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TORINO PROCESS 2018–2020 UKRAINE

NATIONAL REPORT

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ACRONYMS

ATO	Anti-terrorist operation
CMU	Cabinet of Ministers of Ukraine
CVET*	Continuing vocational education and training
DL	Distance Learning
DVT	Dual Vocational Training
EPC	Education and Practical Centres
ETF	European Training Foundation
EU	European Union
GDP	Gross domestic product
GSE	General secondary education
HCD	Human capital development
HE	Higher education
HEI	Higher educational institution
ICT	Information and communication technologies
IDP	Internally Displaced Persons
IECM	Institute of Education Content Modernisation
ILO	International Labour Organisation
IRC	Inclusive resource centre
IVET	Initial vocational education and training
LLC	Limited Liability Company
MoEDT	Ministry of Economic Development, Trade and Agriculture
MoES	Ministry of Education and Science
MoF	Ministry of Finance
MoSP	Ministry of Social Policy
NAES	National Academy of Educational Sciences
NAQ	National Agency for Qualifications
NQC	National Qualification Commission
NQF	National Qualifications Framework
NRF	National Reporting Framework
PCC	Professional Career Centre
PJSC	Public Joint-Stock Corporation
PPP	Public-private partnership
RSA	Regional state administration
SES	State Employment Service
SSEQ	State Service of Education Quality
SSSU	State Statistics Service of Ukraine
TRP	Torino Process
VBT	Voucher-based training
VET	Vocational education and training
VETI	Vocational education and training institution
VETSs	Vocational education and training standards
WBL	Work-based learning
y/y	year-on-year

*The concept of the “Continuing vocational education and training” implies the advancement of qualifications and the retraining of workers.

Building block A: Country and VET overview

A.1: Country background

A.1.1 Introduction

Transformations in Ukraine after the preceding round of Torino Process in 2016 have been marked by strengthening European integration processes, which significantly influenced social, political and economic developments in the country. The EU Association Agreement, including its Deep and Comprehensive Free Trade Area (DCFTA) entered fully into force on September 1, 2017. It provided strong guidance for Ukraine's reform programme and gave rise to trade expansion between the EU and Ukraine¹. In 2017-2018 Ukraine's export to the EU increased by 44.9%, and EU's share reached the record level of 42.6% (the relevant EU's share in import exceeded 40% as well)². Visa-free travel for Ukrainian citizens with biometric passports entered into force on June 11, 2017. In one year, over half a million trips to the EU were made without a visa³.

The economy of Ukraine has stabilized after falling in 2014 and got back to sustainable growth (GDP grew by 2.4% in 2016, by 2.5% in 2017 and by 3.3% in 2018)⁴. The key factor of economic growth was an increase in household consumption. In 2018, Ukraine launched a new Stand-By programme with the IMF (USD 3.9 bn). The first tranche (of USD 1.4 bn) was directed to the international reserves of the National Bank of Ukraine, increasing them to USD 20 bn that is the highest since 2013. The currency market has also been stabilized due to its liberalisation. At the same time, the problem of external debt peak payments in 2018-2019, permanently low level of labour productivity and social standards, as well as high level of poverty remains significant.

In recent times, the course set out for reforms has been continued. The significant progress has been made in such areas as medicine, education, justice, regulatory policy and entrepreneurship development, budget sphere (medium-term planning implementation). The decentralisation reform launched in 2014, aimed at increasing local self-government efficiency in Ukraine, was continued (876 amalgamated territorial communities were established in 2015-2018)⁵. Ukraine's position in respectable global rankings has slightly improved, including the World Bank's *Doing business* (from 80th place in 2017 to 71st in 2019) and the World Economic Forum's *Global Competitiveness Index* (ranked 85th out of 138 countries in 2016-2017 compared to 81st out of 137 countries in 2017-2018)⁶⁷. However, according to Transparency International's 2018 Corruption Perceptions Index, level of corruption in Ukraine remained rather high⁸⁹.

At the same time, the continuation of military aggression in the Donbas, exacerbation of the situation in the Sea of Azov waters and the problems with ships passage to Ukrainian ports affected economic and social reforms in Ukraine during 2016-2019. Delays in marine cargo movement in this region put a local infrastructure functioning at risk and worsened Ukraine's transit status. The short-term imposition of martial law in 2018 did not significantly affect the economy in 2018, however sent out negative signals to investors.

