were active in formal voluntary activities. Volunteering is an important life skill as it promotes social cohesion, as well as social inclusion and integration. Furthermore, volunteering can provide unemployed individuals with valuable skills to facilitate re-integration into the labour market, or enhance skills among employed individuals. Lastly, direct involvement by citizens in volunteering plays an important role in the fostering of civil society and democracy.[130] Participation in volunteering varies between EU member states, with strong voluntary engagement in Austria, the Netherlands and Sweden, but rather low participation in volunteering in Bulgaria, Greece, Italy, and Lithuania.[131]

However, rates of participation in volunteering do not only vary between EU member states, but also between particular groups. The most recent data on participation in formal voluntary activities stem from 2015, gathered by Eurostat. In that year, 18.9% of the total 16+ population took part in formal voluntary activities (numbers for informal voluntary activities were even slightly higher). When looking at participation rates by degree of urbanization, individuals living in cities are 2.5 pp less likely to take part in formal volunteering than people living in towns and suburbs, or rural areas (20%). A stronger determinant is the level of income, causing a participation gap of 9.9 pp between individuals from the lowest (14%) to the highest (23.9%) income quintile. Participation rates in formal volunteering remain stable throughout most of our lives, although drop among individuals aged between 25 and 39, as well as for those over 75 years old. The strongest single factor influencing participation in volunteering is the education gap. While solely 11.2% of individuals with low educational attainment volunteer, the level at 27.3% is 16.1pp higher among the higher educated. Regarding gender, men are 1.4 pp more likely to formally volunteer than women. Figure 28 provides further insights on participation in formal volunteering by the characteristics mentioned above.

[126] Migrant Integration Policy Index (2020). *Political Participation.*
[127] Ibidem.
[128] EP (2023). *Political participation of people with disabilities in the EU.*
[129] Priestley et al. (2016). *The political participation of disabled people in Europe: Rights, accessibility and activism.*
[130] Educational, Audiovisual & Culture Executive Agency (EAC-EA) (2010). *Volunteering in the European Union.*
[131] Ibidem.

Figure 28. Participation in formal voluntary activities by degree of urbanization, socioeconomic characteristics, age, level of education, and gender (EU-27, 2015).
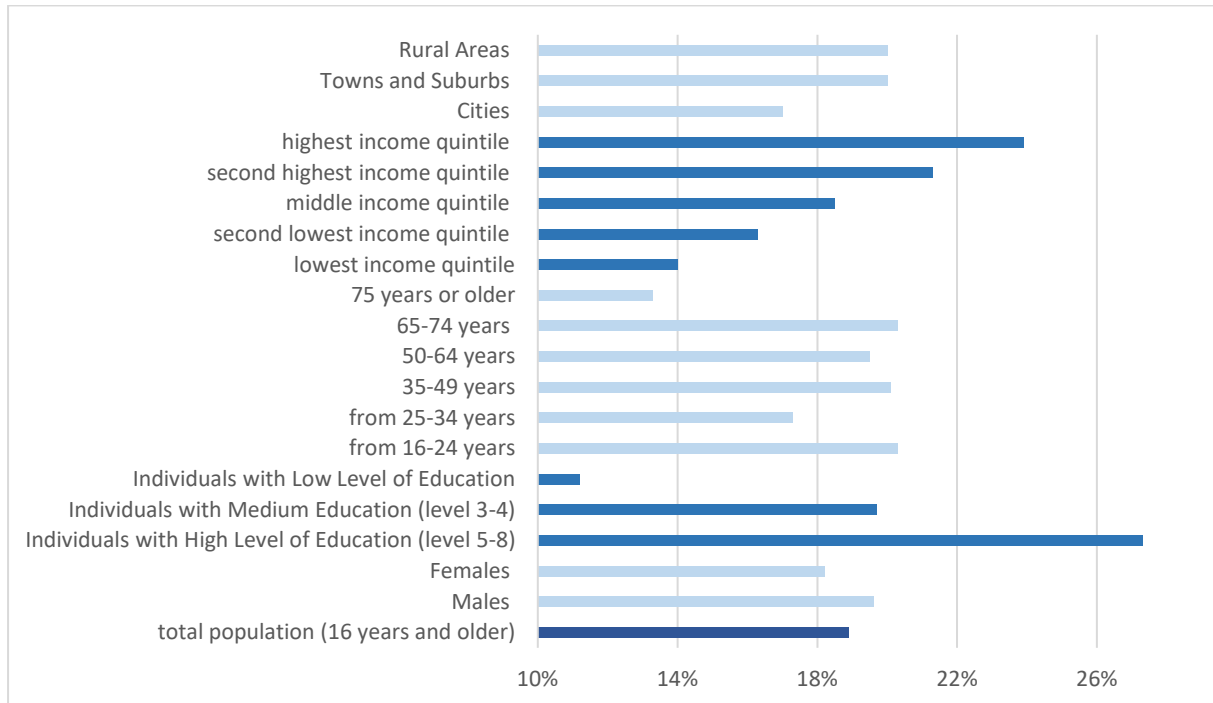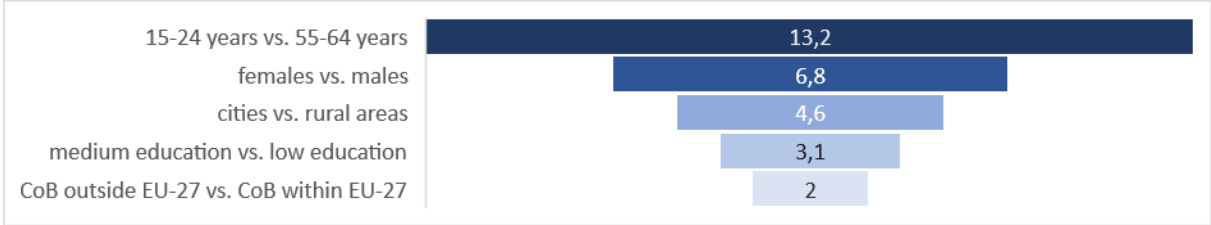

Source: CASE: own elaboration, based on Eurostat (2023). Participation in formal or informal voluntary activities, or active citizenship by income quintile, household type and degree of urbanization. and Eurostat (2023). Participation in formal or informal voluntary activities or active citizenship by sex, age and educational attainment level.

Transversal and Life Skills at a Glance

A common definition for transversal as well as life skills is herculean to find, and as such they are challenging to measure and the concepts sometimes overlap. Nevertheless, entrepreneurship and problem solving provides us with a good idea of transversal skills gaps among vulnerable groups, while interpersonal skills, as well as political participation and volunteering, highlight skills gaps in social (life) skills.

Starting with **entrepreneurship**, age is a strong determinant responsible for the largest skills gap in entrepreneurship skills. Among individuals aged 55-64, the percentage of self-employed people is 13.2 pp higher than among 15–24-year-olds, of whom only 4% are self-employed. Males are 6.8 pp more self-employed than females, and rural residents 4.6 pp more than people who live in cities. Interestingly, the highest rate of self-employed can be found among individuals with low educational attainment. Entrepreneurial activity among them is 3.1 pp higher than for those with medium educational attainment. In addition, migrants are slightly less likely to be self-employed.

Figure 29. Entrepreneurship Gaps at a Glance, difference in pp, (EU, 2022).*

15-24 years vs. 55-64 years	13,2
females vs. males	6,8
cities vs. rural areas	4,6
medium education vs. low education	3,1
CoB outside EU-27 vs. CoB within EU-27	2

Source: CASE: own elaboration, based on Eurostat Data Browser (2023). Self-employment by sex, age and country of birth; plus Eurostat (2021). Majority of the self-employed in the EU are men
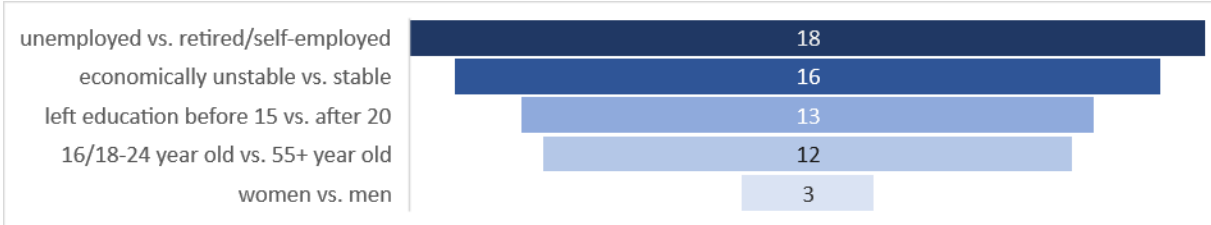
* the lower skilled group is mentioned first, followed by the higher skilled group, the percentage points in between are the skill gap

In regard to **problem-solving** skills, younger individuals (aged 25-34) are using them 16 pp more often at work than older individuals (aged 55-64). A lower education level makes individuals 13 pp less likely to make use of problem solving at work. Females are also slightly more vulnerable in regard to not applying problem-solving skills at the workplace.

Interpersonal skills are most likely used at work among highly educated young females, and less likely among low educated, older males. The education gap is 13.2 pp, while an age gap of 9.5 pp and gender gap of 1.4 pp can be observed.

Political participation is a crucial life skill. We outlined that for migrants, particularly non-EU citizens, political participation is heavily restricted. Furthermore, despite being a fundamental right, individuals with disability show a lower probability of voting. While no significant gap regarding political participation and degree of urbanization could be found, we identified several participation gaps when looking at the most recent EU elections in 2019. Here we found that the electoral turnout among unemployed individuals (37%) was 18 pp lower than among the retired and self-employed population (55%). Another significant gap of 16 pp can be found between individuals who struggle to pay their bills most of the time (38%) in comparison to people who almost never or never face difficulties in paying their bills (54%). Those who are early leavers of education were 13 pp less likely to vote compared to those who remained in education at least until they turned 20. Older citizens were 12 pp more likely to vote in the 2019 EU elections than the youngest cohort allowed to vote. There is also a small gender gap of 3 pp in favour of men.

Figure 30. Participation Gaps at the 2019 European Elections at a Glance, difference in pp.

unemployed vs. retired/self-employed	18
economically unstable vs. stable	16
left education before 15 vs. after 20	13
16/18-24 year old vs. 55+ year old	12
women vs. men	3

Source: CASE: own elaboration, based on EP (2019). Eurobarometer Survey 91.5 of the European Parliament. A Public Opinion Monitoring Study. The 2019 Post-Electoral Survey. Have European Elections Entered a new Dimension?

* the lower skilled group is mentioned first, followed by the higher skilled group, the percentage points in between are the skill gap

Volunteering fosters civil society and social cohesion and is therefore another important life skill. As our research outlined, participation in formal volunteering is not distributed equally among the total population. Despite slightly lower participation rates in volunteering among individuals 25-34 years of

age, there are no major age gaps among the working age population. The highest educated are 16.1 pp more likely to participate in formal volunteering than the lowest educated. A considerable gap of 9.9 pp can also be identified by income. Rural residents and people living in towns and suburbs, as well as males, are slightly more active in formal volunteering than females and people living in cities.

Figure 31. Participation Gap in Formal Volunteering at a Glance (EU-27, 2015)*, difference in pp.
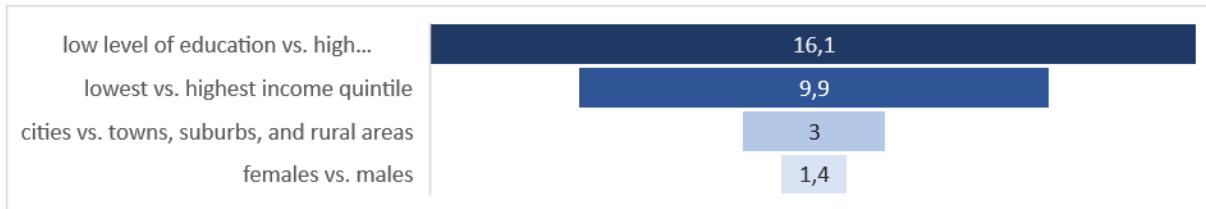
Source: CASE: own elaboration, based on Eurostat (2023). Participation in formal or informal voluntary activities, or active citizenship by income quintile, household type and degree of urbanization; and Eurostat (2023). Participation in formal or informal voluntary activities or active citizenship by sex, age and educational attainment level

* the lower skilled group is mentioned first, followed by the higher skilled group, the percentage points in between are the skill gap

3.5. What groups of people are most at risk of skills poverty?

It has already been concluded in the theoretical chapters that several determinants can simultaneously affect an individual, creating unique circumstances of vulnerability in regard to skills. Since data on various skills gaps have been presented, this part of the chapter assesses to what extent the individual characteristics contribute to a lack (or low level) of numeracy and literacy, digital, foreign language(s), as well as transversal and life skills.

When comparing skills gaps in all analysed categories, it becomes clear that lower educated older individuals are at the highest risk of being affect by skills poverty, followed by foreign (particularly non-EU 27) residents and the rural population. Gender can play a role too, although a rather small one. Lastly, ethnic minorities can suffer from skills poverty, however, just as in the case of people with disabilities, this is very context-specific. The following paragraphs thoroughly address the most critical skill gaps identified by our research.

EU individuals with **lower than secondary educational attainment** scored 23 pp worse than individuals with tertiary education in numeracy, and 20 pp worse in literacy in the PIAAC Survey. Only 32% of the lowest educated possess basic digital skills, contrary to 79% of high educated individuals. 43.2% of the lowest educated individuals know a foreign language, which is 45.7-pp. less than individuals with tertiary educational attainment (88.9%). The lowest educated use problem solving and interpersonal skills at work less often, and fewer voted in the 2019 European Elections or engaged in formal volunteering. **Unemployment**, being **out of the labour force**, as well as **low income** has strong potential for exacerbating skills poverty.

In most of our analysed skills, **older individuals perform significantly worse than younger population cohorts.** 55–65-year-old adults showed a 10% lower score in numeracy and literacy in the PIAAC Survey than 25–34-year-olds. For the same age groups, the younger set has a 27 pp higher share of individuals with at least basic digital skills, and 21.6 pp higher share of individuals knowing at least one foreign language. The older people use problem solving and interpersonal skills at work less often,

but they are more often self-employed and more of them took part in the 2019 EU elections. Many remain active in volunteering up to an old age.

Skills gaps among **foreign-born individuals** are considerable, though not as high as among older and low educated individuals with low income. Individuals with migrant status perform 10% lower in basic numeracy and literacy skills than the average. Only 42% of non-EU-27 nationals living in the EU have basic digital skills, compared to 55% nationals. Many migrants speak foreign languages as their mother tongue often varies from the national language in the country of residence, hence, there is often a skill mismatch between the language(s) they know and the requirements of the labour market. People with migrant status are less likely to be entrepreneurs, especially female entrepreneurs, and score lower in problem solving in a technology-rich environment. Some **ethnic minorities** can show lower literacy and digital skills, as well as language skill mismatches.

In some skills, the **degree of urbanization** can also be a risk factor for skills poverty. The share of individuals with basic digital skills is 15 pp lower among rural residents compared to people living in cities, and the number of individuals living in nonurban areas who know at least one foreign language is 14.4 pp lower than in urban areas. On the other hand, more rural residents are entrepreneurs than in urban areas, and together with residents of towns and suburbs, more rural residents volunteer.

Gender skill gaps are present, but rather small compared to the other variables we present. While no literacy skills gap could be identified, males scored 3% better in the PIAAC Survey at numeracy. 4 pp more men have basic digital skills in the EU, while 1.2 pp more females know at least one foreign language. Gender is an important factor regarding entrepreneurship, as only 9.4% of females between 15 and 64 are self-employed, compared to 16.2% of males. While men use problem-solving skills at work slightly more often than women, females make use of interpersonal skills at work more often than men. As for voting in EU elections and volunteering, men are slightly more likely to do so.

Data for individuals with **disabilities** are to some extent incomplete, and the type of disability plays a major role in whether an individual is less likely to acquire skills. According to the PIAAC survey, one in two individuals with permanent disability has only basic numeracy and literacy skills. Moreover, people with disabilities are less likely to be online and or digital facilities such as online banking or e-government services. Disability can also be a risk factor for language and life skills, for instance the European Quality of Life Survey outlined that severe impairment decreased voting probability by 8 pp.

In the context of this large number of skills gaps among vulnerable groups, upskilling and reskilling initiatives are of critical importance for an inclusive, strong, and resilient labour force. The following section will highlight some good practices to learn from to tackle skills poverty through various initiatives and policy measures.

4.   How to design effective upskilling and re-skilling policies to reach the most vulnerable?

This chapter includes a comparative analysis of how various initiatives within the analysed countries have approached the design and implementation of upskilling and re-skilling initiatives, with a focus on Belgium, Poland, Ireland, Italy and Denmark. The following initiatives were chosen for in-depth analysis:[132]

Table 6: Upskilling and re-skilling initiatives analysed in the study

Country	Analysed initiatives
Belgium	▪ Digibanks; ▪ Accessia; ▪ SheDIDIT.
Poland	▪ Development Strategy of the Lower Silesian Voivodship 2030; ▪ A chance – New opportunities for adults; ▪ The Ukrainian House in Warsaw.
Ireland	▪ Regional Skills Fora; ▪ Adult Literacy for Life; ▪ You Employment – Generation Ireland.
Italy	▪ Fondazione Mondo Digitale (FMD) Academy; ▪ Guaranteed Employability of Workers (GOL); ▪ Documentation Info Centre and Development Initiative (CIDIS).
Denmark	▪ ReDi School Copenhagen; ▪ Danish Refugee Council (DRC) - Job Oriented Efforts[133]; ▪ SEVU Joint Committee for Vocational Welfare Education

Source: own elaboration, CASE.

Across the 15 case studies, several overarching trends and patterns emerge in the approaches to addressing skills poverty and promoting workforce development. One commonality is the emphasis on tailored support and targeted interventions to meet the diverse needs of vulnerable populations, including migrants, refugees, women, and individuals with disabilities. Mentoring, skills evaluations, and job matching are recurring themes, highlighting the importance of personalized guidance in facilitating access to employment opportunities. Digital skills training is another prevalent theme, reflecting the growing demand for technological proficiency in today's labour market. In addition, collaboration between public and private sectors, as well as with local communities and educational institutions, is a recurring strategy to ensure holistic support and maximize impact. However, differences exist in the specific focus areas and target populations across the case studies, ranging from IT education for migrant women (*ReDi School Copenhagen*) to vocational training in healthcare (*SEVU Joint Committee for Vocational Welfare Education*).

More specifically, in **Belgium** the three case studies present diverse approaches to addressing the skills development needs of vulnerable populations. *Digibanks* caters to those living in poverty, seniors, and the unemployed, providing free access to digital technology, workshops, and essential services tailored

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[132] The analysis of the case studies was based on comprehensive desk research and, when possible, interviews with the organization implementing the initiative.

[133] The analysis of the *Danish Refugee Council (DRC)* case study was based only on desk research.

to specific locations and target groups. *Accessia* focuses on individuals with disabilities, combining workforce integration with digital accessibility services. Finally, *#SheDIDIT Youthpreneurs* targets young women with diverse cultural roots, emphasizing entrepreneurship and social/life skills through tailored programmes, coaching, and a concept store.