Significant progress in education reform has been one of the most important achievements for the human capital development (HCD) in Ukraine between 2016 and 2019. In particular, the Law on Education was adopted in 2017. It is aimed at updating education content, creating opportunities for competence-based training development, designing new educational environment, strengthening teacher motivation, improving management system of educational institutions and functioning of inclusive education sector. The Government developed and approved the state policy concept on general secondary education

¹ Facts and figures about EU-Ukraine relations. Available at: <https://www.consilium.europa.eu/media/31661/eap-summit-factsheet-ukraine-eng.pdf>

² State Statistics service of Ukraine, International economic activity and balance of payments, Ukraine's Foreign Trade in Goods with EU countries. Available at: http://www.ukrstat.gov.ua/operativ/operativ2018/zd/ztt_ES/ztt_es_u/ztt_es18_u.htm

³ According to the official statement of the State Border Service of Ukraine. Available at: <https://dpsu.gov.ua/ua/news/Za-rik-bezvizu-prikordonniki-oformili-555-tisyach-ukrainciv-za-sproshchenoyu-proceduroyu/>

⁴ State Statistics service of Ukraine, The change of Gross Domestic Product volume. Available at: http://www.ukrstat.gov.ua/operativ/operativ2018/vvp/ind_vvp/ind_2018u.htm

⁵ Ministry of Regional Development, Monitoring the decentralisation reform process. Available at: <https://storage.decentralization.gov.ua/uploads/library/file/359/10.01.2019.pdf>

⁶ World Bank Group, Doing business 2019. Available at: <http://www.doingbusiness.org/en/reports/global-reports/doing-business-2019>

⁷ World Economic Forum, Insight Report: The Global Competitiveness Report 2017–2018. Available at: <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>

⁸ Ukraine ranked 120th out of 180 countries in 2018 compared to 130th out of 180 countries in 2017.

⁹ <https://ti-ukraine.org/en/research/corruption-perceptions-index-2018/>

reform - the "New Ukrainian School" up to 2029¹⁰, the Concept on Dual-Based Training of Specialists¹¹, the Concept for implementation of state policy in VET education "Modern Occupational and Vocational Education for the Period up to 2027"¹².

After the preceding round of Torino Process significant progress has been made in the National Qualifications Framework (NQF) development. The key tasks of the National Qualifications Agency (NQA) established in 2018 are to provide support to the introduction of the NQF, to strengthen the education system focus on labour market needs, to form requirements to recognition of outcomes of non-formal and informal education, to participate in occupational standards development etc¹³.

Article 38 of the Law of Ukraine 'On Education'

The **National Qualifications Agency** is a permanent collegial body authorized to implement public policy in the area of qualifications. The National Qualifications Agency is formed on a parity basis from representatives of central authorities in the area of education and science, social policy, economic development, joint representative body of all-Ukrainians associations of employers organisations and a joint representative body of all-Ukrainian trade union associations.

The National Qualifications Agency:

1. participates in the development of laws and regulations in the area of qualifications;
2. ensures interaction, coordination and enhanced efficiency of activities of stakeholders in the area of qualifications;
3. provides support to the introduction of the National Qualifications Framework with requirements of this Law;
4. performs international cooperation in the area of qualifications, including with the goal of harmonizing the National Qualifications Framework with similar international documents;
5. coordinates efficiency assessment of state policy in the area of qualifications;
6. provides for forecasting needs of the labour market in qualifications;
7. provides information support to the introduction of the National Qualifications System and the National Qualifications Framework;
8. creates and maintains the Qualification Registry;
9. develops a draft procedure of development, enforcement and review of occupational standards and submits it to the Cabinet of Ministers of Ukraine for approval;
10. registers professional standards and ensures open access to standards;
11. coordinates development of occupational standards;
12. participates in the development of educational standards;
13. performs accreditation of qualification centres;
14. develops recognition criteria and procedures for qualification obtained in other countries;
15. forms requirements to qualifications awarding procedures, recognition of outcomes of non-formal and informal education;
16. interacts with bodies and establishments of quality assurance in education;
17. performs other powers envisaged by law.