Similarly, in **Poland**, the initiatives target different groups. The *Development Strategy of the Lower Silesian Voivodship 2030* aims to achieve balanced regional growth, emphasizing economic potential, public services' quality, human capital, resource use, and spatial cohesion. The *New opportunities for adults* project focuses on upskilling adults with low basic skills, targeting literacy, numeracy, digital, and social competencies. Lastly, the *Ukrainian House Foundation in Warsaw* centres on supporting Ukrainian citizens in Poland, providing information, assistance, and Polish language courses for migrants.

In **Ireland**, the *Regional Skills Fora (RSFs)* actively engage regional stakeholders to address skills gaps and provide tailored education and training opportunities aligned with labour market needs. The *Adult Literacy and Learning (ALL)* initiative primarily addresses literacy and numeracy skills among vulnerable groups through nationwide courses and collaboration funds supporting grassroots projects. ALL targets specific cohorts like older adults, migrants, and people with disabilities, prioritizing inclusivity and plain language usage. In contrast, *Generation Ireland's* bootcamp model focuses on profession-specific technical skills, particularly benefiting the unemployed and underemployed, including women, ethnic minorities, and individuals with disabilities.

In **Italy**, the *FDM Academy* offers free training opportunities in digital, transversal, and social skills through a user-friendly online platform, targeting various groups like youth, women, immigrants, and vulnerable workers. The *GOL programme* in turn adopts a tailored approach, offering pathways for occupational reinsertion, upskilling, reskilling, and inclusion, with mandatory participation for certain income support recipients. Furthermore, CIDIS's L2 Italian courses focus on facilitating social integration of migrant populations through language learning, intercultural mediation, and support for the school system.

Lastly, in **Denmark**, the *ReDI School Copenhagen* aims to combat skills poverty among migrant women and non-binary individuals by providing mentoring, workshops, job matching, and community support, with a focus on digital skills and IT education. Similarly, the *Danish Refugee Council's* initiative works to integrate refugees into the labour market, offering job-oriented courses and support services such as mentorship and skills evaluations. Finally, the *SEVU Joint Committee for Vocational Welfare Education* plays a pivotal role in developing vocational training programmes tailored to the needs of the healthcare sector, by establishing training schemes, managing course content, and providing continuing education opportunities.

The comparative review of the Strengths, Weaknesses, Opportunities and Threats (SWOT) analyses reveals common threads and challenges inherent in initiatives aimed at addressing skills poverty and providing upskilling opportunities to vulnerable populations. Across the initiatives, several common strengths emerge, including: commitment to vulnerable populations such as migrants, refugees, and individuals with disabilities; tailored approaches to meet the needs of specific target groups; tangible results; and collaboration with external stakeholders. On the other hand, some emphasize intersectionality, targeting specific demographics, while others focus on niche sector training or broader skills poverty alleviation. Geographical coverage, political support, reported success rates, and

collaboration levels with stakeholders also differ, highlighting the nuanced impact and varying strategies of each initiative. When it comes to weaknesses, the cases share some common flaws, including: dependence on funding sources; limited media presence and visibility; challenges in engaging specific target groups due to lack of awareness or cultural barriers; and capacity constraints.

Opportunities for these initiatives lie in creating new skills and job opportunities, facilitating better integration of marginalized groups, and promoting dialogue between participants and employers. By integrating marginalized groups into the workforce, upskilling programs re assumed contribute to greater social inclusion and economic empowerment. Furthermore, fostering dialogue with employers ensures that training aligns with industry needs, increasing the likelihood of successful job placement for participants. However, they also face threats such as funding uncertainty, reliance on political support and public opinion, competition with larger companies or organizations with greater financial resources, and external factors (e.g. changing technology, migration patterns, or political relations between countries impacting programme implementation).

One common challenge faced by such initiatives is the uncertainty in the sustainability and programme continuation. Some of the interviewees identified limited media presence and visibility, as a barriers to reaching target audiences, especially among marginalized groups who may be unaware of available opportunities. Engagement barriers, such as cultural differences or competing priorities, further complicate participation in learning activities. Capacity constraints may limit the scalability of initiatives, restricting their reach and impact. To address barriers to engagement in learning, initiatives must prioritize accessibility, cultural sensitivity, and geographic inclusivity. This may involve providing flexible learning options, language support, and targeted outreach efforts to underserved communities. By tailoring support and providing targeted interventions based on individual circumstances, such initiatives can effectively bridge skill divides and promote equitable access to opportunities for all.

In conclusion, effective upskilling and re-skilling policies for reaching the most vulnerable require a multifaceted approach that targets specific vulnerable groups, engages civil society, addresses diverse needs, and acknowledges intersectionality. By tailoring initiatives to the unique challenges faced by vulnerable populations and fostering collaboration between stakeholders, countries can better support individuals in gaining the skills needed to thrive in an evolving labour market.

For more detailed information on the analysed initiatives carried out in the five Member Countries, please refer to *Annex 1 – Policy initiatives and solutions to overcome the most pressing skills divides: case studies from the EU* – attached to this report.

5.   Conclusions and recommendations

Recent labour market transitions shaped by so-called megatrends like demographic changes, globalisation, climate change, technological progress and digital transformation significantly affect the socio-economic situation of individuals. Vulnerable people are the ones, who are at the higher risk of its negative impact, especially in terms of their skill poverty, social exclusion, and inability to efficiently adapt to the rapidly changing labour market.

Skills inequality causing skills poverty has been a persistent phenomenon over the last decades deriving mainly from the unequal access to high-quality education in early childhood development and unequal access to upskilling training in later stages of their lives. The main traditional factors behind the skills inequality are uneven access to education in early childhood, and socioeconomic and family background, which sets the base for educational formation, or stereotypes, discrimination and gender segregation observed at the early stage of educational development. Such characteristics push some individuals into the worse-off societal and economic situation in their early lives, leading to their social exclusion and poverty in the later stage of their professional careers.

In 2022 in the EU 21,6% of the EU population, which corresponds to the 95,3 million of people were at risk of poverty and social exclusion. The CEDEFOP 2020 estimates show that a pool of 128 million adults in the EU-28+ has a potential for upskilling and reskilling.

This study identifies the following groups of individuals, who are at risk of poverty and social exclusion:

➢ **Individuals with disadvantaged socio-economic situation**, like family background, or communities with fewer opportunities. Disfavoured socio-economic background affects significantly the educational attainment of individuals and living conditions.

➢ **Being women, or belonging to LGTBQA+ community,** which is still visible under the gender discrimination and segregation in Europe. Household community and care responsibilities expectations often limit their chances of accessing education and training and equally participating in the labour market of women. Individuals belonging to LGTBQA+ on the other hand face elevated threats of violent and discrimination in the employment and educational opportunities.

➢ **Racial and ethnic minority** is a factor discriminating and segregating several individuals in a disfavoured position. Ethnic minorities are found to face numerous disadvantages due to limiter rescores and limited access to training opportunities.

➢ **Migrants** are found to face various challenges in accessing quality training and decent jobs that would allow them to use their skills properly.

➢ **People with disabilities** are found to be frequently excluded from regular primary and secondary education. Also their access to TVET is often inaccessible. The limited set of skills development programmes are often available for them

➢ **Young people** are in a vulnerable state on the labour market, especially NEETs. They are also particularly likely to lack skills that are acquired non-formally through on-the-job training and work experience.

➢ **Individuals and communities residing in rural areas** have fewer educational opportunities and face underinvestment when it comes to educational capacity.

> The intersectional approach is adopted to the analyses representing the fact that individuals or groups of individuals experience multiple forms of discrimination based on their different social characteristics or identities.

This study also identifies the skills, which are relevant in the rapidly changing world of work. They are related to the individuals' ability to adapt to rapidly changing demand for specific competencies, to their ability to build societal networking, or ability to communicate effectively. They are categorised in the following groups:

- ➢ **Literacy and numeracy skills**, defined as skills needed to communicate both orally and in writing in a variety of situations, and to monitor and adapt one's own communication to the requirements of the situation, as well as skills to apply numerical and mathematical content, information, ideas and processes to meet the basic demands of learning and work. These are the basic educational competencies needed a every single stage of individuals' life-long learning activities.
- ➢ **Basic digital skills** are skills that empower individuals to become digitally literate. These skills can be applied both in the workplace as well as in society in daily living. The fast-paced adoption of digital technologies affects the way we live and work. Digital skills are unavoidable competencies of today's world.
- ➢ **Multilingualism** is an ability to communicate through reading, writing, speaking and listening in the mother tongue and in a foreign language. The globalisation process and the need for more interaction between individuals push for the ability to communicate in an understandable manner.
- ➢ **Transversal skills**, which include all types of skills with high transferability across different jobs and sectors, are found to be important when it comes to the rapidly changing nature of work. These skills are another key element of the competencies needed in the rapid social, technical and economic development of the socio-economic lives of individuals.
- ➢ **Social (life) skills** include social and communication competencies, as well as life skills. These are skills shaping freedom, tolerance, critical spirit, European values and democratic citizenship, in order to combat intolerance and any emerging radical movement, which might raise due to the rapid changes caused by the presented transitions.

This study confirms the existence of significant skill poverty within all the categories of skills among vulnerable individuals.

The most visible ones are observed for literacy and numeracy skills, where the skill gap is the highest between the most and the least educated individuals in the EU. Indeed, the educational attainment has a vital impact on the literacy and numeracy skill poverty. The educational outcomes are unequally distributed among the population due to the individuals' socio-economic background, or societal stereotypes. Significant skill poverty in numeracy and literacy skills can be also found among people with disabilities, ethnic minorities, or those coming from rural areas.

Social (life) and transversal skills are seen as relevant competencies needed in the recent dynamic labour market. Entrepreneurship, problem-solving abilities or interpersonal skills are competencies identified in the literature, as core transversal skills for the labour market. Also, social skills, represented as the ability to communicate, or tolerance are seen as relevant competencies for the social and healthcare sectors. Despite their significance, the concepts very often overlap, are not precisely defined and the existing databases do not cover all information about the skills possession or gaps. Existing databases

show significant skill poverty among the most vulnerable groups in this respect. The groups with the highest share of skill poverty are those coming from the disfavoured socio-economic background, migrants, and women. Nevertheless, the lack of sufficient comparable data makes it impossible to make a credible statement in this respect.

The digital skills are those, which are the best addressed and described in the statistics. As shown, people coming from the most vulnerable socio-economic backgrounds are those at the highest risk of skill poverty when it comes to basic digital skills. The digital skill poverty is also significant among the inactive elderly – 79% of older individuals do not possess basic digital skills, when compared to 32% of young individuals. Other significant digital skill gaps are observed between rural and urban areas or migrants versus EU-nationals.

Also, multilingualism is unequally distributed among the population. People coming from the most vulnerable environments with a low level of education are those mostly exposed to multilingualism skill poverty. Also the elderly, or people coming from rural regions are those more exposed to this type of skill poverty.

The second overreaching aim of this project is to provide insights into how we can combat skills poverty and design effective policies to reach the most vulnerable people. Following the understanding that individuals or groups of individuals experience multiple forms of discrimination based on their different social characteristics or identities, this study is adopting an intersectional approach to the analyses performed, aiming to present the most comprehensive recommendations on how to address the most pressing skill inequalities.
Drawing on the conclusions provided from the 15 case studies on the most effective initiatives, the following policy recommendations are formulated on how to overcome skill divides and effectively combat skills poverty.

> ➢ Equal access to high-level education for all societal groups in early childhood, regardless of their background, is pivotal to decreasing skill poverty in society in the long term.

The present study shows that in all skill poverty categories people coming from lower socio-economic backgrounds are those with the highest risk of skill poverty and in consequence probable social exclusion. Lower education of parents and lower level of family income are the triggers of individuals' lower level of education, which in turn affects individuals' performance in multilingualism, numeracy and literacy skills, or possession of digital skills. This, in turn, might affect negatively individuals' ability to effectively adapt to new labour market changes. Policymakers should direct policies towards more equal access to education starting from early childhood and limiting the negative barriers to its access.

> ➢ National policies, while well addressing the challenges related to digitalisation, should pay more attention to other types of skills needed in the rapidly changing world of work.

While digital and green transitions are well addressed in all European, national and regional policies, measures and initiatives, relatively less attention is paid to other forms of competencies, which are also relevant in the rapidly changing world of work. As shown in this study, life (social) and transversal skills are very often neglected in national statistics as well as in policy programmes. The numeracy and

literacy skills, while observed and well addressed in early-school education, seem to be less of an interest in the formal and informal adult educational policies. Also, the existing national policies seem to treat social and life skills at lower relevance than other more technical skills. Also, when selecting the successful case studies, the digital upskilling initiatives were identified more often and were more present at national policies and programmes rather than the upskilling activities for other type of skills. In light with the market trends, policy makers should equally recognise the need to support other types of skills, which also are to be crucial on labour market.

> In a short-term life-long learning activities should be created with the direct aim to support the disfavoured individuals in their access to high-quality upskilling measures.

As presented in this study national educational policies pay special attention to upskilling and reskilling policies, which can help individuals to adapt more easily to green and digital transitions. Supported by the EU strategies and corresponding funds, they create effective programmes for those at a higher risk of labour market exclusion, or long-term inactivity. Such activities should be continued, and they should particularly encompass the most disfavoured individuals in terms of their socio-economic background, their lower level of education, those socially and economically excluded, or those who are the most difficult to reach by the programmes.

> The initiatives addressing the upskilling of vulnerable groups could be built in collaboration between private and public institutions

While several initiatives were identified to combat skills poverty among the vulnerable, only a few of them were taking into consideration the needs of the private sector, compared with the supply of the existing skills on the regional/local labour market. The SWOT analyses provided for the national case studies, and in particular the opinions of interviewees suggest that collaboration between the public and private sectors, as well as with local communities and educational institutions, is a recurring strategy to support a holistic approach and optimize the impact of the interventions. Enhanced regional collaboration between multiple stakeholders builds initiatives, which respond better to the local realities and needs and increase the effectiveness of the measure in terms of reaching urgent needs from both sides. Therefore, more collaboration between public institutions and the private sector seems beneficial to respond to labour market requirements more effectively.

> More media presence and higher visibility of the interventions at the local level could increase their effectiveness.

The SWOT analyses, and in particular, the opinions of the interviewed stakeholders, pointed that the visibility of the interventions can be a favourable element in targeting and inclusion of specific target groups. Usually the interventions are focused on direct activities, attempting to have an impact on individuals, but having lower, or limited media presence. It limits the knowledge about the existing strategies for the most marginalized groups and hinder the dialogue between different stakeholders. The existing analysis suggests that the visibility might be an important element improving the outreach activities to the most vulnerable groups.

> ➢ Civil society organisations could play a stronger role in better identification and reach of vulnerable individuals in need of upskilling.

The analyses of the upskilling initiatives showed that during the implementation of the majority of them the broader local community was not engaged in the creation and implementation of the strategies. While some of interventions chose some kind of societal collaboration, in many cases their engagement was not that much visible. The interviewed stakeholders pointed out that stronger dialogue and collaboration between the local stakeholders might be beneficial in improving the knowledge about the civil society needs or potential challenges for the interventions.

Further Research Perspectives

Given the novelty of the topic, the study focused on specific dimensions of skills poverty, that has an impact on labour market integration and falling into poverty. However, other aspects of skills poverty, such as technical skills or industry-specific competencies, are not thoroughly explored. The definition of skills poverty may vary across contexts, potentially leading to discrepancies in interpretation and measurement. Authors stress that future research should adopt inclusive approaches that center the voices and experiences of vulnerable communities affected by skills poverty. Engaging stakeholders from diverse backgrounds in the research process can ensure that interventions are responsive to the needs and realities of those most impacted.

While the study acknowledges the intersectional perspective of skills poverty with socio-economic factors, further exploration of how intersecting identities influence access to education (that should be considered a strong driver behind skills inequality), as well as labour market outcomes, could provide richer insights. Understanding the barriers and facilitators to skills development from the perspective of vulnerable groups can inform targeted interventions. What is more, a significant limitation of this study is its reliance on available data, which does not fully capture the personal characteristics of individuals, further quantitative research, fed with detailed data is needed to assess the prevalence and distribution of skills.

Last but not least, exploring the role of emerging technologies, such as AI and automation, in exacerbating or mitigating skills inequalities and skills poverty can be beneficial to inform future workforce preparedness strategies.

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Annex 1. Policy initiatives and solutions to overcome the most pressing skills divides: case studies from the EU

1. **Belgium**

Megatrends, such as globalisation, digitalisation, demographic change, and education are expected to impact the labour market and interplay with the climate transition, and not only in Belgium. In this context, digital, transversal, social and emotional, and job-specific skills are becoming increasingly important to make people more adaptable and resilient to changing demands on the labour market. Vulnerable groups are the most affected, and high-quality and inclusive learning opportunities in formal, non-formal and informal settings should be accessible for everyone to successfully alleviate skills poverty and thus better manage transitions in the labour market.

With 26% of inactive people (1.3 million people) out of the entire working-age population, Belgium is among the poorest performers in the EU.[134] Among these inactive people, more than 440,000 are affected by long-term work incapacity, and a majority of them belong to a vulnerable group, in an intersectional manner or not. In addition, 2021 data shows that 20.4% of the non-working population was inactive due to family and caring responsibilities.[135]

The federal "return to work" policy, initiated in 2022, has the objective to achieve 80% employment by 2030, and to mitigate the damage caused by the COVID-19 pandemic[136].

When looking at the initiatives to fight skills poverty, we see significant engagement in boosting digital skills. For example, since 2016 the Digital Belgium Skills Fund has been focusing on developing and improving the digital skills of socially vulnerable children, adolescents and young adults. The Fund funded 27 projects in 2021, and 47 in 2022. Belgium ranks 13th of the 27 EU countries in human capital in the 2022 edition of the DESI, with a score of 48.7 (EU average 45.7).[137] The proportions of Belgians with basic digital skills and those with advanced digital skills are comparable to the EU average, and one-third of Belgian businesses offer ICT training to their employees. While this is above the EU average, the proportion has decreased since 2019. Many people belonging to vulnerable groups lack basic digital skills, and initiatives are implemented to digitally reskill or upskill migrants, the long-term-unemployed, seniors, NEETs, and people affected by disabilities, and so on. In addition, strengthening digital skills has become a key objective for all communities and regions, and structural reforms are aimed at finding tailor-made and effective solutions and setting them in motion. For example, the Women in Digital National and Intersectoral Strategy 2021-2026 was adopted with the aim of providing a coherent strategy to promote women in Science, Technology, Engineering, Mathematics (STEM)/ICT at all policy levels.

The number of occupations experiencing shortages in professionals is increasing each year (+17 between 2022 and 2023), with 158 occupations in 2023.[138] Almost one third (29.2%) of the population aged 15 to 64 is considered inactive on the labour market.[139] Despite this, the Belgian labour market has become more dynamic in recent years, with an unemployment rate of 5.6% and an increase in the

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[134] Randstad (2021). *La Belgique est malade.*
[135] Indicators.be (2023). *Inactive population due to caring responsibilities.*
[136] Belgian Government (2022). *National Reform Programme 2022.*
[137] Digital Skills & Job Platform (2023). *Belgium, a snapshot of digital skills.*
[138] Le Soir (2023). *Voici la nouvelle liste des métiers en penurie.*
[139] Statbel (2023). *Emploi et chomage.*

employment rate.[140] The measures prioritised at policy level concern i) the inclusion of vulnerable groups, ii) reskilling and upskilling through vocational training, iii) boosting employment among the long-term unemployed, and iv) improving wellbeing at work[141], which shows a will to alleviate skills poverty and its consequences for the labour market. Indeed, the Belgian regions are investing European Social Fund (ESF) funding to develop reskilling and upskilling opportunities and fight skills poverty, in order to bring more people into the labour market. To do this, they are investing in all levels of education and training, and improving access to jobs for the more vulnerable social groups.