The Government approved the composition of the National Agency for Quality Assurance in Higher Education (NAQAHE). Its main regulatory and control functions include, in particular, educational institutions and education programmes accreditation, scientific personnel certification, specialized academic councils accreditation etc.¹⁴

The newly created National Fund for Research (NFR) is aimed at transparency ensuring for projects procedures and funding, grant support for researches¹⁵. Since 2019, the Institute of Ombudsman for

¹⁰ CMU Order No 988-p as of December 14, 2016. Available at: <https://www.kmu.gov.ua/ua/npas/249613934>

¹¹ CMU Order No 660-p as of September 19, 2018. Available at: <https://zakon.rada.gov.ua/laws/show/660-2018-%D1%80>

¹² <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciyi-realizaciyi-derzhavnoyi-politiki-u-sferi-profesiynovi-profesijno-tehnichnoi-osviti-suchasna-profesijna-profesijno-tehnichna-osvita-na-period-do-2027-roku-i120619>

¹³ CMU Order No 1029 as of December 5, 2018. Available at: <https://zakon.rada.gov.ua/laws/show/1029-2018-%D0%BF>

¹⁴ CMU Order No 1063-p as of December 27, 2018. Available at: <https://zakon.rada.gov.ua/laws/show/1063-2018-%D1%80>

¹⁵ CMU Order No 528 as of July 4, 2018. Available at: <https://zakon.rada.gov.ua/laws/show/528-2018-%D0%BF>

Education (IOE) has been launched in Ukraine to ensure rights protection for education process participants¹⁶.

National Research Foundation of Ukraine

National Research Foundation of Ukraine was established on July 4, 2018 (according to the Law of Ukraine "On Research and Development Activities" and the CMU resolution No. 528 as of July, 4, 2018).

Mandate:

1. stimulation and support for fundamental and applied research;
2. implementation of state policy in scientific and R&D activities;
3. development of the national research community and its integration into the global research space;
4. expansion of the research infrastructure in Ukraine and its integration into the global research infrastructure;
5. facilitation of R&D cooperation between research institutions, higher educational institutions, and representatives of the real and service sectors of economy;
6. engaging young people into research activities;
7. supporting production-oriented (sectoral) research institutions by conducting competitions upon request of central executive authorities or other customers (in case they allocate the respective funding).

Key objective is to provide support for: (1) fundamental scientific research in natural sciences, technical, social sciences, and in humanities; (2) applied scientific research and R&D developments within the priority areas of science and technology.

Functions:

1. to organise and conduct open competitive selection of projects to be funded by the grants, with mandatory prior independent and objective evaluation, engaging international experts;
2. to provide targeted, efficient, and reasonable use of funds of the Foundation.

A.2 Overview of Vocational Education and Training

A.2.1 Overview of VET: set-up and regulatory framework

In Ukraine the main VET related terms are defined in two basic Laws – 'On Education' (2017)¹⁷ and 'On Professional (Vocational) Education'(1998)¹⁹. **Professional (vocational) education** is defined as the complex of pedagogical, organisational and managerial measures aimed at ensuring citizens with the acquisition of knowledge, skills and abilities in the chosen professional activity area, competence and professional manner development, general and professional culture education. **Professional (vocational) training** is a VET component which foresees formation and development of professional competences of individuals necessary for professional activity of a particular occupation in the relevant field, ensuring their competitiveness in the labour market, mobility and life-long career prospects. **Retraining of workers** is professional (vocational) training aimed at mastering a different profession by workers who have received initial professional training. **Professional advancement of workers** is professional (vocational) training of workers that enables expanding and enhancing the previously acquired professional knowledge and skills on the level of requirements of the industry or the sphere of services.

VET institution (VETI) ensures meeting of citizens' needs in VET, obtaining occupations, qualifications in accordance with their interests, abilities, and health grounds. The legislation also stipulates the compliance of VET schools with accessibility requirements (for people with special educational needs).

VET institutions by organisational types and statuses²⁰: vocational school of the corresponding profile; social rehabilitation vocational school; higher vocational school; vocational lyceum; vocational

¹⁶ CMU Order No 491 as of June 6, 2018. Available at: <https://zakon.rada.gov.ua/laws/show/491-2018-%D0%BF>

¹⁷ Law of Ukraine "On Education" defines main forms of education (incl. distance and dual), its components and levels, quality assurance aspects, training institutions functions, management and control issues, financial and economic relations, educational standards and programs, qualifications, certificates and diplomas.