While the public sector has a key role to play in supporting the reskilling and upskilling of workers, with policy measures needed in order to (1) ensure the availability of relevant training for workers, (2) improve training frameworks, content and methods, and (3) follow up on the training results, the private sector also has a role to play. Many companies have already started taking action: to address the skills gap in Belgium, 58% of employers are upskilling and reskilling their current workforce.[142]

Interestingly, population ageing will not necessarily lead to a significant decrease in the Belgian workforce, as young seniors (55+) are expected to continue working, with more than 55.5% of seniors working in 2022 (compared to 25% only in 2000).[143] More active employment policies for seniors will be needed to cope with their specificities, notably in the ICT sector and sectors affected directly and indirectly by the climate transition. However, Belgian statistics confirm that older workers are significantly less likely to follow lifelong training. This issue of motivation for participating in reskilling/upskilling activities impacts the progress to mitigate skills poverty. While Flanders is already a strong performer overall, the Flemish Government continues to search for new ways to further strengthen the commitment of its workers to reskilling/upskilling activities. More specifically, they are observing a significant lack of motivation to learn on the part of adults, and this despite the benefits that upskilling and reskilling offer. 37% of the adult population is considered unmotivated,[144] or in other words disengaged from learning or unmotivated due to age or health obstacles. While adults with these profiles are the most in need of upskilling/reskilling opportunities, the policies and incentives to increase their engagement in learning are insufficient.

1.a Case study 1: Digibanks

> **The Government of Flanders wants to include vulnerable groups in the digitalisation wave. With support from the European Recovery and Resilience Facility (RRF), the Flanders region set up local "Digibanks" to reduce the risk of digital exclusion among vulnerable groups, i.e. adults who are at risk of digital exclusion, with the following objectives: to provide equal access to digital technology, strengthen digital skills through training and knowledge sharing, and ensure improved digital access to essential services by providing guidance on their use. There are 54 Digibanks in Flanders and Brussels, covering over 200 municipalities. The total budget for Digibanks is EUR 50 million. The project started in February for two years, and has been extended for 2 more years.**

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[140] Statbel (2023). *Emploi et chomage.*
[141] European Commission (2021). *Commission staff working document- Analysis of the recovery and resilience plan of Belgium, Accompanying the document "Proposal for a Council implementing decision on the approval of the assessment of the recovery and resilience plan for Belgium" {COM(2021) 349 final}.*
[142] Manpower group (2023). *Belgian employers refine strategies to address talent shortages.*
[143] Federal Public Service, Climact (2023). *Implications of the climate transition on employment, skills, and training in Belgium – Final report.*
[144] OECD (2022). *OECD Skills Strategy Implementation Guidance for Flanders, Belgium – The faces of learners in Flanders.*

Website: https://digibanken.vlaanderen.be/
Contact: https://digibanken.vlaanderen.be/contact
Institution implementing: The Flanders region with support from the National initiative with the support of the European Recovery and Resilience Facility (RRF)
Description of action: Digibanks offer to people who are digitally excluded the possibility to strengthen their digital skills. Services differ in each Digibank, and only some of them offer workshops. A digibank often consists of several digipoints, integrated in public points of access such as "social houses". Access to Digibanks is free. At the Digibanks, people can   - write a CV   - attend training courses (on laptop use),   - fill in tax-on-web   - receive support to Smartschool (a digital service for primary and secondary school pupils and their parents)   - learn how to use public services' websites   - learn how to make videocalls with mobile devices   - learn how to get online subscriptions   - receive support for buying a train or bus ticket online   - borrow a laptop (max 6 months at a time, up to 2 years, after signature of a contract)   - buy a laptop or tablet second hand   Digital banks help reduce the risk of digital exclusion among vulnerable groups through 3 objectives: 1) Equal access to digital technology by making laptops, screens and other hardware available through a lending service 2 Strengthening of digital skills through training and knowledge sharing. 2) Through guidance and support, ensuring an improved digital access to essential services Digibank U-Connect in the Bloemekenswijk focuses on helping job seekers and people who work in the social economy, meaning people involved in organisations with a pronounced focus on social issues. Visitors to U-Connect will have a chance to borrow one of the 100 laptops and tablets, receive help from a digicoach, or follow a training course. Another Digibank, located in the welfare offices of OCMW Gent, specialises in helping people in poverty. This Digibank focuses on guiding and training people to use digital applications in the administration. Lastly, the Digibank located in De Serre in Nieuw Gent (New Ghent) is aimed at local residents having trouble using digital devices. In addition, it offers workshops such as: 3) how to use a laptop 4) how to use social media 5) how to create an online CV 6) etc. The workshops are held twice a month on average, and are targeted to "basic users" or "advanced users".
Target group: People living in poverty, people with low-literacy skills, seniors living alone, unemployed people, etc.
Intersectionality: yes, since the target comprises vulnerable groups in a broad sense
Types of skills being addressed: basic skills (literacy skills), digital skills

Reasons for implementing it: While the world is becoming increasingly digital, the risk of digital exclusion is still present among vulnerable groups in society. According to the King Baudouin Foundation's "Digital Inclusion Barometer" (2022), people belonging to one or several vulnerable positions in society experience a higher risk of digital exclusion. This gap is present on several levels. For example, people in a vulnerable position have unequal access to technology, such as a laptop or internet connection. They also often have fewer digital skills, which means they make less use of e-services. The digital divide further increased in Belgium between 2019 and 2021 (by 6%). As much as 39% of the Belgian population is considered to have weak digital skills, and 46% of Belgians are digitally vulnerable, despite the fact that access to the internet has increased (92% of Belgian households have an internet connection).[145] Furthermore, laptop use increased by 15% in these 2 years.

The gap between different population groups also remains large: **57% of low-educated internet users and 56% of those with low incomes have not used the internet to send documents to the administration, even though they were required to do so.** Moreover, 29% of households with low incomes do not have an internet connection at home, compared to 1% of people with high incomes.[146]

At the same time, the speed of innovation and transformation of Belgian society makes it essential for everyone to continuously update and refine their digital skills. These skills are crucial not only for improving their chances of integration into the labour market, but also to facilitate the use of essential online services.

According to a coordinator at Digibanks, "Certain aspects of our digital life can be quite daunting for the average user and for someone who is not used to working with them, they can be outright incomprehensible. This is why the Digibanks are counting on a personal approach to every citizen, as the employees can address individual issues."

Description and involvement of stakeholders: public support, including financing, and strong involvement of the municipalities and regions.

Description of people being engaged: The people who offer the support and workshops are often people who have jobs on the side, in ICT or teaching for example, and they are paid by the project according to the hours of support they provide.

Box 2. SWOT analysis of Digibanks

Strengths	Weaknesses
- Intersectionality in the target group	- The project was allocated financial support till the end of 2024 (potentially extendable till mid 2026), so constant need to find funding
- Support for vulnerable people with difficulties on the labour market	- Very broad target group, with various issues that are not always addressed.
- Addressing skills poverty	
- Offering upskilling and reskilling opportunities in a developing sector	
- Strong political support from public authorities	
- Very high geographical coverage	
- Strong visibility and media communication	
Opportunities	**Threats**
- Creating new skills and new jobs	- End of funding potentially in 2024
- Addressing a wide range of profiles	- Dependent on political vision

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[145] Fondation Roi Baudoin (2022). *Barometre de l'inclusion numerique.*
[146] Ibidem.

- Offering support to people in poverty with no means to get help - Offering highly diverse activities for various purposes - Extension and replicability to all Belgium - Some digibanks are integrated with job centres, so it is easier to address skill gaps	- "The process of learning is very slow, and the people looking for help, although they are motivated, need a lot of hours to master laptop usage. Another thing is that new people are coming in all the time, and one of the dangers is that 4 years is not enough to provide the necessary skills to all the people that need them" said a teacher at Digibanks Brussels.

Source: own elaboration, CASE based on desk research and interview.

1.b Case study 2: Accessia

Created in 2022, Accessia is an inclusive web agency created by Eqla, which is a Belgian association created in 1922 to support blind and visually impaired people and facilitate their inclusion in society. Accessia has a more general target since it is dedicated to people with disabilities, but with a narrower purpose: providing them with digital skills. **Website:** https://eqla.be/nouvelles-technologies/accessia/

Contact: Name: Catherine Borgers
    - **Function: Coordinator**
    - **Contact:** Catherine.borgers@eqla.be

Institution implementing: Eqla, in partnership with Citeco, DiversiCom and Passe-Muraille, non-profit organisations. 10 experts in digital accessibility and who are themselves affected by a disability implement the activities of the project.

Description of action: Accessia's mission is to promote digital accessibility and the digital inclusion of people with disabilities as well as provide upskilling/reskilling in the IT and digital sector to people with disabilities.
This innovative project is both:
    - a specific accompaniment of people with disabilities (all disabilities combined) towards employment in the digital sector, with the aim of integration into a company, and
    - a project of digital accessibility through audits, accessibility standards of websites and applications and the creation of accessible websites.
Accessia employs people with disabilities while providing them with training on digital accessibility. Those people are taught skills that few web developers possess.
"Those skills will be increasingly in demand on the labour market because by 2025, all websites in the sectors of the audiovisual media, air and rail transport, banking and e-commerce will have the obligation to be made accessible to all regardless of technical, material or physical constraints" informed a coordinator at Accessia.[147] Another added that "with Accessia, interns have the possibility to get their first professional experience, while the scope is enlarged, since the interns are not only blind or visually impaired, but are affected by all sorts of disabilities".
The services offered to clients by Accessia are:
    - the creation of accessible websites
    - accessibility audits of websites and mobile applications
    - support for accessibility projects for websites and mobile applications

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[147] Since September 2020, a European directive requires all public websites in the European Union to comply with specific standards of digital accessibility directed to people with disabilities. In 2025, this obligation will be extended to private wesites in the fields of transport, banking, insurance and e-commerce.

	- community Management (+ webmaster)

Per year, Accessia creates 6 inclusive websites, conducts 15 digital accessibility audits, and supports 15 website creation or redesign endeavours.

Eqla, a non-profit that administrates Accessia, also provides a training programme: BlindCode, the first coding and development training courses intended for visually impaired people. It is reserved to people in the Brussels region, and its goal is to fight skills poverty among this specific group of people with disabilities. Since its launch in 2019, 36 people have attended the training (about 9 per year) and 8 of them have been hired in long-term jobs. The training lasts 9 months (543 hours of teaching + 152 hours of internship)

- HTML, SCC, PHP, coding
- Job search (Curriculum Vitae, cover letter in Word, use of job search websites and platforms)
- English courses; etc.

Target group: People with disabilities preventing them from accessing digital tools (visual or hearing impairment, reduced mobility, cognitive disability, etc.), and visually impaired people for BlindCode

Intersectionality: sometimes, when the person is affected by multiple disabilities

Types of skills being addressed: digital skills

Reasons for implementing it: "25 to 30% of people are, to varying degrees, affected by a disability preventing them from using the Internet. Only 5% of websites respect digital accessibility standards. In Belgium, the employment rate of people with disabilities barely reaches 35%, compared to the European average of 50%. Belgium is also one of the only countries in Europe where there is no obligation to employ people with disabilities in the private sector," says a coordinator of Accessia. Accessia wants to:

- promote the social and professional digital inclusion and autonomy of people with disabilities preventing them to use digital tools
- contribute to a more inclusive and equitable society
- improve digital accessibility by designing intuitive user interfaces that work harmoniously with assistive technologies such as screen readers, text-to-speech software and alternative keyboards
- promote the creation of websites respecting the Web Content Accessibility Guidelines (WCAG) and compatible with any device, including mobile devices
- support the maintenance of accessible websites and compliance of new contents
- provide diagnosis for existing websites: rapid audit of website accessibility with the aim to updating it while meeting the WCAG
- facilitate the compliance of existing websites with the WCAG
- provide consulting services to companies and support them in making all their websites, mobile applications, software and digital content accessible to people with disabilities

Description and involvement of stakeholders: Eqla and its project Accessia collaborate with the FOREM, Bruxelles Formation, and other institutions accompanying people with impaired vision as well as other disabilities preventing them from accessing digital tools.

Description of people being engaged: Accessia employs 4 people: two people with impaired vision (development + audit) and 2 people without disabilities (one coordinator and one web designer). For Blind Code, 2 coaches/ICT trainers providing the training are assisted by one person who is visually impaired.

Box 3. SWOT analysis of Accessia

Strengths	Weaknesses
- Successful training of professionals in a niche sector - Determined target group - Commitment to inclusivity - Motivated and ambitious attendees - Support for people with disabilities, vulnerable on the labour market - Addressing skills poverty - Offering upskilling and reskilling opportunities in a sector with increasing demand for professionals by 2025 - Among the attendees of Blind Code, one succeeded in being accepted to a highly ranked university	- Funding: the programme is getting 56% of funding from the DBSF for a duration of 2 years, so 44% is needed every month from other sources, for instance from donations. - Weak media presence - Difficulty finding participants for the training, because of poor visibility - Difficulty sensitising people to the issue of digital access for people with disabilities - Difficulty sensitising companies to the importance of the European directive imposing standards
Opportunities	*Threats*
- Accessibility criteria are not part of the curriculum of web and communication professionals - Creating new skills and new jobs - Enabling the better integration of people with disabilities	- Brain drain: some of the people who beneficiated from Blind Code moved on to other companies instead of Eqla - The programme is not recognised as an education institution despite the significant amount of hours/courses of the workshops - Competition with bigger companies who will provide the same service/audits with bigger financial means

Source: own elaboration, CASE based on desk research and interview.

1.c Case study 3: SheDIDIT

The project started in July 2018 with a campaign starring successful role models, providing a platform for women and a talent pool in which women with a migrant background can register and talk about their interests, their expertise and what they would like to learn more or grow further into. Through events, coaching sessions, networking opportunities and mentoring, entrepreneurial women with a migrant background are offered support and tools to develop an entrepreneurial activity and get a voice. SheDidIt's mission is manifested through business coaching, workshops/networking and community building. According to the Programme Leader, "SheDidIt is not a social service, it is an incubator".
Furthermore, SheDIDIT visits schools to raise awareness amongst young girls to encourage entrepreneurship, whilst telling young boys that they should not be afraid of ambitious and enterprising women.
Website: https://www.shedidit.be

Contact: Lien Warmenbol (Founder & Director) +324 99 35 57 66
hello@shedidit.be

Institution implementing: SheDIDIT is a non-governmental organization (NGO) with funding coming from offering expertise and public funding. The focus is female entrepreneurship, to offer a realistic picture of enterprising women in today's diverse Belgium, and to send a positive signal to Flemish society about the unknown group of enterprising women with a migrant background to

hopefully create a snowball effect encouraging other girls and women to pursue their entrepreneurial dreams. The NGO plans to expand into Wallonia and Brussels.

Description of action:

- #SheDIDIT Youthpreneurs is a leisure programme for young ladies with diverse cultural roots (15 to 28 years old) with an entrepreneurial dream. The group programmes consist in either a three-day, one-week boot camp or a 10-week programme. Themes discussed are ones young people use in practice, and include mindset, concept development, finance, and marketing & branding.

- #SheMeansBusiness is a personalized business coaching programme based on needs, obstacles and objectives. Participants can benefit from 1-1 sessions for up to 4 months, with a max of 5 sessions, which they freely plan by themselves. The sessions are free and are available in Dutch, French, English and Spanish.

- The NGO offers follow-up activities accompanying women entrepreneurs with a migrant background, such as career counselling, access to a psychologist, monthly workshops held by a female entrepreneur, and power talks with expert intervention in skills enhancement as well as professional and personal development.

- SheDitIt developed a game for schools, Design your Business, which highlights the barriers and motivations to entrepreneurship with videos and tips from role models. SheDidIt mentors also visit schools to inspire young people to choose the entrepreneurial path. At larger events, female entrepreneurs with diverse roots are brought together in a panel, with a moderator, to tell their story, and "speed dates" are organised so that they can share their expertise with other women.

- SheDidIt also owns an inclusive concept store filled with diverse products issued from female-owned small businesses in Antwerp. There, the women need to pay to have their products on display for sale, but they do not need to pay a commission on their sales.

Target group: women and in particular migrant women

Intersectionality: yes, the project is destined for women migrants, although participation of women from non-migrant backgrounds is sometimes accepted. Women migrants face many obstacles in society to become entrepreneurs.

Types of skills being addressed: Entrepreneurship (transversal skills) and Social(life) skills

Reasons for implementing it:
- To offer a realistic image of the female entrepreneur in today's diverse Belgium
- To send a positive signal to Flemish society about the unprecedented and sometimes unknown group of enterprising female migrants
- To put female entrepreneurs in the spotlight
- To inspire other girls and women to follow their own entrepreneurial dreams
- To fight skills poverty among migrant women
- To offer support in terms of skills and knowledge as well as emotional support
- To provide community access to migrant women, often isolated, suffering from their intersectionality as women and migrants, and lacking self-confidence
- The need to empower women migrants

Description and involvement of stakeholders: volunteers: women and women migrants, and participants: women migrants, partnerships with different private and public entities

Description of people being engaged: According to the Programme Leader, since 2021, when SheDidIt acquired its current form as an NGO, the Youthpreneur programme has reached 300 people and the SheMeansBusiness Programme about 500.

Box 4. SWOT analysis of SheDIDIT

Strengths	*Weaknesses*
- Clear purpose, clear activities and solid structure - Engaged and professional coaches, who are themselves entrepreneurs - Motivated and ambitious attendees - Successful implementation and results - Defined and concrete target group - Support for women migrants - Addressing skills poverty - Offering upskilling and reskilling opportunities related to entrepreneurship otherwise difficult to access - The fact that the coaching sessions are individual is a driver of success	- As a nonprofit, the project has limited funding - The constant need to prove before public opinion that the programme is needed - The NGO is growing very fast (from 3 people to 14 in 1.5 years), so there are structural and organisational challenges
Opportunities	*Threats*
- Creating new skills - Enabling the better integration of migrants and their higher participation on the labour market - Boosting female entrepreneurship	- Growing polarisation and stigmatisation of migrants in Belgian public opinion - Cultural barriers preventing women, notably Muslims, from choosing entrepreneurship as a career - Lack of support from the attendees' families impacting on their attendance at SheDidIt's activities - Access to finance for the attendees allowing them to start a business and then benefit from the programme.

Source: own elaboration, CASE based on desk research and interview.

1. Poland

Ever since 1989 the Polish economy has experienced a significant rate of economic growth. Between 1990 and 2022, its Gross Domestic Product (GDP) has more than tripled (194.8 billion vs. 627.5 billion USD).[148] Compared to a 7% contraction of the economy in 1991, in 2022 the Polish economy expanded by 4.9%.[149] Despite experiencing a decrease in 2020 as a result of the Covid pandemic, Poland's economy returned to the trend of expansion in 2021.[150] Poland is now experiencing comparably larger growth than the OECD average; in 2018, the Polish economy grew by 5.1%, while the OECD average for that year was 2.3% of year-on-year growth.[151] Apart from the improved performance of Poland's economy, its labour market has also seen an increase in performance, evidence of which can be found in the trends of falling unemployment or growth in wages.[152]

At the same time, the improving situation on the labour market should be attributed more to a better allocation of resources rather than an overall improvement in productivity.[153] In fact, the working age

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[148] World Bank Open Data (n.d.). *GDP growth (annual %) – Poland, 2015.*
[149] Ibidem.
[150] Ibidem.
[151] OECD (2018). *OECD Skills Strategy Poland: Assessment and Recommendations*.
[152] OECD (2017), *How's Life? 2017: Measuring Well-being, OECD Publishing, Paris.*
[153] World Bank Group (2017). *Lessons from Poland, Insights for Poland: A Sustainable and Inclusive Transition to High Income Status.*

population of Poland is shrinking.[154] The decreasing number of people of working age means that further economic growth will rely highly on growth in productivity rather than just the sheer size of the labour force.[155] Increase in productivity can be achieved by a number of drivers, however, the skill level of the population, quality of education, and level of innovation can be argued to be of relevance in the case of Poland. At the same time these factors, especially skill level, are important for creating resilience among workers in the changing labour market, in the face of the twin transition.

According to ESJS conducted by CEDEFOP, Poland still ranks poorly for literacy and numeracy skills; only 18% of the population can read and understand a text longer than 25 pages, and only 11% of the population can do advanced math, compared to the EU averages of 24.2% for reading skills and 18% for mathematical skills.[156] Furthermore, ESJS places Poland as the top third country necessitating moderate digital upskilling for 43% of the population, and fifth country necessitating significant digital upskilling for 17% of the population.[157] Another survey conducted by the OECD, PIAAC), indicates that while the mean scores for numeracy and literacy are very close to the OECD average, the percentage of adults who have no experience in using a computer is almost double the OECD average – 19.5% in Poland vs. 11.7% OECD average.[158] The results of both studies suggest vulnerability on the grounds of poor or absent digital skills among the population. Especially taking into consideration the digital and green transitions, deficiencies in these skills create acute vulnerability in a large portion of the population. Furthermore, the developments related to the war in Ukraine, and mainly the significant inflow of Ukrainian refugees into Poland, creates the upskilling need of multilingualism for both Poles and Ukrainians. Currently, according to the Office for Foreigners, there are 1.4 million Ukrainians residing in Poland.[159] According to the NBP (National Bank of Poland), 19% of the Ukrainians who arrived after the outbreak of war express the wish to stay in Poland permanently.[160] This means that a significant number of people will require upskilling in multilingual skills. The importance of the Ukrainian refugees is further shown in relation to the declining working age population numbers in Poland; the integration of migrants into the workforce could prove important for the labour market, and hence there is a need for good multilingual skills.

The need to address the above matters relating to skills prevalence in Poland was noted in the Integrated Skills Strategy 2030.[161] The said Strategy is a skills development initiative, and anticipates eight areas of effect. The Integrated Skills Strategy 2030 was presented by the Polish Ministry of Education in 2020. The areas of effect of the Strategy, and their goals presented below, reflect the concerns recognised above by the OECD and the ESJS survey, and identify actions aimed at addressing the specific areas. The Strategy was developed as a consequence of the OECD Skills Strategy: Poland.[162] The Integrated Strategy presents a comprehensive approach to upskilling needs in Poland.

Table 7: Areas of effect of the Integrated Skills Strategy 2030

Basic, transversal and professional skills of children, adolescents and adults	The promotion and building of a culture of life-long learning, focusing mainly on the

[154] OECD (2018), *OECD Regional Statistics*.
[155] OECD (2018). *OECD Skills Strategy Poland: Assessment and Recommendations*.
[156] CEDEFOP (2022). *European Skills and Jobs Survey (ESJS)*.
[157] Ibidem.
[158] OECD (2023). *Education GPS - Survey of Adult Skills (PIAAC): Full Selection of Indicators*.
[159] Serwis Rzeczypospolitej Polskiej (2023). *Urząd do Spraw Cudzoziemców - Obywatele Ukrainy w Polsce – aktualne dane migracyjne*.
[160] Forsal.pl (2023). *Wojna W Ukrainie. Ilu Uchodźców Chce Zostać W Polsce Na Stałe?*
[161] Ministerstwo Edukacji i Nauki (2022). *Zintegrowana Strategia Umiejętności 2030 (Część Szczegółowa)*.
[162] Ibidem.

	development and improvement of skills that pertain to life in the private, public, and professional spheres.
Developing skills in formal education – management cadres	The development of skills of education management cadres, especially in terms of compliance with the skills development strategy.
Developing skills in formal education – teaching cadres	The support of teaching cadres through tailored professional training, and the fostering of the creation of preferential studying conditions for those in education.
Developing skills beyond formal education	Preparation and training of persons involved in the progress and development of children, youths, and adults outside of formal education, including involvement at home or in the area of residence.
Developing and using skills in the workplace	The support of employees and managing cadres in the use of their skills in the workplace with the aim of increasing productivity and professional satisfaction, while at the same time better allocation of the managing cadre's potential for the improvement of the economy.
Career counselling	The development of good career counselling aimed at children, youths, and adults from all social and professional groups, who are either about to start their careers, or are seeking to improve their current ones.
Employer cooperation with formal and non-formal education	Research, conception, development, and implementation of mechanisms that would improve cooperation between formal and informal education, and employers, especially with the aim of easing and clarifying the transition between education and employment.
Lifelong learning planning and skills validation	The improvement of existing and development of new systemic solutions for the attainment of formal and informal education and training, together with the development and improvement of solutions allowing the control and validation of the results of this education or training, irrespective of how the results were achieved.

Source: CASE: own elaboration, CASE based on Integrated Skills Strategy 2030.[163]

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[163] Ibidem.

The Integrated Skills Strategy is meant to address a number of factors contributing to the dynamic global labour market situation, such as globalisation, development of new technologies, rising levels of urbanisation, or the twin transition, through fostering an increase in the populations' general skill level. The Strategy places strong emphasis on creating an environment of life-long learning, encouraging youths, adults and seniors to keep building on already acquired skills. The Strategy also notes the importance of innovative methods of learning, allowing for a more efficient acquisition of knowledge and skills. At the same time, the Strategy includes an area of effect pertaining to career counselling, as career planning is also an important part of the general goal set of the programme. The counselling is aimed at both youths and adults, allowing a more thought-out approach to education and skills required in the desired fields.[164]

However, the Strategy also recognises the issue of several areas of skills becoming obsolete, a problem that is relevant in the case of Poland; the Strategy aims at amortizing now-obsolete skills through the re-skilling of affected workers.[165] This problem is best exemplified by the current situation in the energy industry. Due to the green transition, and the general global tendency of moving away from fossil fuels, a significant portion of industry will be replaced by other technology requiring different skill sets. In Poland, the most pertinent example of this mechanism is the gradual departure from the coal power industry. Currently, about 75,000 people are employed in the coal mining industry, which is a sector that is becoming obsolete.[166] Most of them will need to look for a different career, which could create a need for re- or up-skilling.

Thus, the Integrated Skills Strategy, through the comprehensive combination approach presented above, aims at providing a remedy for the unavoidable changes in the relevant skills and future-proofing the population, first of all by fostering an environment for skill expansion, secondly by creating opportunities for applying these skills, and thirdly by providing support in the planned acquisition and use of these skills.

2.a Case study 1: Development Strategy of the Lower Silesian Voivodship 2030

The main goal of The Development Strategy of the Lower Silesian Voivodship 2030 is the even development of the Lower Silesia into a modern, competitive, and strategically focused region. The primary aim planned in the initiative is the balanced growth of the region, together with an improvement in the generally understood quality of life of its inhabitants. One of the main preconditions for the creation of this strategy is the adoption by the Council of Ministers of the Strategy for Responsible Development. The Strategy 2030 finds its justification mainly in the changing economic situation, and the conditions such as socio-economic changes, new technology development, and reindustrialization.

The Development Strategy of the Lower Silesian Voivodship 2030 sets out a number of strategic goals: the effective use of the region's economic potential; improvement in the quality and accessibility of public services; strengthening of regional human and social capital; responsible use of resources and protection of the natural environment and cultural heritage; and the strengthening of the region's spatial cohesion. Within these goals, there is a very large number of sub-initiatives aiming to address specific local and regional needs.

Website: Execution Plan of the Development Strategy for the Lower Silesian Voivodship 2030

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[164] Ibidem.
[165] Ibidem.
[166] Centrum Informacji o Rynku Energii (2023). *Polskie Górnictwo W Liczbach.*

Institution implementing: The Marshal's Office of the Lower Silesian Voivodeship. It is located at Wybrzeże Słowackiego 12-14, 50-411 Wrocław. Contact to the office is e-mail: umwd@dolnyslask.pl and telephone number: (+48 71) 776 90 53

Description of action:

Lower Silesian Talents Support System: support of innovative educational techniques, action in the aim of increasing the quality and attractiveness of VET, Support activities for the development of skills and creative and entrepreneurial attitudes with a special focus on gifted students.

Target group: Children, youths, and adults, with emphasis placed on disadvantaged persons in education and improving its accessibility

Intersectionality: partially

Types of skills being addressed: knowledge-based technical skills, basic digital skills, digital skills for employment, transversal skills.

Reasons for implementing it: changing economic situation, and the conditions such as socio-economic changes, new technology development, and reindustrialization.

Box 5. SWOT analysis of Development Strategy of the Lower Silesian Voivodship 2030

Strengths	*Weaknesses*
- Support for innovative education, as well as improving the quality of education and increasing the appeal of education - Emphasis on VET training, allowing for better specialization of individual skill sets - General goal of balanced growth	- Greater robotisation of industries may make it difficult to re-employ a large upskilled workforce; a holistic approach to upskilling that may fall short compared to highly specialised small-scale upskilling;
Opportunities	*Threats*
- Improving the skills of individuals currently employed in industries to be phased out. Much easier transition into new careers for workers whose skills became obsolete	- Quick and unpredictable development of technology, and therefore dynamic changes in skill demand; the need to reinvent the Silesia region under this initiative.

Source: own elaboration, CASE based on desk research.

2.b Case study 2: A chance – New opportunities for adults

The main objective of the project is to support adults with low basic skills, which include understanding and creating information, mathematical reasoning, digital skills and social competencies. The pursuit of this objective will involve the development and testing of innovative models of three-stage (through skills diagnosis, educational action, validation) educational support for people with low basic skills from selected target groups. The next step will be to develop recommendations for systemic measures to improve the basic skills of adult Poles.

Website: https://www.cedefop.europa.eu/en/news/poland-new-project-upskilling-pathways; https://szansa-power.frse.org.pl/

Contact: Izabella Lutze - Project Coordinator ilutze@frse.org.pl; 509-492-035
Additional contacts: https://szansa-power.frse.org.pl/kontakt/

Institution implementing: [The Foundation for the Development of the Education System](#) in partnership with the [Educational Research Institute](#).
Description of action: The project offered beneficiaries flexible opportunities to improve their literacy, numeracy, digital and social competencies, and an option to progress to higher levels of the Polish qualifications' framework. These objectives were achieved by developing effective models that would reach and motivate individuals from the selected target groups, and by offering them tailored-made learning programmes, skills assessment, and validation of achieved learning outcomes. The project itself is a consequence of "Recommendation on Skills Improvement Pathways: New Opportunities for Adults" adopted by the Council of the European Union on 19 December 2016. The project assumes a three-step approach to the improvement of individual literacy, numeracy, and digital skills: 1) Diagnosis of skills and the assessment of their level; 2) Support for education and training that is tailored to the skill level and growth requirements of each individual; 3) Confirmation and certification of the acquired skills through scrutinized validation.
Target group: adults from disadvantaged areas (rural areas, small towns and/or post-industrial municipalities), immigrants.
Intersectionality: yes
Types of skills being addressed: basic skills (numeracy, literacy), digital skills, social skills
Reasons for implementing it: The aim was to support adults with a low level of skills, knowledge and competencies, adults with intellectual physical and/or sensorial disabilities, and adults affected by abuse (e.g. physical, mental), etc.

Box 6. SWOT analysis of the New opportunities for adults

Strengths	*Weaknesses*
- All skills categories that are deficient are addressed, without the omission of digital skills - The aim of providing tailored support, thus avoiding blanket investment - Targeting of vulnerable groups	- Because the project is specialized, it will not respond to the general need of re- and upskilling, as it is better suited for direct and planned action
Opportunities	*Threats*
- Specified and direct support for vulnerable groups - Targeting the groups in most dire need of re- and upskilling - The ability to fill niches in the market with an inflow of new employees due to the specialized scope of the project	- Risk of overspecialization and limited future-proofness of the skills provided to the target groups by the project

Source: own elaboration, CASE based on desk research and interview.

2.c Case study 3: Ukrainian House in Warsaw

The Ukrainian House Foundation in Warsaw has been putting a lot of effort into creating a place where foreigners, especially Ukrainian citizens, can feel at home. Many informational and educational projects, cultural events and advocacy activities aimed at supporting migrants and refugees in Poland have been organized here, such as free Polish Language Courses for Ukrainian Refugees in Poland.

The Foundation focuses on helping Ukrainian citizens feel comfortable in Poland, mainly through the improvement of the skills necessary for them to integrate into Polish society and

the Polish workforce, while at the same time not forgetting Ukrainian culture, as the Foundation also focuses on disseminating and preserving the culture of those Ukrainians who live in Poland. Furthermore, the Foundation also focuses on good Polish–Ukrainian relations, both political and economic.

Website: https://ukrainskidom.pl/szukam-pomocy/kursy-jezyka-polskiego/

Contact: biuro@ukrainskidom.pl, media@ukrainskidom.pl

Institution implementing: The beginnings of the Ukrainian House date back to 2004, and one of the key moments in building Ukrainian civil society: the Orange Revolution. The spirit of the Ukrainian peaceful revolution united people all over Europe, and in particular Ukrainians living abroad. As a result of the events described above, a group of Polish-Ukrainian friends in Warsaw decided to act to support migrants coming to Poland. In 2009, the group of activists was officially registered as the "Our Choice" Foundation. Since 2014, the activists have been running the Ukrainian House in Warsaw. In the autumn of 2022, the "Our Choice" Foundation changed its name to the Ukrainian House Foundation.

Description of action:

The main task is to provide information support not only to Ukrainian citizens fleeing the war, but also to all foreigners residing in Poland. The Ukrainian House offers a hotline and a consultation point, helps in looking for accommodation, assists in job search (with finding training, career counselling, writing a CV, and legal consultation), functions as a meeting hub and offers language courses in Ukrainian and Polish. Polish language courses are offered free of charge for Ukrainian Refugees in Poland. The course is designed for people who want to communicate in Polish in everyday life, and who are interested in the Polish language and culture. Classes are held in various locations in Warsaw. Between June and October 2022, about 240 adults living in and around Warsaw who had fled the war in Ukraine attended our Polish language courses. A total of 17 groups took part, led by 7 experienced teachers of Polish as a foreign language. In August and September 2022, 4 groups of intensive Polish language courses were organised for children and teenagers. The classes were attended by 45 male and female students.

Target group: migrant population residing in Poland, with a particular focus on Ukrainian nationals, among them many refugees and also children

Intersectionality: yes, for example migrant women, refugees, refugee children

Types of skills being addressed: Multilingualism, but also intercultural competences (life skills & transversal skills)

Reasons for implementing it: To achieve integration of the (Ukrainian) migrant population

Box 7. SWOT analysis of Ukrainian House in Warsaw

Strengths	*Weaknesses*
- Targeting of a specific skill deficiency allowing for the more comprehensive implementation of upskilling - Targeting of a niche that exhibits potential for long-term future relevance - Meeting a strong need relevant to Polish society, while at the same time enabling better functioning of Ukrainian refugees	- The project is only concerned with the multilingual skills deficiency, and thus is not concerned with digital skills, which are outside of the project scope - The project answers a need that is relevant but at the same time limited, as the multilingual deficiency being addressed is more related to assimilation rather than answering an upskilling need in societal development (the language being taught is Polish)

Opportunities	Threats
- Better assimilation and functioning of Ukrainian refugees – especially those planning to stay in Poland permanently - Inflow of new employees due to increased Polish language ability among migrants	- The focus on multilingual skills is on the one hand specified, but on the other it may lead to limitation of the initiative's outcomes – as in only multilingual skills instead of hybrid skill combinations, such as multilingual digital skills; - To some extent the initiative is reliant on the political relations between Poland and Ukraine, placing some aspects of the implementation out of the foundation's control

Source: own elaboration, CASE based on desk research and interview.

2. Ireland

Throughout the last century, Ireland has experienced an astonishing transition from a rather poor agricultural society to a knowledge economy.[167] After the Covid-19 pandemic, Ireland accomplished a broad economic recovery, with the country's GDP estimated to grow 3.8% in 2023 and 3.3% in 2024, along with a very low unemployment rate of 4.4% in 2022.[168] The country has a comprehensive understanding of the importance of skills for the future of work. Ireland's skills system is complex with the involvement of multiple departments, agencies and governmental bodies shaping skill policies at the national, regional, and local levels.

A look at basic skills proficiency (reading, mathematics, science) among 15-year-olds in Ireland shows that the results are above the OECD average and far beyond the OECD average in reading, indicating a functioning educational system that sets the base for the further development of skills. According to the DESI 2022, a comparatively low number of adults (30%) do not possess basic digital skills in Ireland, compared to 54% at the EU level.[169] In regard to lifelong learning, 14% of Irish adults recently took part in education and training, which is above the EU average of 10% of all adults but far behind Finland and Sweden, with around one in three.

In 2016, Ireland was ranked sixth in the Global Innovation Index. In recent years, however, the country has lost some ground, and is currently ranked 23rd (2022).[170]

Nevertheless, despite these rather promising numbers, only 27% of adults feel that their skill sets prepare them very well for the future workplace in an increasingly complex and interconnected world.[171] The impact of Covid-19 was felt unequally across sectors, skill levels, age and gender, and was particularly disruptive for hospitality, food services, wholesale and retail, and the tourism sector, with young, low-skilled and part-time employees at high risk. Women have been affected more strongly than men in Ireland, with migrant women from Eastern Europe the group affected the most by Covid-19 related job losses.[172] Imbalances in skills are noticeable in the Irish economy, originating from skills shortages, surpluses, and mismatches. Although the pressure of skill shortages is apparent, it is less severe than in most EU countries.[173]

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[167] O'Sullivan and Rami (2022). *Key Milestones in the Evolution of Skills Policy in Ireland*.
[168] OECD (2023). *OECD Skills Strategy Ireland: Assessment and Recommendations*.
[169] Ibidem.
[170] World Intellectual Property Organization (WIPO) (2022). *Global Innovation Index 2022: What is the future of innovation-driven growth?*
[171] OECD (2023). *OECD Skills Strategy Ireland: Assessment and Recommendations*.
[172] Public Policy (2022). *The Pandemic: Two years that have changed Ireland. Part 1: Health, Healthcare, and the Labour Market*.
[173] OECD (2023). *OECD Skills Strategy Ireland: Assessment and Recommendations*.