¹⁸ <https://zakon.rada.gov.ua/laws/show/2145-19>

¹⁹ <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80>

²⁰ Law of Ukraine "On Professional (vocational) education"

lyceum of the corresponding profile; school of VET and art; arts vocational school; higher arts vocational school; VET-farm business school; higher VET-farm business school; school-factory; centre of professional (vocational) education; vocational education centre; production-and-training centre; center for employees training and retraining; training-course centre; training centre; other types of educational institutions providing VET (VET schools at penal colonies; VETIs that are divisions of higher educational institutions; training centres at penitentiary institutions). In addition, VET institutions are divided by the attestation level (in particular, the second and the third levels)²¹²²²³.

Education certificates²⁴: a *General Certificate of Education* – for a VET graduate upon the completion of the full secondary education course; secondary education; a *skilled worker diploma, or a junior specialist diploma* – for a VET graduate granted with the education qualification level of the "qualified worker" or "junior specialist" qualification; a *Certificate of competence or Professional advancement certificate* – for a person who has mastered a VET course and successfully passed the qualification certification.

Table 1.

Programmes classification in VET system (IVET and CVET)

VET levels (degrees)	Duration	Entry requirements	ISCED 2011 level, NQF level
First (initial) level (degree)	up to 1 year	no requirements on previous education	1 ISCED 2011/ 2 NQF level
Second (basic) level (degree)	a) up to 1.5 year	a) on the basis of complete secondary education;	Access to higher education 3 ISCED 2011/ 3 NQF level
	b) 3-4 years	b) based on basic secondary education with obtaining the complete course of secondary education	
	2 years	based on basic secondary education without obtaining the complete course of secondary education	2 ISCED 2011/ 2 NQF level
Third (higher) level (degree)	up to 1.5 years	based on complete secondary education and education qualification level of "qualified worker"	Access to higher education 4 ISCED 2011/ 4 NQF level
	up to 2 years	complete secondary education and education qualification level of "qualified worker" are required for admission	Access to higher education 4 ISCED 2011/ 4 NQF level

Source: developed based on the Law "On Education"

VET has different stages (see table 1)²⁵²⁶²⁷. These stages are reflected in respective qualification levels, occupation complexity and education qualification levels (qualified worker, junior specialist)²⁸²⁹.

²¹ VET institutions of the second attestation level include VET schools of the corresponding profile, schools of VET and arts; arts vocational schools; VET-farm business schools, schools-factories, production-and-training centres, training centres and other training institutions of that type. VET institutions, which belong to the third attestation level, are the following: higher vocational schools, higher arts vocational schools, higher VET-farm business schools, centres of vocational education, centres for employees training and retraining, other types.

²² <http://zakon5.rada.gov.ua/laws/show/956-99-%D0%BF>

²³ According to the draft Law of Ukraine "On Professional (vocational) education" the following types of VET institutions are foreseen: vocational lyceum, vocational college, centre of professional (vocational) education and centre for employees training and retraining.

²⁴ <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80>

²⁵ ENIC UKRAINE, National Information Centre of Academic Mobility, Vocational education. Available at: <http://www.enic.in.ua/index.php/ua/systema-osvity/profesijno-tehnicna-osvita>

²⁶ CMU Order form June, 3, 1999 N 956 "On approval of the Statement on graded vocational education"(with changes). Available at: <http://zakon5.rada.gov.ua/laws/show/956-99-%D0%BF>

²⁷ Education programs of each level (stage) are designed in a way to provide a possibility for students at the first stage to continue their education at the second stage and for the second stage students – to move up to the third one.

²⁸ <http://www.enic.in.ua/index.php/ua/systema-osvity/profesijno-tehnicna-osvita>

²⁹ A graduate of a VET institution who successfully passes the qualification examinations is awarded the qualification degree of Qualified Worker of the appropriate category in the selected specialization field. For a VET graduate after completing the course

The Law “On Education” contains provisions on the **National Qualification Framework (NQF)**. The NQF was introduced in 2011. It defines eleven levels. Each level is determined with the set of competences typical for the qualification of appropriate level including an individual’s readiness for life-long learning.

Article 35-36 of the Law of Ukraine ‘On Education’

National Qualification Framework a systemic and structured by competences description of its levels. The National Qualification Framework is approved by the Cabinet of Ministers of Ukraine. **NQF** is intended to be used by state authorities and bodies of local self-government, establishments and organizations, institutions of education, employers, other legal entities and physical persons with a goal of developing, identifying, relating, recognizing, planning and developing qualifications.