In 2022, there was high demand for skills in the sectors of new information and communication technology, life sciences, construction, health, and financial activities. Skills shortages were observed particularly in professions affiliated with science and technology, and construction, where % respectively 39% and 28% of new job vacancies were difficult to fill. Of these "difficult-to-fill-vacancies", only 32% were taken by Irish nationals, which outlines the need for skilled migration.[174] Looking more closely, one can highlight significant shortages in software, coding, and data analytics skills (digital), in engineering, mathematics, and building abilities (technical), and in project management or multicultural competencies (transversal/life).[175]

The "*National Skills Strategy 2025 - Ireland's Future" (NSS),* launched in 2016, stands at the core of the country's efforts to respond to skill challenges and enhance the abilities of workers in the context of the twin transition. Skills that are highlighted to be promoted are in digital skills and in transversal and life skills, such as foreign languages, problem solving, or entrepreneurship.[176] A key element of the NSS was the creation of new bodies, such as the National Skills Council (NSC) and nine Regional Skill Fora (RSFs), which function as single contact points at the regional level, to ameliorate the provision of tailored support available across the education and training system. On top of that, the national "*Future FET: Transforming Learning"* strategy for Further Education and Training (FET) plays an important role in Ireland's Skills system. Additional complementary strategies are, among others, the "*Action Plan for Apprenticeship, 2021 to 2025"*, "*Adult Literacy for Life – A 10-year Adult Literacy, Numeracy and Digital Literacy Strategy"*, the "*Digital Strategy for Schools to 2027", and "Languages Connect"*, which is Ireland's strategy for foreign languages in education.

A large portion of skills formation, reskilling, and upskilling takes place within Further Education and Training or FET. Before 2010, the responsibility for activation measures including training was a matter for the Department of Enterprise and Employment and the National Training and Employment authority, FÁS. Since then, a single Skills Division has been created in the renamed Department of Education and Skills (FETCI). This department laid out the foundation for rolling out a new public policy infrastructure FET, which is best explained as an institutional triangle consisting of SOLAS (Further Education and Skills Service - the state agency that oversees FET), QQI (the national agency responsible for qualifications in Ireland), and ETBs (Education and Training Boards). SOLAS and the ETBs were created in 2013. FET first launched an action plan for apprenticeships and traineeships. In 2018, joint national FET system targets with the Ministry of Education and Skills were defined which then framed the establishment of 3-year strategic performance agreements between SOLAS and the ETBs. The most recent vision for FET in Ireland is the "*Future FET: Transforming Learning",* which sets three strategic objectives for the period of 2020-2024. Further Education and Training shall 1) enhance skill building, 2) foster inclusion, and 3) illustrate pathways for upskilling and reskilling.[177]

Box 8. An overview of Ireland's Further Education and Training system (FET)

FET, underpinned by state investment of around €800 million, offers reskilling and upskilling opportunities Level 1 to Level 6 of the National Framework of Qualifications (NFQ). It is delivered by 16 Education and Training Boards and a range of other FET providers and support agencies ensuring that FET reflects regional characteristics and meets local needs. There are 64 FET centres focusing on

[174] Solas (2022). *Difficult-to-fill vacancies survey.*
[175] OECD (2023). *OECD Skills Strategy Ireland: Assessment and Recommendations*.
[176] Ireland - Department of Education and Skills (2016). *Ireland's National Skills Strategy 2025.*
[177] Solas (2022). *Future FET: Transforming Learning The National Further Education and Training (FET) Strategy.*

what is traditionally perceived as training or further education at Level 5 or Level 6. In addition, there is a wider network of 293 community-based facilities providing critical access to education and training opportunities, primarily at Levels 1 to 4.

FET provides a diverse range of programmes and supports designed to meet the needs of individuals at different stages of the learning pathway. This includes courses that are focused on foundation or transversal skills development, including literacy and numeracy (for example, Adult Literacy), in order to build the core capabilities that will allow participants to move on to more advanced learning opportunities. A range of programmes (for example, Youthreach, Back to Education Initiative, Skills for Work) are focused more formally on facilitating pathways to other education and training opportunities and often bridge the gap between foundational learning and accessing vocational education and training.

Via the means depicted above, FET in Ireland significantly contributes to the amelioration of literacy and numeracy skills, boosts participation in lifelong learning, responds to challenges provoked by the digital divide, and supports vulnerable groups (e.g. migrants, or the low skill cohorts in the existing workforce).

The impact of FET in Ireland is large, with 186,740 learner enrolments in 2022, among whom 62.1% were women. Most individuals attended part-time courses (62.2%) rather than full-time courses (33.7%), with a small percentage (4.1%) also undertaking online courses. Most enrolments were in generic programmes and qualifications (54.4%), followed by business administration and law (9.1%), health and welfare (9.1%), and services (7.5%). 31.5% of all individuals enrolled were non-Irish nationals. In 2022, 30.4% of learners were unemployed prior to completion, while 31.6% were employed. The remaining 37.9% of learners were inactive prior to completion. Of those learners who were unemployed, 38.2% were long-term unemployed. Among those individuals who completed a FET course, around half of them were below 25 or between 55-64+ years of age, and 42.4% of certified completions concerned Qualification Level 5.

Source: own elaboration, CASE, based on: Solas (2022). This is FET Facts and Figures 2022.

Looking into the future, FET envisions to further strengthen skill building, promote inclusion via rooting FET in the community, targeting priority cohorts, and to provide literacy and numeracy support. Furthermore, FET aims to decrease entrance obstacles as much as possible to boost engagement at all stages of people's lives and careers.[178] Ireland's "*National Skills Strategy 2025 - Ireland's Future*", masterminded in 2016, is still guiding the skills policy of Ireland until 2025. After that, it is likely that a similar skills strategy, possibly with slightly shifting objectives, will come into place.

3.a Case study 1: Regional Skills Fora

Ireland's nine Regional Skills Fora (RSFs) enhance multi-stakeholder collaboration in order to identify skills gaps, and to furnish tailored responses to tackle skill mismatches and skills poverty, taking into account the local context. Vulnerable individuals can benefit from enhanced further education and training opportunities thanks to ameliorated networking between enterprises and skill building facilities. A principal role of RSFs is to ensure the alignment of regional activities with the country's national skills policy and the current skills demand. RSFs are completely neutral and impartial, which enables them to provide unbiased advice on which upskilling or reskilling initiative suits best an individual or company. While

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[178] Solas (2022). *Future FET: Transforming Learning The National Further Education and Training (FET) Strategy.*

the RSFs were created to support skills development among the whole adult population in Ireland, many vulnerable individuals benefit from their activities. After consulting stakeholders, RSFs draft and promote projects such as the Explore programme to enhance digital skills, or the programme "women in coding". Furthermore, they support future-oriented research on key labour market developments such as the twin transition.

Website: gov.ie - Find support to train your staff with Regional Skills (www.gov.ie), Home - Regional Skills

Contact: RSF South-West - Siobhan Bradley (Manager) siobhanbradley@regionalskills.ie; RSF West – Carl Blake (Co-Coordinator) Carl.Blake@tus.ie.

Institution implementing: The Regional Skills Fora are an initiative developed in 2016 by the Department of Education and Skills (DES), and are part of the country's sophisticated skills policy ecosystem. Each RSF consists of a voluntary chair and a full-time manager who identifies regional skills needs and opportunities for action together with forum members. RSF members are senior representatives from each of the universities in the region, further education centres, Skillnet, the IDA (which is the agency in charge of inward investment), Enterprise Ireland (supporting local businesses in growth and exports), local government representatives, and business association representatives.

The forum meets three to four times a year to discuss how skills demand and supply can be matched, and what areas should be focused on. Furthermore, RSFs conduct skills audits with numerous enterprises each year. As the impact of civil society is rather low, actors such as the Department of Social Protection (also part of the fora) make sure the needs of vulnerable individuals are heard.

Description of Action: RSFs focus on regional engagement to identify skills gaps and play an active role in setting initiatives targeted at developing tailored education and training opportunities for individuals, in line with the needs of the labour market. RSFs advise on how to navigate the broad spectrum of training available, in order to ensure that Ireland remains a leader in the development of human capital. As such they need to address the issues of time, costs, family commitments, navigating the system and nervousness as barriers to engagement in upskilling and reskilling activities.

The principal pillars of action of the RSFs are:

• providing a contact point for regional stakeholders to enhance collaboration across the education and training system

• conducting research on trends, challenges and the opportunities that should be considered when equipping individuals with skills for the upcoming changes in the world of work

• enhancing the progression route for learners thanks to improved collaboration between multiple actors

• encouraging the active participation of multiple actors in the processes

In 2019 more than 100,000 individuals working in 1,400 enterprises were reached. Fruitful collaboration with enterprises continued despite the disruptive Covid-19 pandemic, and in 2022 a total of 1538 companies were registered to collaborate with RSFs, more than half of them (791) involved in manufacturing. Furthermore, many individuals working in information and communication, wholesale and retail trade, accommodation and food service activities, and construction took part in RSF activities.

An example of the initiatives organized and promoted by the RSFs is the "Explore Programme", aiming to increase transversal and digital skills among individuals aged over 35, many of them lacking basic digital skills. Developed in 2018 by RSFs Managers, it reached over 440 people in 2019. Another initiative concerning digital skills is a project dedicated to bringing more women into the

field of coding. With the help of the Mid-West RSF and other stakeholders, over 40 learners could enhance their skills, and many of them have since secured employment.

Further good practices include the support of the Mid-East RSF in organizing an "Apprenticeship Expo" where 3,000 attendees had the opportunity to get in touch with 80 exhibitors offering hundreds of apprenticeship opportunities. RSFs also developed initiatives aiming to equip women who left the workforce to have a family, and who face difficulties when re-entering the labour market, with proper mentoring and support to find good initiatives to reskill/upskill according to the new job market realities. Initiatives are tailor-made for regional needs; a good example is a pharmaceutical group that is active in the RSF-Southwest.

An example of a research-related activity is a review on training and education in the hospitality industry in the South-East of Ireland. The South-East RSF conducted a review of recruitment, education, and internal training in the hospitality sector. Recommendations on the of support education and training in the industry, which employs 20,000 individuals directly in this region, were then made. The hospitality sector is an area where many foreign workers are active, and here RSFs try to encourage individuals to attend free English language classes organized by further education providers.

Target group: Individuals in need of upskilling or reskilling due to the changing nature of work, or because of a lack of relevant skills for the labour market in general, among them many belonging to vulnerable groups, such as older employees, women, or lower educated people.

Intersectionality: partially; while RSFs support some activities that follow an intersectional approach, for instance the initiative "women in coding", they were set up to give industry the workers they need, and to give learners the chance to close skills gaps to secure good employment; targeted individuals include the lower skilled and the most vulnerable, but RSFs help everyone.

Types of skills being addressed: RSFs engage with employers and other relevant stakeholders to define what skills are in demand, and they address skills needs at the local level. As a general trend, digital and green skills are at the core of the RSFs' agenda, but other skills such as transversal or social skills are also addressed to some extent. Artificial intelligence is perceived as an opportunity where further skill building is needed.

Reasons for implementing it: They were set up to improve coordination throughout Ireland's complex skills system to jointly respond to megatrends such as digitalization, climate change and the digital and green transition, which have led to a shift in the skills required by employers. In order to respond to the changing nature of the workplace and to boost the attractiveness of the Irish workforce, the RSFs were created to respond to employers' needs. At the same time, the initiative equips disadvantaged groups with the skills needed on the labour market.

Description and involvement of stakeholders: RSFs consist of a voluntary chair and a full-time manager who primarily defines local focus points. These areas of action should be in line with the national skills policy and input from employers, education and training providers, enterprise agencies, local authorities, and government bodies, to provide targeted solutions for (vulnerable) individuals in need of upskilling or reskilling. In the organisational structure of the RSFs, employees and civil society do not play a significant role. The programme has a top-down approach of public authorities responding to the labour market's skills needs, to maintain the attractiveness of the region to business.

Description of people being engaged: RSFs attempt to reach vulnerable individuals affected by skills poverty through collaboration with employers, third level institutions, Education and Training Boards, Skillnet Ireland networks (education and training providers), enterprise support agencies as well as local and regional authorities (Regional Enterprise Programmes, Dept. of Employment

Activation & Social Protection, etc.). With their partners, RSFs take action via organizing relevant activities and initiatives tailored towards people in need. Individuals can benefit from enhanced collaboration among actors providing upskilling and training, and can therefore find it easier to obtain relevant training according to their needs.

Box 9. SWOT analysis of Regional Skills Fora

Strengths	*Weaknesses*
- They enhance regional collaboration between multiple stakeholders - Taking into account local realities - Focus points set may include intersectionality - In line with megatrends such as the twin transition - Research activities help to plan ahead - Thanks to RSFs, thousands of individuals can be upskilled/reskilled every year - impartial advice, not favouring any institution	- RSFs give limited opportunities for engagement of individuals and civil society organizations - RSFs have a rather thin structure and could be better implemented in the system to further increase their impact
Opportunities	*Threats*
- Regional adaptability allows individuals to acquire the exact skills needed for the local labour market - AI and digital upskilling needs can be of critical importance in the future - Upscaling: currently every RSF conducts around 250-300 Skills audits every year; their reach could be extended with more personnel and funding	- When the RSFs were set up, they were the only ones to address collaboration among stakeholders on a national level, and the level of interest in participation was high; currently people from individual colleges and further education colleges also receive funding, and are looking to talk to industry. This could cause competence confusion, since overlaps may occur

Source: own elaboration, CASE based on desk research and interviews.

3.b Case study 2: Adult Literacy for Life

Adult Literacy for Life (ALL), launched in 2021 and co-funded by the Government of Ireland and the European Social Fund (ESF), is an ambitious 10-year strategy that aims to ameliorate literacy and numeracy skills among adults in Ireland. ALL envisions every adult having the ability to read and calculate, thereby enabling active participation in society. The initiative recognizes that individuals are made vulnerable by society rather than their own characteristics. Education and certain skills, such as literacy, are considered a human right. In line with that philosophy, the four principal goals of ALL are an increase in the number of learners engaged in literacy and numeracy support, a reduction in the number of adults with unmet literacy needs from 18% to 7%, reducing unmet numeracy skills needs from 25% to 12%, and ensuring that four in five adults have basic digital skills (the level currently stands at 53%). To achieve these milestones, a holistic cross-governmental, societal, and economical approach that puts the strategy into practice is essential.

Website: Home | Adult Literacy for Life Strategy

Contact: National Programme Office Clare McNally and Fionnuala Carter clare.mcnally@solas.ie, fionnuala.carter@solas.ie

Institution implementing: ALL is funded by SOLAS (Ireland's State agency that oversees Further Education and Training) and the Further Education and Training Authority of Ireland, and is managed by the National Adult Literacy Agency (NALA). The strategy is overseen by a cross-government implementation group. In addition, there is an ALL-National Programme Office within SOLAS for monitoring the implementation of the objectives. The National Programme Office collaborates with 16 Regional Literacy Coordinators corresponding to the Education and Training Boards.

Description of Action: ALL aims to enhance fundamental numeracy but primarily literacy skills among individuals from 12 vulnerable target groups, among them long-term unemployed and low-paid workers. The initiative works across the government, the economy, society and communities, with the strong involvement of civil society when drafting the strategy. To tackle literacy gaps, there exists a powerful support network of 127 primary care centres, 357 ETB FET learning facilities, 983 community education providers, 124 Intreo offices (Public Employment Service), 400 connected digital hubs, 215 citizen information centres, 50 local development companies, 330 libraries, 60 money and budgeting services, and 109 family resource centres.

Literacy courses are available nationwide, attended by 40,000 adults at the moment. Services are provided free of charge, learner paced, without exams, and mainly by the Education Training Boards (ETB) Adult Literacy Service. Some of the tutors are paid, and some are volunteers. Telephone and online services are also available via the National Adult Literacy Agency.

Unlike regular education at school, adult training is primarily about addressing the unique needs of the learner, so as to maximize the impact. In order to address skills inequality, reaching out to their target cohorts is an absolute priority for ALL. These include older adults, ethnic minorities, people with disability, and individuals in long-term unemployment. The largest obstacle ALL needs to overcome when reaching individuals is stigma.

Different courses may be suitable depending on the needs of the learner. The courses offered include:
- Adult Literacy Courses: for all individuals who want to improve their reading, writing, numeracy, and oral skills and want to obtain a qualification at the National Framework of Qualifications levels 1, 2 and 3
- Skills for Work Courses: for participants who have old or outdated skills, including those up to Leaving Certificate, which they would like to enhance

- ESOL (English for Speakers of Other Languages) Courses: for participants who have English language skills below B1 on the Common European Framework

Successful completion of a literacy course opens up many new career paths to the participants.

The Collaboration and Innovation Fund also allows a regional approach and stipulates intersectionality, as partners with different target cohorts are encouraged to collaborate. Projects are wide-ranging and span from cookery projects to initiatives that address civic engagement in society. To enhance inclusiveness in public services, the use of plain English is promoted.

Target group: Approximately slightly over 500,000 people lack basic literacy, numeracy, and digital skills in Ireland. To enact sustainable progress, those furthest behind will be prioritized. ALL considers older adults (55+), low-paid workers, incarcerated & ex-offenders, migrants, members of the traveller community, carers, people recovering from addiction, international protection applicants, long-term unemployed, one-parent households, people with disabilities, and people with language needs as the principal target cohorts.

Intersectionality: Intersectionality is often a natural part of ALL's activities, for instance via the Collaboration and Innovation Fund, thanks to which many new initiatives stemming from regional needs and addressed in a grassroot manner could be supported. Apart from that, it is often the case that characteristics that provoke individuals' upskilling needs overlap. Consequently, intersectionality is an important part of ALL, even though the strategy does not state it as fundamental pillar.

Types of skills being addressed: basic literacy, and to a lesser extent, numeracy, as well as basic digital skills

Reasons for implementing it: Throughout the last 30 years the issues of adult literacy and gaining basic skills have been gaining attention. Despite a wide network of adult education centres, not all individuals could be reached. Lacking basic literacy, numeracy, and digital skills negatively impacts situations in everyday life, from filling in forms or reading instructions, to helping children with homework or finding a job. Individuals who lack at least one of these skills often suffer stigmatization and a lack of work opportunities. This additional need for addressing the issue on a societal level ended in the creation of ALL. The strategy is intended to complement and reinforce such campaigns as the Healthy Ireland strategic action plan 2021-2025, Ireland's Roadmap for Social Inclusion 2020-2025, Pathways to Work 2021-2025, and the first Well-Being Framework for Ireland.

Description and involvement of stakeholders: ALL incorporates the involvement of ministerial sponsorship, a Programme Office with a Cross-Government remit, a Cross-Government Implementation Committee, a National Literacy Coalition, a Regional Literacy Coalition, and Regional Literacy Coordinators. The latter work with stakeholders at the local level (including representatives in education, health, and community development) in order to embed the required systems-based approach while the former focus on strategic planning at the national level.

Description of people being engaged: The Cross-Government Implementation Group established and chaired by the Minister ensures proper policy making, monitoring, and evaluation. The Programme Office operates as the central coordinating body across government departments along with other stakeholders. The National Literacy Coalition is a multi-stakeholder body that facilitates the sharing of relevant knowledge on literacy support. Regional Literacy Coalitions are the quintessential drivers of this strategy, since they ensure the tailored implementation of the strategic objectives of ALL. Existing networks can be naturally linked to Education and Training Boards, or Regional Skills Fora. All levels contribute to an increase in awareness, the provision of access to upskilling, expansion of the ALL strategy, and the empowering of as many individuals as possible.

Box 10. SWOT analysis of ALL

Strengths	Weaknesses
- An effective "Take the first step" campaign that encourages individuals to call and seek help in order to improve basic numeracy, literacy, or digital skills - High reach among target groups - Nationwide strategy, tailored for regional needs, for instance via the Collaboration and Innovation Fund - Involvement of civil society when drafting the strategy - Training offered free of charge - Easy access to help - Sufficient funding available - Tailored experience in terms of the needs of the individual	- Half the individuals who called the helpline said they heard about the initiative online, which may indicate difficulties in accessing information for particularly vulnerable individuals - Representatives of ALL highlighted that numeracy is an area that has not yet been sufficiently addressed; the initial implementation of the new strategy will need further development to address this issue later on
Opportunities	Threats
- Creating pathways for individuals who have not yet heard about the strategy - Collaboration with partners to promote specific themes at different times of the year - Contribution to the creation of a more inclusive society - Increased needs for action in the context of the twin transition - There are a number of new thematic literacies that need to be addressed: health literacy, health information, family literacy (especially for incarcerated persons), media literacy (recognizing fake news, etc.) - The initiative is replicable in different contexts	- The largest obstacle for individuals in Ireland to seek help in numeracy and literacy acquisition is the perceived stigmatization. Without tackling this issue, the strategy cannot flourish to its full impact - Needs are constantly changing, for instance throughout the strong influx of migration there is a rising need for English language support - Recruiting tutors & gathering resources for services on the ground was highlighted as challenging by representatives from ALL

Source: own elaboration, CASE based on desk research and interview.

3.c Case study 3: You Employment – Generation Ireland

"You Employed" are bootcamps organized by Generation Ireland, a non-profit social enterprise, to equip individuals with the necessary skills for entry-level positions or to re-enter the labour market. The bootcamps focus on digital skills, usually last from 9 to 12 weeks, and provide over 200 hours of learning, including networking, support, and technical skills training. In addition to the curriculum, Generation Ireland also offers employability coaching, mentoring, and to practice job interviews to help learners prepare for the workforce. Generation Ireland addresses vulnerable groups in particular, for instance a large share of non-Irish nationals or people with disability. The bootcamps regularly include individuals facing multiple barriers, for instance people from a multiethnic background, with disability, and having dependents, thereby making intersectionality a key principle of this initiative. Bootcamp graduates report very high rates of having successfully obtained employment with a life-changing salary.

Website: https://digital-skills-jobs.europa.eu/en/inspiration/good-practices/generation-you-employed-ireland

Contact: Ronan Connell, Executive Director Ireland

Institution implementing: Generation Ireland is part of Generation, a non-profit organization founded in 2015 by McKinsey, a consultancy company, and is now active in 18 countries. With its approach, Generation has brought around 100,000 people back into work globally. Generation Ireland was established in 2020, is part of the UK and Ireland initiative, and has supported nearly 500 people so far.

Description of Action: Generation Ireland has developed a 3-month bootcamp in collaboration with employers that focuses on equipping participants with profession-specific technical skills. The bootcamp is designed to be learner-centric and is adaptable to cater to individuals with limited education or those who have been out of the workforce for some time. To continuously improve the curriculum, Generation Ireland seeks feedback from both learners and employers. The organization proactively assesses the job market demands and customizes the bootcamps to address them, thus enhancing participants' chances of acquiring the skills needed for transformative careers.

The bootcamp is conducted online, making it accessible to anyone, anywhere, and eliminates the need for participants to travel. To ensure maximum accessibility, Generation Ireland provides devices to those who do not have access to one, which is returned for future use by other participants.

"You Employed", the initiative's outreach programme, employs a dedicated outreach manager to locate and engage with groups that may be more challenging to reach. In general, Generation Ireland recruits around 40% of its participants from job centres (INTREO) run by the Department of Social Protection, another 40% from Social Media advertising, and the rest via recommendations from previous participants. Among the participants in Ireland, around 55% are non-nationals, 15% have a disability, and many are vulnerable from an intersectional viewpoint. Besides people with disability and from ethnic minorities, representatives from Generation Ireland say that non-binary, LGBTQ+, the unemployed, people without a degree, and individuals with dependents, etc., are frequent bootcamp participants. Cohorts that are challenging to reach are older, long-term unemployed rural residents with low activity on social media. To enhance participation among this vulnerable group, Generation Ireland plans to widen their outreach strategy in the form of bus commercials.

Throughout the programme and for up to six months afterwards, each learner is paired with a mentor. When participants apply, they complete a "Supports Needs Conversation" survey with their mentor, to ensure that Generation Ireland comprehensively understands and supports their requirements throughout the programme's duration. This information is then relayed to programme instructors, enabling them to tailor the programme accordingly.

Since the launch of the initiative, it has supported over 300 learners across several profession-specific bootcamps, including Data Analytics, and Customer Support. Of these, 70% of the participants have secured life-changing careers with salaries of over €30,000, enabling economic upward mobility for vulnerable groups. Since November 2022, the initiative has delivered four pilot cohorts, with the last one graduating in June 2023.

In 2023, the initiative plans to deliver three more cohorts of 66-75 learners each, and a further 6-8 cohorts are planned for 2024. The bootcamps are hugely popular, with many more applicants than spaces available, which means that Generation Ireland can select the most motivated individuals. Those who do not manage to secure a spot in the bootcamps are provided with suggestions for other upskilling opportunities, and once they have completed them, they are encouraged to re-apply;, for

instance, many of those who initially lacked adequate language skills are successful with their re-application after having engaged in language training.
Target group: The most vulnerable, particularly the unemployed and the underemployed. Among them, women, ethnic minorities, disabled individuals, unemployed individuals, and people without formal education.
Intersectionality: Intersectionality stands at the core of Generation Ireland, with some participants even sharing three barriers to learning. Willingness to learn and motivation is the key element for Generation Ireland. If individuals show commitment, the initiative gives vulnerable individuals a chance.
Types of skills being addressed: digital and technical skills
Reasons for implementing it: To better match the skills of individuals with the needs of the current labour market, in order to ensure that people who enter employment are among the top performers from day one.
Description and involvement of stakeholders: Generation Ireland has partnered with Microsoft to incorporate tech, IT Support, and Cybersecurity subjects into their bootcamps, in response to the gap identified in the rapidly expanding tech sectors. Besides that, the main collaboration partners for Generation Ireland are government bodies, such as the Department of Social Protection which runs many job centres in Ireland. Other partners are the Department of Higher and Further Education, as well as Solas, and Ireland's ETBs. Generation delivers some of its programmes through them and their funding. Civil Society involvement is also important for the initiative. Important actors here include the apprenticeship organization, Rethink Ireland, and the Community Foundation Ireland. In addition, some of the projects also involve Ireland DIGITAL Skillnet, Amazon AWS RE/START, and Rethink Ireland.
Description of people being engaged: You Employed is a project that aims to support people who face employment barriers due to lower academic achievement, caring responsibilities, and marginalized status as ethnic minority individuals. The project has so far included 40% women, 55% ethnic minority individuals, 15% individuals with mental or physical disabilities, 40% without a degree, 95% unemployed at the start of the programme, and 30% unemployed for over a year.

Box 11. SWOT analysis of You Employment – Generation Ireland

Strengths	*Weaknesses*
- Alumni of the bootcamp find a job with very high certainty and often perform above average - Provides upskilling in keeping with labour market needs - Providing valuable upskilling and reskilling opportunities, which may otherwise be challenging to obtain, at no cost - A strong intersectional approach that has enabled economic upward mobility for many vulnerable individuals - Tackling challenges faced by marginalized groups and combatting skills gaps in society - Strong government collaboration and now embedded in the skills ecosystem of Ireland	- Outreach to rural residents less active in social media is still rather limited - The approach mostly works in urban areas, as tech enterprises are usually located there
Opportunities	*Threats*

- Creating new job opportunities for individuals from vulnerable groups - Providing dialogue between participants and companies in order to match job seekers with appropriate jobs - Enhancing participants' understanding of shifts in the labour market landscape - High entrance level salaries enabling individuals to become self-sufficient - a very successful model that is now recognized by official government bodies as good practice, providing an opportunity to organically upscale the outreach	- Generation Ireland relies on multiannual funding, which is difficult to obtain. For the first two years there was a big corpus of philanthropic funding available, but this funding is no longer available - When upscaling the bootcamps, it might happen that the high success rates experience a drop, therefore it is perceived more feasible to organically upscale by representatives from Generation Ireland

Source: Case, own elaboration, based on desk research and interview.

3. Italy

In recent years, the Italian government has been working to narrow down gaps in basic skills and low qualifications (in 2016, the adult population scored at 251 in literacy and 247 in numeracy, compared to the OECD averages of 268 and 263 respectively. In both domains, younger adults scored higher than older adults).[179] A major advance in this area has been achieved due to the Covid-19 pandemic, when among other measures the government allocated EUR 201.7 million to support distance learning, including on the acquisition of digital devices for schools, and to ensure equal access to all learners, particularly those from disadvantaged backgrounds.[180] Following the harmful effects of the pandemic, Italy has been showing an ongoing economic recovery – with the GDP expected to grow in both 2023 (+1.2%) and 2024 (+1.1%), and its unemployment rate expected to fall to 7.9% in 2023 and 7.7% in 2024.[181]

The Italian labour market presents some contradictions in the relationship between the education and training system and the structure of the economy, as for example the low presence of qualified labour in industry, due mostly to the still fairly low number of graduates compared to other European countries (in 2022, 18% of the Italian population had tertiary education attainment, compared to the EU-27 average of 30%[182]). Education is highly valued in Italy, yet having a higher educational does not appear to have a significant effect on the probability of finding a good job match.[183]

According to the 2019 OECD report on Skills Strategy, Italy has been making good progress in developing the skills of youth. Despite the positive trends, however, Italy faces significant skills challenges. In 2019 the average skills outcomes of tertiary graduates and adults were low, placing Italy in the bottom 20% of OECD countries; participation in adult learning is also low, with comparatively low interest in learning in adulthood and high barriers to participation.[184] Moreover, the Digital Economy and Society Index 2022 shows that even though Italy is narrowing the gap with the EU when it comes to basic digital skills, still more than half of Italian people do not have at least basic digital

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[179] OECD (2016). *Skills Matter - Further Results from the Survey of Adult Skills.*
[180] Cedefop (n.d.). *VET in Europe – Italy.*
[181] Istat (2023). *Le prospettive per l'economia italiana nel 2023-2024.*
[182] Eurostat (n.d.). *Population by educational attainment level, sex and age (%) - main indicators*
[183] Cedefop (n.d.). *VET in Europe – Italy.*
[184] OECD (2019). *OECD Skills Strategy 2019: Italy.*

skills. The share of digital specialists in the Italian workforce is below the EU average, and future prospects are undermined by low rates of ICT enrolment and graduates.[185]

The Italian government has taken important steps to address many of these challenges. For example, in order to improve the level of digital skills, in 2020 the government adopted the first National Strategy for Digital Skills, covering both education and the labour market. The Strategy aims to support digital inclusion and to combat the cultural digital divide, to support the development of e-skills, to promote key competencies development, and to increase the numbers of ICT specialists while also ensuring basic digital skills for the entire working population, for the new needs and ways of working.[186] The Strategy identifies four lines of intervention (higher education and training for young people, active workforce, ICT specialist skills, and citizens), and has been complemented by an Operational Plan including targets for 2025:

- Equip 70% of the population with at least basic digital skills, and bridge the gender skills gap in the ICT sector.
- Double the rate of Italian citizens with advanced digital skills (78% of young people with higher education, 40% of workers in the private sector, and 50% of civil servants).
- Increase the number of graduates in ICT three times; and four times for the number of female graduates; and increasing twofold the share of companies active in the field of big data.
- Double the share of companies that uses big data; and double the employment of digital experts and ICT specialists in small and medium sized enterprises (SMEs).
- Increase the share of the population using public digital services (to 64%).
- Increase in the use of the Internet and the ability to use computers also for older people: 84% in the 65-74 age group[187].

Moreover, in 2021 the Ministry of Education promoted the National Plan for Guaranteeing the Skills of the Adult Population (*Piano Strategico Nazionale per lo sviluppo delle Competenze della Popolazione Adulta*) to tackle the high number of low-skilled people. The main aim of the Plan is to impact a substantial part of the adult population in order to fill gaps in basic skills and low qualifications, and help them recover their competitiveness on the labour market, while also having greater margins for integration and reintegration in social and family life.[188] The Plan consists of five actions, including the following: encouraging and supporting the activation of "Skills Guarantee Pathways" for the adult working-age population, aimed at the acquisition of basic skills (mathematical, literacy, linguistic and digital), transversal skills (ability to work in a team, creative thinking, entrepreneurship, critical thinking, problem-solving and learning to learn skills and financial literacy).[189]

The government also established a new special fund (*Fondo per la Repubblica Digitale*) that promotes initiatives to increase digital skills levels and approved a new national plan to foster personalized labour market plans, the GOL Programme (programme for Guaranteed Employability of Workers, as illustrated in Case Study 2). Another important development was the adoption of the Strategic Programme on Artificial Intelligence 2022-2024, which includes recommendations to strengthen competencies and attract talents.[190]

[185] EC (2022). *Italy in the Digital Economy and Society Index.*
[186] Digital Skills & Jobs Platform (2022). *Italy - National Strategy for Digital Skills.*
[187] Ibidem.
[188] Ministero del Lavoro (2021). *Piano strategico nazionale per lo sviluppo delle competenze della popolazione adulta.*
[189] Ministero dell'Educazione (n.d.). *Piano di garanzia delle competenze della popolazione adulta.*
[190] EC (2022). *Italy in the Digital Economy and Society Index.*

The VETsystem in Italy is characterised by multilevel governance with broad involvement of national, regional and local stakeholders: the ministries of education and labour lay down general rules and common principles for the system; regions and autonomous provinces are in charge of VET programmes and most apprenticeship-type schemes.[191] We can distinguish between VET at the upper-secondary level (school-based), VET at post-secondary level (offered by foundations that represent schools, universities, training centres, enterprises and local bodies) and VET for adults.[192]

Box 12. An overview of VET programmes in Italy

At upper secondary level, the following VET programmes are offered:
- 5-year programmes (European Qualifications Framework - EQF 4) at technical schools (*istituti tecnici*) leading to technical education diplomas; at vocational schools (*istituti professionali*) leading to professional education diplomas. Graduates have access to higher education;
- 3-year programmes (*istruzione e formazione professionale*, IeFP) leading to a vocational qualification (EQF 3);
- 4-year programmes leading to a technician professional diploma (EQF 4).

At post-secondary level, VET is offered as higher technical education for graduates of 5-year upper secondary programmes or 4-year IeFP (*istruzione e formazione professionale*) programmes who passed entrance exams:
- higher technical education and training courses (*istruzione e formazione tecnica superiore*, IFTS): 1-year post-secondary non-academic programmes leading to a high technical specialisation certificate (EQF 4);
- higher technical institute programmes (*istituti tecnici superiori*; ITS): 2- to 3-year post-secondary non-academic programmes which lead to a high-level technical diploma (EQF 5).

VET for adults is offered by a range of different public and private providers, and comprises programmes leading to upper secondary VET qualifications to ensure progression opportunities (upskilling) for the low-skilled, provided by provincial centres for adult education (*centri provinciali per l'istruzione degli adulti*, CPIA) under the remit of the education ministry.

Finally, Continuing vocational training (CVT), in order to meet enterprise, sectoral and regional needs, is:
- supported by the ESF and managed by regions and autonomous provinces;
- directly funded by the regions and autonomous provinces;
- financed by joint inter-professional funds, managed by the social partners.

Source: Cedefop (n.d.). VET in Europe – Italy.

According to the OECD report released in 2023, in Italy 40% of 15-19 year-olds are enrolled in vocational upper secondary education, compared to 23% across the OECD. Despite their popularity, VET programmes in Italy face significant challenges in facilitating the transition of their students into the labour market. For example, the employment rates of VET graduates one to two years after graduation are the lowest across the OECD, at 55%. Also NEET rates of 15-34 year-olds with a vocational attainment are substantially above the OECD average (28.1% Italy and 15.2% OECD) and

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[191] Cedefop (n.d.). *VET in Europe – Italy.*
[192] Ibidem.

above the NEET rates of 15-34 year-olds with a general upper secondary or post-secondary non-tertiary attainment (12.0%).[193]

4.a Case study 1: Fondazione Mondo Digitale (FMD) Academy

The FMD Academy is a public service space on digital transformation, with the stated mission of promoting the sharing of knowledge, inclusion, and social innovation, with particular attention to categories at risk of exclusion (the elderly, immigrants, unemployed youth, etc.). The Academy provides short modules and more structured courses that enable intensive learning experiences and tools for planning changes in personal and professional life. It concentrates on finding solutions to the challenges of social innovation, educational poverty, digital inclusion, jobs of the future, special needs, solidarity, gender equality, digital transformation, educational innovation and active ageing. In particular, the Academy aims to provide timely answers to the training needs of every citizen, from basic digital literacy to the specialised skills most in demand in the labour market, to digital business transformation.
Website: https://formazione.mondodigitale.org;
https://www.mondodigitale.org/formazione/academy

Contact: helpdesk@mondodigitale.org, info@mondodigitale.org, +39 06 42014109

Institution implementing: The FMD Academy is implemented by Fondazione Mondo Digitale ETS, a knowledge-oriented non-profit organization, founded as Digital Youth Consortium (*Consorzio Gioventù Digitale*) in 2001. The Foundation has its main operational headquarters in Rome and several territorial hubs in Milano, Terni, L'Aquila, Palermo and Catania. Through more than 200 social inclusion and innovation projects implemented to date, also financed with European funds, the Foundation is committed to intervening in emergencies with innovative and systemic solutions in strategic sectors for the country's development, specifically in terms of GDP (school drop-outs, youth unemployment, gender equality, active ageing, etc.).

Description of action: The FDM Academy offers training opportunities on strategic skills for the development of the country: digital skills, transversal skills, and social skills (personal development). All activities and tools are free for everyone. It envisages a distance learning platform, developed with an open code learning environment (Moodle), with easy accessibility and a user-friendly interface for those who are less experienced. They offer engaging and transformative learning experiences that start with self-awareness and awareness of one's own potential to become agents of change at all ages.

Most training sessions are offered as webinars (web seminars), i.e. in synchronous mode: trainers and participants connect at the same time and communicate via a single platform from distant locations. To ensure the widest possible participation, the same content is also available in asynchronous mode, so that it can be accessed at one's own time and pace. The content withing the FMD Academy is strictly linked to the projects of the Foundation. Projects range from topics such as digital literacy and awareness, with the goals of active citizenship and safety in daily web surfing, to specialised data analyst and cybersecurity architect courses for employment purposes. The skills acquired are attested by the issuing of certificates of participation, open badges and micro-certificates.

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[193] OECD (2023). Education at a Glance 2023 – Country note: Italy.

Target group: Anyone who wants to find tailor-made courses and pathways to enrich their training and develop new skills, with a strong emphasis on young people, women, immigrants, adults seeking professional retraining, unemployed and frail workers, parents, teachers, professionals, and the eldery, etc.

Intersectionality: Yes – courses and training activities are planned for various groups of people: women who are under 30-34 years old and unemployed or inactive, young people who are inactive (NEETs), young migrants and refugees, migrants living in disaster-affected territories (e.g. due to the 2009 L'Aquila earthquake), young students with disabilities, etc.

Types of skills being addressed: basic digital skills, digital skills for employment, transversal skills (personal development).

Reasons for implementing it: The FMD Academy aims to: (i) build technical and life skills, from education to the labour market; (ii) provide multi-cultural education and combat differences that lead to social exclusion; (iii) address the challenge of the digital transformation of the modern society.