NQF is based on the *European and national standards* and principles of educational quality assurance, on labour market requirements to competences of employees, and is introduced with a goal of harmonizing requirements of the legislation in the area of social and labour relationships, promotion of the national and international recognition of qualifications obtained in Ukraine, and effective interaction between the sphere of education and the labour market.

The **National Qualification Framework** defines **eleven levels** which may contain sublevels.

Each level of the National Qualification Framework is determined by a special set of individual’s competences that are typical to qualifications of the respective level, which also includes individual’s readiness for life-long learning.

The zero level defines ability of an individual to act in an adequate manner in the known simple situations under direct supervision of another individual.

The first level defines ability of an individual to fulfill simple assignments in typical situation in a strictly defined structures sphere of work or study, perform assignments under immediate supervision of another individual.

The second level defines ability of an individual to fulfill typical ordinary assignments in typical situation in a strictly defined structures sphere of CDL-REF(2017)047 - 30 - work or study, perform assignments under immediate supervision with elements of independence.

The third level defines ability of an individual to fulfill labour or study assignments of medium complexity by predefined algorithms and established time and quality standards.

The fourth level defines ability of an individual to independently fulfil complex specialized labour or study assignments in a certain field of professional activity or in the process of education, in particular, in non-standard situations.

The fifth level defines ability of an individual to independently fulfil complex specialized labour or study assignments in a certain field of professional activity or in the process of education, be responsible for results of one’s activity and control other persons in certain situations.

The sixth level defines ability of an individual to solve typical specialized problems in a certain field of professional activity or in the process of education, which involves application of principles and methods of the respective science and is characterized by some uncertainty of conditions, be responsible for results of one’s activity and control other persons in certain situations.

The seventh level defines ability of an individual to solve complex specialized tasks and practical problems in a certain field of professional activity or in the process of education, which involves application of some theories and methods of respective science and is characterized by complexity and uncertainty of conditions.

The eighth level defines ability of an individual to solve complex tasks and problems in a certain field of professional activity or in the process of education, which involves doing research and/or making innovations and is characterized by uncertainty of requirements and conditions.

The ninth level defines ability of an individual to solve complex problems in the area of professional and/or research and innovative activity, which involves deep rethinking of the available and creation of the new integral knowledge and/or professional practice.

The tenth level defines ability of an individual to determine and solve socially significant systemic problems in a certain area of activity, which re key to ensuing sustainable development and require creation of new the area of professional and/or research and innovative activity, which involves deep rethinking of the available and creation of the new system-forming knowledge and progressive technologies

at a VET school of III grade the educational-qualification level of “junior specialist” is awarded but only if he/she obtains the educational-qualification level of “qualified worker”.

Overall, the legislation of Ukraine on VET is based on the Constitution of Ukraine and regulated by two main Laws of Ukraine – “On Education” (2017)^{30,31} and “On Professional (vocational) Education” (1998)³². Other directly and indirectly applicable legislation in VET include the Law of Ukraine “On Promotion of Social Advancement and Development of Young People in Ukraine” (1993), “On Development and Placing Governmental Orders for Training of Specialists, Scientific, Teaching Staff and Labour Force, Advanced Training and Retraining” (2012)³³, Code of Laws on Labour (1971), “On Employment of population” (2012), “On Professional Development of Employees” (2012), etc.

In particular, the provision of **continuous training to workers (employees)** is regulated by the Law of Ukraine “On professional development of employees”³⁴. In particular, it defines the basic provisions for implementing work-based learning, certifying workers, verifying their qualification acquired through non-formal learning. Activities and tasks for employers and role of trade unions in VET are pointed out.

The *procedures and conditions for CVET* are foreseen in the Law of Ukraine “On the employment of population”³⁵. This Law also contains separate provisions on **CVET for the unemployed**. It can be conducted either on the employer’s request or for self-employment (entrepreneurship), responding to labour market demand and the needs of unemployed. Provision of CVET to unemployed is primarily focuses on arranging professional training for the unemployed without any occupation or low-qualified, professional development for long-term unemployed etc. Besides, the extension of competence through internship or specialization of unemployed is foreseen.

In the context of decentralisation, an important step for VET was the adoption of the CMU Order № 831-p from October 25, 2017³⁶. It envisaged a transfer of certain functions related to state VET schools governance to regional and city levels (including VET schools property operational management, preparation of regional order on skilled workers training, appointment of VET schools heads etc.). Relevant methodological recommendations on the regional order formation for specialists and workers training were approved (CMU Order No. 994-p from December 14, 2016).