Description and involvement of stakeholders: From public-private partnerships to multi-stakeholder partnerships, the Foundation works with various national and international organisations. Alliances and dialogues with the various stakeholders accompany the Foundation throughout the project lifecycle (in the phases of needs and context analysis, target reaching and training content design). These include schools, universities, companies, foundations, associations and communities, as well as local, regional and national authorities, thus creating both local learning communities and transnational partnerships to disseminate successful projects and experiences. The funding organisation is a partner in its own right, with whom the FMD shares its vision and mission.

Description of people being engaged: In 2022, the FMD's training services reached over 150,000 citizens. The majority of these were students and young people (over 100,000), but also citizens in training and local activities (15,000), parents in training (5,120), managers and teachers enrolled in webinars and workshops (13,000), over 65s (4,000) and to a lesser extent entrepreneurs and professionals (500), decision-makers in round tables (112) and migrants (700).

Box 13. SWOT analysis of the FMD Academy

Strengths	Weaknesses
- Free open-access - Broad spectrum of skills shortages covered (digital skills, transversal skills, social skills) - Experimentation with skills certification system - Agile and short formats (podcasts, tutorial pills, etc.) - Option of learning anywhere, anytime, at one's own pace (both online and face-to-face) - Territorial and proximity dimension, with local activities and training events	- Not responding to specific local needs - Not solely focused on the needs of vulnerable groups
Opportunities	Threats

- Great opportunity to combat skills poverty - Combined with the proper promotional activities, and activities raising awareness among the most vulnerable groups, it might attract those most in need - Providing a learner-tailored system that combines remote and on-site training.	- The difficulty of engaging certain target groups harder to reach (e.g. NEETs) - The difficulty of engaging adults in lifelong education, due to motivational and cultural barriers - Retaining the local dimension: digital must break down barriers and distances, and alleviate routes, but cannot replace relations on the ground or proximity

Source: own elaboration based on desk research and interview.

4.b Case study 2: Guaranteed Employability of Workers (GOL)

The Guaranteed Employability of Workers (GOL) Programme (in Italian *Garanzia di Occupabilità dei Lavoratori*) offers services for starting out and reintegration into work, and the professional qualification or reskilling of workers. It aims to improve job search and job placement opportunities for citizens seeking new employment. The programme contributes to the development of integrated employment and lifelong learning services, based on the emergence of individual needs, in connection with social and development support policies.
Website: https://www.anpal.gov.it/programma-gol

Contacts:
- Lombardia: alessandro_fiori@regione.lombardia.it
- Calabria: programmagol@regione.calabria.it
- Toscana: gol_lavoro@regione.toscana.it, gol_formazione@regione.toscana.it

Institution implementing: The GOL Programme is under the control of the Ministry of Labour and it is implemented by Regions and Autonomous Provinces on the basis of specific regional plans. The Programme falls within the framework of the National Recovery and Resilience Plan and it aims to comply with Mission 5, component 1, relating to active employment policies. It has resources of EUR 4.4 billion, and by 2025 it will involve 3 million beneficiaries, of whom 800,000 will be in training activities, 300,000 of them related to digital skills.

Description of action: The GOL programme includes an integrated service offer, based on cooperation between public and private sectors. It envisages pathways to work, professional upskilling or retraining, and paths coupled with other local services (social, socio-medical, conciliation, educational) in the case of complex needs, such as those of persons with disabilities or vulnerabilities. GOL is based on the customisation of services. After contacting regional employment services, people are directed to the most appropriate pathway through targeted basic orientation and employability assessment by means of qualitative-quantitative assessment. There is a detailed intake interview at the Public Employment Service (PES), during which the operator reconstructs with the person their career pathway, analyses their skills and identifies any objective or subjective factors that may constitute vulnerable elements. At the end of the interview, on the basis of the employability profile drawn up, the person is directed towards one of the various paths envisaged by the programme:

1. *Occupational reinsertion*: for people who possess skills that are immediately employable in the labour market of reference, for which an intervention is needed mainly for orientation and job placement.
2. *Updating* (Upskilling): for people who need to update their skills in order to facilitate their pathway of reintegration into the local labour market. The training measures envisaged are mainly of short duration (40 or 70 hours), with professionalisation content. At the end of the training course a Skills and Competence Card is issued
3. *Retraining* (Reskilling): for people who need a professional retraining pathway in order to adapt their skills to the new needs emerging in the reference labour market. Generally speaking, training courses last 300 hours (180 classroom and 120 internship) and issue a skills certification referred to in the Regional System of Qualifications.
4. *Employment and inclusion*: for people in a condition of vulnerability characterised by lack of employment and the presence of additional social or health problems, in addition to the previous services, it envisages activation of the network of local services (social and/or health)
5. *Collective outplacement*: aimed at assessing the employment chances of the beneficiaries of social shock absorbers on the basis of the specific company crisis situation, the professionalism of the workers involved and the reference local context in order to identify suitable solutions for the workers as a whole.

For those who receive forms of income support such as Citizenship Income or Unemployment Indemnity, participation in the paths envisaged by the GOL programme and any training paths is binding. The paths will be implemented by the subjects of the Active Employment Network. It is therefore necessary to fix, always with the support of the PES operator, the first appointment for the activation of the agreed services at the premises of the accredited private entity or at one's own PES.

The Programme is also space for innovation and experimentation for small-scale projects, adopted in agreement with the regions, the evaluation of which, if positive, may introduce changes in national policies. In particular, some areas for experimentation can already be identified:
- digital skills
- mapping and/or promotion of accredited or accreditable spaces for co-working, fab lab and incubation; business acceleration for the creation of professional communities that facilitate self-employment
- fragility and vulnerability – experimentation with forms of "protected" employment or dedicated mentoring to work, with the involvement of Third Sector organisations, for people with serious disabilities or the most vulnerable unemployed.

Target group: Workers with social safety nets or other income support, vulnerable workers (young people, women with special disadvantages, people with disabilities, over 55s), the working poor, unemployed people without income support. In particular,
- recipients of social safety nets during the employment relationship
- beneficiaries of social safety nets in the absence of an employment relationship: unemployed NASpI (*Nuova Assicurazione Sociale per l'Impiego*) or DIS-COLL (*Indennità di disoccupazione mensile*) recipients
- beneficiaries of income support of a welfare nature: Citizenship Income (*Reddito di Cittadinanza*) recipients

- fragile or vulnerable workers: young NEETs (under 30), disadvantaged women, people with disabilities, mature workers (55 and over)
- unemployed people without income support: unemployed for at least six months, other workers with fewer employment opportunities (young people and women, also not in vulnerable conditions), self-employed workers who have stopped working or with very low incomes
- workers with very low incomes (so-called working poor), whose income from employment or self-employment is below the threshold of incapacity according to tax regulations

Intersectionality: yes – the Programme guidelines mention "fragile or vulnerable workers […] who, regardless of whether income support is available, meet <u>at least one</u> of the following requirements: long-term unemployed; with a socio-health support and/or are included in projects/interventions of social inclusion; at least 55 years of age; women, regardless of the condition of vulnerability, etc."

Types of skills being addressed: knowledge-based technical skills, basic digital skills, digital skills for employment, transversal skills, social (life) skills.

Reasons for implementing it: The GOL programme has a twofold objective: to reintegrate unemployed workers into the labour market through tailor-made training activities, and to improve the organisation of Public Employment Services so that they can provide more options to the unemployed through upskilling and reskilling activities.

Description and involvement of stakeholders: The GOL Programme is implemented by Regions and Autonomous Provinces, with the involvement of Public Employment Service (PES) and the Active Employment Network. Specifically, Public Employment Centres (within the public sector) but also employment agencies (of the private sector) are responsible for guiding the unemployed worker to access the measure. Later, the training agencies provide training activities.

Description of people being engaged: As of 30 June 2023, a total of 1,338,045 people have entered the active labour policy system under the new GOL programme rules (the overall implementation of the Programme started at the end of 2021, with variations between the Regions). More than half of the beneficiaries are placed in pathway 1, which identifies those closest to the labour market. The rest are distributed between Pathway 2 of Updating and Pathway 3 of Retraining (26% and 19.8% respectively), while 3.7% is the share of those in need of complex Pathways to Employment and Inclusion (Pathway 4).

Box 14. SWOT analysis of the GOL Programme

Strengths	*Weaknesses*
- Capillarity of the implementation - Tailor-made approach (job guidance and training) depending on individual needs - Tailored-made response of the system to vulnerability	- Orientation tools imposed by the Ministry of Labour (a tool to assess people is based on an algorithm that classifies people in a way that is not always consistent with the person's aspirations) - Rigidity (once the algorithm has allocated a person to one type of path, it is impossible to change their path)

Opportunities	Threats
- Allowing the organisation of a new and more comprehensive system for hiring the unemployed - Encouraging the unemployed to reskill and upskill - Directing the unemployed to new job opportunities and career paths	- Language barrier for migrants - Cultural barriers for adults to enrol to upskilling and reskilling activities

Source: own elaboration based on desk research and interview.

4.c Case study 3: Documentation Info Centre and Development Initiative (CIDIS)

CIDIS Impresa Sociale (in Italian: Centro Informazione Documentazione e Iniziativa per lo Sviluppo) offers, among other activities, L2 Italian courses on several levels of the CEFR (Common European Framework of Reference for Languages), micro-language courses, neighbourhood Italian courses. CIDIS also deals with L2 teacher training and updating, publishes educational and recreational-educational material and provides CELI exam (International Certification of the Italian Language) sessions. CIDIS acts in the belief that the integration of migrant citizens is an essential condition for promoting social cohesion in modern, plural, and multi-ethnic societies, and within its scope works to teach Italian as a second language to immigrants, refugees, and asylum seekers among adults and at school.
Website: https://cidisonlus.org/aree-di-intervento/italiano-l2/

Contacts:
- Perugia: perugia@cidisonlus.org
- Terni: terni@cidisonlus.org
- Foligno: foligno@cidisonlus.org
- Napoli: napoli@cidisonlus.org.

Institution implementing: CIDIS Impresa Sociale works at the national and European level to ensure equal rights and opportunities for migrants and people with a migration background, refugees and asylum seekers, and to raise awareness about promoting an inclusive society. CIDIS carries out activities in four Italian regions: Umbria, Lazio, Campania, and Calabria.

Description of action:
CIDIS focuses on assisting in the access to services, promoting adequate reception (e.g. social housing), intercultural mediation, job orientation and (of particular interest for Skills Poverty): promoting language learning (Italian as a second language) for adults and at school. CIDIS has always been aware of the profound connection between linguistic knowledge and social, economic, and civic skills in the perspective of full social integration and the construction of an intercultural and cohesive citizenship. For this it has gained substantial experience in teaching the language in the context of migration. In order to act in a broad sense and facilitate the learning of the language, CIDIS offers, in the regions in which it operates and where possible on a continuous basis, L2 Italian courses on several levels of the CEFR, micro-language courses, and neighbourhood Italian courses. CIDIS also deals with L2 teacher training and updating, publishes educational and recreational-educational material, and provides CELI (International Certification of the Italian Language) exam sessions.

The intercultural upgrading of the school system is a major challenge. CIDIS places a team of experts at the school's disposal to assist and support the school in relational, didactic, and inter-institutional matters. CIDIS offers training courses on: intercultural dialogue with school staff; prevention of early school leaving; active citizenship and legality; continuous updates on teaching and methodologies. CIDIS offers foreign students' literacy and linguistic enhancement courses, extra-curricular laboratories aimed at socialization, the acquisition of skills, and fighting child educational poverty, but also courses that involve the entire class group to educate about differences, and to develop critical thinking in order to deconstruct stereotypes and prejudices. For families, CIDIS provides an orientation desk for the Italian school system and local services; and linguistic-cultural mediation to encourage their participation in the school life of their children.

Target group: migrant population with particular attention to vulnerable groups (political refugees and asylum seekers, unaccompanied foreign minors, vulnerable women, etc.).

Intersectionality: yes – e.g. migrant women, unaccompanied foreign minors, etc.

Types of skills being addressed: multilingualism, intercultural competences (life skills & transversal skills).

Reasons for implementing it: To achieve true integration of the migrant population, develop intercultural dialogue and integration, promote an inclusive society and help families with migrant background with an orientation desk for the Italian school system and linguistic-cultural mediation.

Description and involvement of stakeholders: The project activities promoted by CIDIS involve a wide network of actors, both institutional and civil society. For the activation of regional Language Training Plans, for example, the actors are: Region, Regional School Office, CPIA institutes (Provincial Centres for Adult Education), associations and social enterprises of the territories, diaspora associations.

Description of people being engaged: Approximately 2,500 third-country nationals were intercepted during the 44 months of the project and all of them participated in a training course (from literacy level to B1) and reported having improved their language skills by at least one level.

Box 15. SWOT analysis of CIDIS L2 Italian courses

Strengths	*Weaknesses*
- Intercultural dialogues - Local level - Prevention of early school leaving - Continuous updates on teaching and methodologies - Option of courses with specific language objectives (micro-language courses in specific professional fields, or to meet specific needs, e.g. Italian courses to support parenting) - Orientation desk	- Coverage is not national
Opportunities	*Threats*
- Integration of migrants and promotion of inclusive society - Opportunities for migrants, refugees, asylum seeker - Strengthen social cohesion in the regions where it operates - Realise a reception that conceives the migrant as an actor and active subject in the inclusion process.	- Difficulty in reaching groups for (i) individual differences in personality, interaction predisposition and motivation levels; (ii) typological differences between the learners' native language and the target language, coupled with limited education; (iii) the varied ages of learners, which demands increased didactic flexibility from teachers - The re-emergence of nationalist priorities and exclusive rights poses a threat to the fundamental principles of equality and social justice

Source: own elaboration based on desk research and interview.

4. Denmark

Between 2022 and 2023, employment in Denmark increased by 2%. This is the largest number of people employed ever recorded. In 2023, the unemployment rate in Denmark was 2.6%, which is a 2pp. decrease compared to the previous year, and a considerably lower rate in comparison to other EU countries (EU average of 5.9%).[194]

Despite large public investments in education, 5% of unskilled 15-29 year olds are neither active on the labour market, nor attending an education (NEETs).[195] Research shows that success or failure in the education system tends to be inherited from one generation to the next, similarly to what can be observed with unemployment. Indeed, the employment status of parents is a driver of the children's chances, and can have a negative effect on the education and employment prospects of the children.[196] In addition, gender stereotypes in schools create structural inequality. In Denmark, skill divide affects rural communities, people with a migrant background, and people with lower education levels.

In addition, the situation of people with disabilities also needs to be highlighted. Indeed, according to the Economic Council of the Labour Movement, in 2018, of the 46,840 unemployed people in Denmark without higher education and aged 15-24, 40% were affected by one or more disabilities, which hindered

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[194] EURES (2023). *Labour market information: Denmark.*
[195] Dansk Industri (2021). *61,000 unge er hverken i job eller uddannelse.*
[196] Brand (2015). *The far-reaching impact of job loss and unemployment.*

access to the labour market. One third of the people in this group will never enter the labour market because of their incapacity. Only 50% of young persons with disabilities have achieved higher education.[197]

Despite various effort to address this problem of skills poverty, progress has been slow. Traditionally, since the 2000s, Denmark has had an employment activation scheme for the unemployed based on rapid re-entry into the labour market combined with a reduction in the eligible period for receiving unemployment benefits. Due to the challenges on the labour market generated by the Covid-19 pandemic, adult education was seen as a constructive response by Denmark's policy-makers and companies. Indeed, adult education became a central policy tool, benefitting from numerous support packages in specific sectors. Encouraged by the trade unions, the Government offered unemployed people and vulnerable groups the opportunity to pursue reskilling and upskilling activities with the goal of fighting skills poverty, and a number of political parties agreed on a plan for strengthening reskilling from 2020 to 2023.

The group among which unemployment rates are the highest in the country, and which has also been adversely affected by the Covid-19 crisis, is that of low-skilled workers. Other groups particularly affected by unemployment and skills poverty are migrants, especially women, and academics with a background in the humanities. In an effort to avoid structural unemployment during the recession following the Covid-19 crisis, measures such as promoting reskilling and increasing mobility to support economic recovery have been taken, targeting these vulnerable groups in the context of labour market policies. More specifically, the main components of active labour market policy are relatively high levels of unemployment benefits, the right and duty to engage in activation, and a right to six weeks of education or vocational training with unemployment benefits.

Most educational activities for people below the age of 30 fall within the adult vocational-training system (AMU), which offers skill-specific short-term courses. This programme (Ministry of Children and Education, 2020) (in Danish "arbejdsmarkedsuddannelser" or "AMU") serves to:
- maintain and improve the vocational skills and competences of the participants in accordance with the needs of the labour market and further the participant's development of competencies,
- solve labour-market restructuring and adaptation problems in accordance with the labour market's short- and long-term needs,
- give adults the opportunity to upgrade their labour-market and personal competencies, and
- address challenges experienced by vulnerable groups.

Box 16. An overview of the adult vocational-training system (AMU)

The AMU programmes, founded in 1960, provide continuing education and skills development to both skilled and unskilled workers on the Danish labour market, and have had the goal of continuously upskilling skilled and unskilled workers, especially in the services sector and in the context of digitisation and, since recently, in the green transition.

Through the AMU system, both the employed and unemployed can access everything from half, full-day or multi-week short courses right up to full training programmes with up to 90 days of AMU courses. The courses range from food hygiene to the metal industry, from IT to biodiversity in landscape gardening, and can also be combined, including with a job. For example it takes three AMU

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[197] Arbejderbevægelsens Erhvervsråd (2022). *Unge med handicap står oftere uden job og uddannelse*

> courses totalling 33 days to become a qualified cable installer, with no prior experience. The AMU system allows for shorter vocational training for people who may not be willing, or who due to their life situation cannot complete longer training programmes. Courses can be booked by businesses, by job centres for the unemployed, and by individuals.

Source: own elaboration, CASE

Several reskilling and training initiatives were also intended to reduce unemployment and ensure the provision of a qualified workforce after the crisis, while also reducing skills poverty. Some of these were implemented in the context of tripartite agreements, and all were aimed at alleviating the effects of actual unemployment or its risk.

In 2020, a political agreement was reached to increase funding (€47 million) for the training, through short courses, of unemployed adults. That same year, for a cost of almost €54 million, a reskilling arrangement was added that provided compensation payments amounting to 110% of unemployment benefits during the period of education. Benefit levels were, however, differentiated such that the highest levels were given to persons who reskilled in areas with labour shortages. In 2020, in the midst of the COVID 19 crisis, the Danish government and the Danish employee and labour organisations reached a number of tripartite agreements aimed at boosting vocational education and training. With these agreements, a total of 6.1 bn. DKK (€ 818 million) have been invested in vocational education, with an additional 500 m. DKK (€67 million) yearly earmarked to new initiatives from 2021 and onwards.[198]

In December 2022, the Government announced that around 79,000 jobs had been saved through various initiatives. Despite that, an increase in unemployment was inevitable.