After the last round of Torino Process, Ukrainian education system in general, and the VET sector in particular, have been under intense reformation process where the appropriate changes in legislation are crucial. The framework Law of Ukraine “On Education”, adopted in 2017, is based on *New Ukrainian School* conceptual principles^{37,38}. For its implementation, there is a need to develop and/or update more than 60 legislative acts in education system, including VET. At present, the Law “On Pre-Tertiary Vocational Education”³⁹ has been approved; the new drafts of Laws on “On Professional (Vocational) Education”⁴⁰ and “On Complete General Secondary Education”^{41,42} have been developed.

³⁰ Law of Ukraine "On Education" defines main forms of education (distance and dual incl.), its components and levels, quality assurance aspects, training institutions functions, management and control issues, financial and economic relations, education standards and programme, qualifications, certificates and diplomas.

³¹ <https://zakon.rada.gov.ua/laws/show/2145-19>

³² <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80>

³³ <https://zakon.rada.gov.ua/laws/show/5499-17>

³⁴ <https://zakon.rada.gov.ua/laws/show/4312-17>

³⁵ <https://zakon.rada.gov.ua/laws/show/5067-17>

³⁶ <https://zakon.rada.gov.ua/laws/show/831-2017-%D1%80>

³⁷ The Concept foresees profile academic and profile secondary education for high schoolers, transfer from knowledge to skills formation, extending autonomy and improving financing of schools and teaching staff, Directors’ position occupancy limits (not more than 12 years), inclusive education, transparency and academic honesty implementing.

³⁸ The Law sets the new structure for education system: 12-year complete secondary education training programmes for Primary school start since September 1, 2018; for basic secondary - since September 1, 2022 and for profile secondary education - since September 1, 2027.

³⁹ <https://zakon.rada.gov.ua/laws/show/2745-19>

⁴⁰ <https://mon.gov.ua/ua/news/mon-proponuye-do-gromadskogo-obgovorennya-proekt-zakonu-ukrayini-pro-profesijnu-profesijno-tehnicnu-osvitu>

⁴¹ http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=65784

⁴² Draft Law of Ukraine “On Complete Secondary Education” is crucial for VET as it foresees a transfer to 3-year profile secondary education since 2027 while high schooling or studying at a VET institution. It assures obtaining occupational qualifications for the youth alongside with obtaining educational competences and free access to the labour market.

A.2.2 Institutional and governance arrangements

At the **national level**: the CMU, MoES of Ukraine, the State Service of Education Quality, and other public authorities, which have subordinated VET institutions⁴³. Certain functions of the VET governance at this level are associated with the work of the Ministry of Economic Development, Trade, and Agriculture (MoEDT), the Ministry of Social Policy (MoSP), the State Employment Service (SES), which is subordinated to the Ministry of Social Policy.

At the **regional level**: Departments of education and science under the relevant regional and Kyiv city administrations⁴⁴. City councils of regional centres-cities of regional significance as well as regional VET councils are partially engaged as well.

At the **sectoral level**, there is no direct governance, only cooperation and advisory functions. First of all, these are sectoral associations of employers' organisations and qualification bodies that they have established⁴⁵.

At the **VET institution level**, the governance is carried out by the head of the VET institution (director). Pedagogical council is a key collegial governance body of the VET institution with an advisory role.

The CMU approves the VET development strategy (concept) and ensures implementation of the VET public policy (state target programmes for VET). It approves license conditions for education, state priorities for training of work force, standards of education, list of teaching staff positions. CMU determines the procedure and mechanism for allocation of educational subventions between the budgets and public funding for VET (funding function).

The **Ministry of Education and Science of Ukraine** develops and implements the VET public policy⁴⁶. The MoES approves VET standards in a specific profession (occupation), procedures for education quality monitoring and institutional audit; ensures international cooperation and regulatory support. It licenses educational activities of VETIs; approves forms of documents on education, typical conditions for admission and typical educational programmes, and makes decisions on establishment, restructuring, and closure of state VET schools. VET functions falls within the competence of the *Directorate of Vocational Education*, which includes the Central Office of Vocational Education (instead of VET Department). This structural unit of the MoES was created as a result of the implementation of the 2016-2020 Strategy for Public Administration Reform in Ukraine^{47,48}. The **State Service of Education Quality** implements public policy on quality assurance⁴⁹ and submits proposals on public policy in this area⁵⁰.