5.a Case Study 1: ReDi School Copenhagen

The ReDI School of Digital Integration Denmark is a non-profit organisation focusing on fighting skills poverty among vulnerable groups. ReDI is dedicated to empowering women and non-binary people with a refugee and migrant background. They support the enhancement of digital skills and facilitate integration into Danish workplaces and society by providing free digital education. Website: https://www.redi-school.org/redi-school-copenhagen
Contact: Name: Vibe Lindgård Bach - Function: Chief executive officer, ReDI School of Digital Integration Denmark (DK) - Contact: Vibe@redi-school.org, +45 2226 0184
Institution implementing: Non-profit organisation located in Copenhagen and Aarhus in Denmark, In Malmø, Sweden, as well as in several other cities in Germany (created in Germany in 2016, since 2019 in Denmark).
Description of action: The ReDI School offers mentoring and guidance, workshops, visits to potential employers, job matching and, in addition, access to a community, and this in order to fight skills poverty within the target group. The courses are held by volunteer tech experts, with a particular focus on ReDI School's core values of care, play, reliability, and usefulness. The ReDI Schools' core values correspond to 5 Sustainable Development Goals (SDGs), including quality education, gender equality, decent jobs and economic growth, less inequality and peace, as well as justice and strong institutions. The Digital Beginners Program serves as an essential foundation for individuals looking to navigate and actively participate in our increasingly digital society. Participants not only acquire

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[198] Danish Ministry of Finance (2021). *Denmark's Recovery and Resilience Plan – Accelerating the green transition.*

fundamental digital skills but also develop their personal capabilities and knowledge of Danish society. ReDi offers free on-site childcare services to allow mothers of young children to upskill/reskill themselves. The ultimate goal of the initiative is to support vulnerable people in their re-/upskilling in accordance with the present market transition in order to limit the risk of poverty they might face.

In addition to digital competences, the School offers workshops with professionals on how to apply for a job, and students have access to a mentor who supports them in their journey to enter the Danish labour market.

"One course lasts 12 weeks (one winter semester and one summer semester). Each week, the students have to physically attend the courses for 3 hours. Attendance is the only condition since the programme is free, but if this condition is not respected the student is expelled from the programme. In addition, students have 5-15 hours per week of preparation, and need to attend 4-6 workshops in the 12 weeks of the course. On top of this there are also mentoring activities," informs the Leader of the Programme. She adds: "Some women take more than one course, many apply for two rounds, but rarely more. 62% of the attendees will be integrating via an internship, a job position or further education."

Target group: women and non-binary people with a refugee and migrant background. These groups are recognised as among the most vulnerable and disadvantaged due to their intersectionality and the discrimination they face on the labour market. Unlike the other ReDi schools in Europe, the ReDi schools in Denmark only focus on migrant women, because – according to the programme's Leader – it is more difficult for women migrants than for men to integrate into the tech industry.

Intersectionality: yes. To benefit from the programme, the following criteria need to be fulfilled: women, with a Bachelor's Degree and with a migrant background.

Types of skills being addressed: digital skills and IT (data analytics, Javascript, machine learning, cybersecurity, UX/UI, etc.)

Reasons for implementing:

The Programme is based on two principles: community/ sense of belonging, and activities targeting professionalisation

- to assist vulnerable individuals who want to navigate an increasingly digital society and actively participate in it
- to improve the digital literacy of migrant women
- to help in acquiring digital skills and to diversify the technology field in Denmark
- to help women advance in digital careers
- to help in developing personal abilities and knowledge of Danish society for a better integration
- to fight skills poverty, narrowing skills gaps and thus reducing poverty within the target group by boosting skills and employment as a consequence

Description and involvement of stakeholders: students, volunteers (about 100), businesses. Partnerships include: Microsoft, Danske Bank, Visma E-conomic and KMD.

Description of people being engaged: From its launch in 2019 to March 2023, the programme has been a success, since it succeeded in training over 250 women from a migrant background, who were digital beginners, through their digital literacy programme. In total, 600 students have been enrolled at the school. Students are typically between 20 and 50 years old, with an average age of 36. 47 nationalities are or have been represented, and half of the students come from India. Other characteristics of the people engaged include: young migrant mothers, unskilled and unemployed

women immigrants living in Denmark for over 10 years, digitally unskilled women migrants, skilled women migrants wishing to upskill themselves in the IT sector, and unemployed and unintegrated women migrants. 130 volunteers are active within the programme.

Box 17. SWOT analysis of ReDi School Copenhagen

Strengths	*Weaknesses*
- Engaged volunteers - Motivated and ambitious students - Successful implementation and results: evaluation of the students showed that 87% strengthened their digital skills, 92% increased their self-confidence in success on the labour market, 79% expanded their network, and 89% enhanced their soft skills - Support from external stakeholders - Courses' topics in demand on the labour market - Positive response to the lack of women in STEM fields - Support to women migrants (social and professional integration) - Skills' enhancement - Offering upskilling and reskilling opportunities otherwise difficult to access and fighting skills poverty	- Limited capacity for accepting all applicants for classes due to lack of space (the school has no permanent location as classes meet in office spaces lent to the school for free by local businesses) and not enough teachers. In 2023, out of the 250-300 people who applied to the tech program, 115 applications were accepted. We can thus see that there are no barriers to engaging the target group in learning activities, but there are barriers to enabling all applicants to receive the training - As a non-profit, the school has limited funding, which comes from corporate partners and grants - The school cannot supply all the students with IT tools, such as laptops
Opportunities	*Threats*
- Creating new skills - Providing dialogue between the students and companies to offer opportunities on the labour market - Enabling a better integration of migrants and their higher participation on the labour market - Receiving support from policymakers - While the school serves women of refugee and migrant backgrounds, the target group was expanded in Denmark to include first or second-generation immigrants to better match the demographics of applicants	- Public policy in Denmark has shifted to considering refugees as temporary residents who are expected to leave when conditions in the home country improve; if they return to their home country in the middle of their education, the students might not get the chance to complete the education they started at ReDI. - Public opinion and fear that the welfare state will collapse, thus limiting initiatives such as the ReDI school welcoming migrants and refugees

Source: own elaboration, CASE based on desk research and interview.

5.b Case study 2: Danish Refugee Council – Job Oriented Efforts

DRC Integration has more than 20 years of experience in getting refugees and citizens with a different ethnic background than Danish into the labour market. The DRC knows the challenges and needs of the target group, and supports them in transferring their competencies and experience from the home country onto the Danish labour market.

The goal of the job-oriented initiatives of the DRC is the independence and autonomy of refugees living in Denmark, through a job or education. The DRC has a broadly composed staff with many bilingual employees.

The job-oriented initiatives, regardless of whether the focus is on returning after a sick leave, reconciling physical or mental challenges with working life, increasing knowledge of the Danish labour market or finding an adequate educational path, are tailor-made and facilitated by a large network of Danish companies.

Website: https://integration.drc.ngo/vores-arbejde/beskaeftigelse/

Contact: Name: Morten Dreisler
- Function Head of department, employment
- Contact: +45 28 87 00 76, morten.dreisler@drc.ngo

Institution implementing: The Danish Refugee Council (DRC) was founded in 1956 and has since provided support to asylum seekers and refugees in Denmark. Today, the DRC is the largest NGO in Denmark providing counselling, support and services for asylum applicants, refugees, and migrants in relation to protection and integration. Across the country, the DRC collaborates closely with other civil society actors, public authorities, and diaspora communities.

Description of action: The goal of the DRC's job-oriented initiatives are to integrate refugees on the Danish labour market and combat skills poverty.

Activities include, among others, labour market initiatives for women migrants (job search, mentoring, skill evaluation), mentorship, guidance and upskilling, and mental health support, etc.

In particular, the DRC offers the course: Social economy, canteen and cleaning. In collaboration with the company Fair Mad and Fair Ren, the DRC offers a course including practical upskilling and guidance that takes place in small groups, with the goal of the beneficiaries obtaining employment as soon as possible during or after the course. The course is adapted to the individual's prerequisites and skills in collaboration with the local job centre.

The beneficiaries are part of a community of workers from day 1, and receive:
- upskilling in the field of food production, customer service and/or cleaning
- an evaluation of their skills and resources
- knowledge about labour market culture
- support for achieving stable attendance.
- guidance for drawing up a realistic and action-oriented professional plan

Then, the workshops provide skills in:
- cooking, catering services
- customer and checkout service
- hygiene and quality assurance
- unwritten rules and communication skills with managers, colleagues and customers

The DRC also provides support to refugees with trauma who would like to benefit from upskilling/reskilling activities and re-enter the labour market, through psychological support and collaboration with companies.

Another job-oriented initiative is one addressed specifically to Ukrainian refugees. They receive skills evaluations to assess their competencies and potential lacks on the labour market. In collaboration with municipalities, a mapping of competencies and experiences can be done. 600 Ukrainian refugees have received skills evaluations in 11 municipalities in Denmark.

Target group: refugees, migrant women, unemployed citizens

Intersectionality: yes

Types of skills being addressed: knowledge based technical skills, basic digital skills, digital skills for employment, transversal skills, social (life) skills
Reasons for implementing it: The DRC has the mission to support refugees to not only enter the labour market but to support vulnerable refugees in their struggles, notably in terms of trauma (war, PTSD, gender-based violence victims, etc.)
Description and involvement of stakeholders: the DRC collaborates with job centres, municipalities and private companies to develop job-oriented initiatives, facilitate labour market integration, and fight skills poverty
Description of people being engaged: volunteers and employees

Box 18. SWOT analysis of DRC Danish Refugee Council

Strengths	*Weaknesses*
- Addressing vulnerable groups - Supporting refugees with multiple vulnerabilities - Fighting skills poverty - Strong collaboration with multiple stakeholders facilitating success	- Limited variety of skills - Skills focused on low-qualified jobs for unqualified people; reskilling of skilled migrants is non-existent - Dependent on political and public opinion towards migrants
Opportunities	*Threats*
- Creating new skills - Providing dialogue between the beneficiaries and companies to offer opportunities on the labour market - Enabling better integration of migrants and their higher participation on the labour market	- Dependent on influx of refugees, which varies in terms of numbers, skills and country of origin, resulting in the need for extreme adaptability

Source: own elaboration, CASE based on desk research.

5.c Case study 3: SEVU Joint Committee for Vocational Welfare Education

(for the health and social sector)

SEVU is the Secretariat for Vocational Welfare Education. They collaborate with trade unions, job centres, as well as ministries, municipalities and regions to offer vocational training to people who would like to participate in reskilling activities, as well as unemployed people in need of upskilling. SEVU proposes vocational training and AMU training in the social and health sectors. It wishes to a) help in the recruiting and qualifying of unemployed people in the social and health sectors, b) help to promote upskilling in the social and health sectors, and c) help to reskill employees in the social and health sector. **Website:** https://www.sevu.dk/fevu/efteruddannelse
Contact: Signe Lonesdatter Munksgaard: SLM@SEVU.DK; Nina Lyng: NLY@SEVU.DK
Institution implementing: The activities are implemented by one of the four trade committees of the SEVU (Secretariat for Vocational Welfare Education) which supports education, all of which help to ensure professional care in the Danish welfare society. The Joint Committee for Vocational Welfare Education (SEVU) is a merger of the academic committee for the pedagogical assistant and social and health education (PASS) and the continuing education committee for the Pedagogical Area and the Social and Health Area (EPOS). The two committees merged in June 2020 to form the Joint Committee for Vocational Welfare Education (SEVU).
Description of action: The Joint Committee for Vocationally Oriented Welfare Education (SEVU) has the aim of addressing skills poverty among people who envisage choosing health-related

employment. It has the professional responsibility for developing programmes to match the needs of the labour market. This means that the committee stipulates the following in relation to SEVU's study programmes:

- Establishes training schemes and determines the duration, structure and competence objectives of the pedagogical assistant training and the social and health training courses.
- Manages and develops the content of the courses, including guidelines for learning placements and final examinations.
- Approves and works for good educational conditions in the learning companies.
- Follows the development possibilities for the committee's area and initiates the revision of the training courses.
- Cooperates with the local education committee on the tasks.

SEVU is also responsible for the supply of continuing education for the job areas, and therefore identifies the needs of social and health workers and pedagogical assistants for continuing education. Against this background, and on the basis of the Act on Labour Market Training, SEVU is responsible for the development of training objectives and examinations for labour market training schemes.

SEVU also develops labour market training programmes targeting the unemployed and career-changers looking for jobs in the field.

SEVU proposes a set of 22 introductory courses in the field of healthcare for the elderly (including dementia) and disabled people, and also proposes courses in the following:

- early childhood care
- nursing
- palliative care
- mental health
- pharmacology
- diabetes care
- etc.

SEVU analysed, as a follow-up, the result/impact of its training in terms of skills, and the analysis showed that the skills acquired matched to a certain extent the needs of the social and health sector.

Target group: social and health workers, unemployed people

Intersectionality: sometimes

Types of skills being addressed: all types of skills needed in the social and health fields

Reasons for implementing it: With an increasing number of elderly people in need of care and fewer professionals in the healthcare sector, the need for more employees in the field of healthcare and elderly care will increase over the years to come. This increased need has required political agreements to strengthen the recruitment of new students into this area. The demand for skilled social and health workers also means that future employees benefit from a high level of job security after completing their SEVU training.

Description and involvement of stakeholders: The SEVU collaborates with trade unions such as FOA, 3F, Kommunernes Landsforening (KL), education institutions, Ministry of Children and Education, and other actors.

Description of people being engaged: the trainers and coaches are professionals of the health sector

Box 19. SWOT analysis of SEVU

Strengths	*Weaknesses*
- Motivated students - Support from influential external stakeholders - Courses' topics in demand on the labour market - Combating skills poverty in a specific field made vulnerable by the Covid-19 pandemic - Very varied and complete curriculum - Offering upskilling and reskilling opportunities otherwise difficult to access, and fighting skills poverty - Successful results	- Very broad target group, with vulnerable groups only partly addressed - Although the results of the training in terms of skills are successful, we can observe several shortcomings, for instance in terms of planning and evaluation, medication management, quality assurance as well as patient security and ethical issues (confidentiality, patients' rights, etc.)
Opportunities	*Threats*
- Creating new skills - Enabling better stability in the health sector - Providing new jobs	- The difficulty of the social and health professions can prevent people from choosing this path

Source: own elaboration, CASE based on desk research.

This interview questionnaire is intended to be used for the data collection process under Task 2 of the study *How to eradicate skills poverty among the most vulnerable* conducted for the European Economic and Social Committee (EESC) by CASE – Center for Social and Economic research based in Warsaw.

With Task 2 of the study (T2: How to design effective upskilling and re-skilling policies to reach the most vulnerable), the project team aims to examine what kind of policy initiatives such as upskilling and re-skilling, among others, successfully help overcome the most pressing skill divides outlined in Task 1, and how they should be designed to successfully reach those in need (the groups of persons most vulnerable to skills poverty).

To gain the most insightful and robust results that will be used for policy recommendations stemming from the findings, the project team will complement the case studies with in-depth interviews with up to two stakeholders per case study. A more comprehensive understanding of the identified policies/initiatives will thereby be gained, especially when it comes to the identification of any barriers/challenges that may have hindered the success of the implementation of the policies/initiatives (such as inadequate funding or limited access to educational resources).

A detailed list of topics to be covered in the interviews with selected stakeholders is presented below. The questions will be adjusted according to the specific background of each case study, success in the implementation and success in reaching targeted vulnerable groups of persons.

Interview questionnaire

Part 1: Understanding of the policy/initiative
- When it comes to the initiative being performed in your country, can you please describe the rationale of its creation? Why was it needed?
- What was the target group of the initiative? Why?
- Did you address any of the vulnerable groups (based on the proposed definition, vulnerable groups are described by the following characteristics*: socio-economic status, gender, ethnicity, migrant status, disability, age, geographical (urban-rural environment).*
- Did it address the reduction of skills poverty among the vulnerable groups in the longer term, or was it a response to an ad hoc need that was identified, or something else?

Part 2: Civil society role
- Could you please outline the principal actors involved in this initiative and their activities?
- Did civil society play a role in the implementation of this initiative? If yes, to what extent?
- Can you share any examples of collaboration partnerships in the context of this initiative? (For ex. between government agencies, civil society organizations, or other stakeholders)?
- What challenges or opportunities have emerged in the engagement of civil society, and how were they addressed?

Part 3: Targeted- group approaches
- Were there any specific strategies or measures to tailor initiatives to the unique needs of a vulnerable group or groups? Why did they target these specific groups?
- Did the initiative consider intersectionality when designing the upskilling/ reskilling programmes? If so, how was it taken into account? By intersectionality we mean the inclusion

of people with more than one vulnerable characteristic (like migrant women, disabled unemployed, etc).

- Was it addressed directly, or indirectly? If directly, then why?

Part 4: Barriers to learning

- Are you able to identify typical barriers that individuals face when trying to engage in upskilling or re-skilling activities? How were they addressed in initiative XYZ?
- In your opinion, how can these barriers be mitigated to encourage greater participation in learning initiatives?

Part 5: Success factors and barriers

- Have you encountered any challenges in reaching targeted vulnerable groups? Why?
- What do you believe contributed to the success of the initiative XYZ in reaching and benefiting vulnerable groups?
- On the other hand, what were the primary barriers or challenges that hindered the success of initiative XYZ?
- Could you share insights on the role of funding and access to educational resources in the effectiveness of initiative XYZ?

Part 6: Success and Failure Assessment

- How do you assess the impact of the initiative in terms of reducing skills poverty and enhancing the employability of (targeted) vulnerable groups?
- Are there any specific measurement or evaluation methods that have proven effective?
- Please outline the most important strengths, weaknesses, challenges, and opportunities of initiative XYZ?
- Is there any additional information or insights you believe are valuable for our research?
- Do you think this measure can be replicable in general or in a different context? Why and how?

Source: own elaboration, CASE

Annex 3. List of interviewees (Task 2)

Belgium:

1. Gulsen Yavuzey, DIGIBANKS (Phone Interview)[199]
2. Catherine Borgers and Servane Leurent, Accessia (Online Interview)[200]
3. Lien Warmenbol SheDIDIT (Online Interview)[201]

Poland:

4. Maryla Goryszewska, Fundacja Rozwoju Systemu Edukacji – A chance (Online Interview)[202]
5. Julia Semeniuk, Ukrainski Dom w Warszawie (Online Interview)[203]

Ireland:

6. Carl Blake, Co. Coordinator Regional Skills Forum West (Online Interview)[204]
7. Siobhan Bradley, Regional Skills Manager South-West (Online Interview)[205]
8. Clare McNally and Fionnuala Carter, National Program Office for Adult Literacy for Life (Online Interview)[206]
9. Ronan Harbison and Aisling Ahern, Generation Ireland (Online Interview)[207]

Italy:

10. Gabriele Grondoni, Toscana Region - Training for job placement (GOL Programme) (Online Interview)[208]
11. Ilaria Graziano, Fondazione Mondo Digitale ETS (Online Interview)[209]
12. Elena Ringoli, Cidis Impresa Sociale ETS (Online Interview) [210]

Denmark:

13. Vibe Lindgård Bach, ReDi School (Online Interview)[211]

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[199] Interview conducted on 28 November 2023
[200] Interview conducted on 29 November 2023
[201] Interview conducted on 23 November 2023
[202] Interview conducted on 7 December 2023
[203] Interview conducted on 26 January 2024
[204] Interview conducted on 23 November 2023
[205] Interview conducted on 30 November 2023
[206] Interview conducted on 22 November 2023
[207] Interview conducted on 5 December 2023
[208] Interview conducted on 7 December 2023
[209] Interview conducted on 22 January 2024
[210] Interview conducted via email
[211] Interview conducted on 21 November 2023

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