Other public authorities governing VETIs carry out functions of founders of such institutions. The **Ministry of Economic Development, Trade, and Agriculture** estimates mid-term demand of the labour market for specialists and workforce under occupational groups^{51,52}. The **Ministry of Social Policy** (MoSP) participates in drafting the education sector legislation, develops the National Classifier of Ukraine DK 003:2010 „Classifier of Professions“ and approves the occupational standards and qualification characteristics⁵³. The **State Employment Service (SES)**, which acts under jurisdiction of MoSP, provides a wide range of free of charge employment-targeted services to the population,

⁴³ governance arrangements in VET are described on the basis of the Law of Ukraine “On Education”, the Law of Ukraine “On Professional (Vocational) Education”

⁴⁴ According to the Law of Ukraine “On Education” governance at this level shall be carried out by the Verkhovna Rada of the ARC, regional councils, Kyiv and Sevastopol City Councils.

⁴⁵ e.g., Sectoral Council for Development of Professional Standards and Strategies of Professional Qualifications in the Mining and Metallurgical Complex of Ukraine, etc.

⁴⁶ This includes development and implementation of strategies and state target programs, as well as analysis and forecast of the VET system development.

⁴⁷ The Central Office of Vocational Education includes three divisions. The Directorate of VET is an independent structural unit of the Ministry staff formed to perform tasks related to ensuring the development of the VET public policy. The Directorate is directly subordinated to the MoES Secretary and coordinated by the Minister of Education.

⁴⁸ <https://mon.gov.ua/ua/ministerstvo/pro-ministerstvo/direktorati/direktorat-profesijnoyi-osviti>

⁴⁹ Ensuring the quality of education and educational activities, monitoring compliance of VET institutions with the legislation; participating in the teaching staff certification.

⁵⁰ Regulation on the State Service of Education Quality approved by the Order of the CMU No. 168 dated 14.03.2018. Available at: <https://zakon.rada.gov.ua/laws/show/168-2018-%D0%BF>

⁵¹ coordinated by the CMU through the Minister of Education and Science

⁵² <https://zakon.rada.gov.ua/rada/show/v0305731-13#n9>

⁵³ <http://www.msp.gov.ua>

including organisation of vocational training for unemployed⁵⁴. It is engaged also in the short-term labour market forecast implemented particularly through employers' surveys⁵⁵. In September 2017, the MoSP established a multi-stakeholder working group, which will be in charge of skills anticipation and labour market forecasting.

VET public policy at the regional level is enforced by **Education and Science Departments**, which are structural units of regional administrations and Kyiv city administration. Each region has **Training-Methodological (or Scientific-Methodological) Centre of VET**^{56,57}. As a result of the decentralisation process certain powers were transferred for a temporary performance to the regional and local levels since January 2018^{58,59}. In particular, the **level of region and Kyiv city** was authorised to prepare and place the regional order; monitor activities of VETIs; implement staff policy regarding heads of VETIs funded from the regional budget and the Kyiv city budget, its budget; develop and implement regional curricular. The **level of regional status cities - regional centres** was authorised to implement staff policy as regards to heads of VETIs funded from their budget.

Functions of VET institution include⁶⁰: *ensuring educational process; staffing policy* (approving the staffing table, appointment of the teaching staff); *evaluation* (evaluation of academic progress, attestation of teaching staff); *admission of students* (development of admission rules based on standard rules); ensuring *apprenticeship (employment training)* of students; functions on *learning content and quality of education*⁶¹. Decentralisation stimulated competition among VETIs since they need to prove their importance for the region and its development.

In 2016, **Regional VET Councils** were founded in all regions of Ukraine. They are advisory and consultative bodies created at regional state administrations for the preparation and implementation of regional policy in VET. Due to the poor performance of these Councils, as of April 2019, the MoES drafted the order of the CMU 'On Approval of the Provision on the Regional VET Council'^{62,63}.

Low efficiency of Regional VET Councils can be explained by the following issues: (1) Regional Council's members were not prepared properly for their functions. Guidelines for their activities were presented as recommendations in the MoES' letter; (2) There were lack of specific information on the regional needs for the qualified workers, as well as priorities for economic and social development in their regions; (3) The format of the council decisions is recommendatory.

A.2.3 Basic statistics on VET

VET system of Ukraine is marked by extensive VET schools network. They are of different types and forms of ownership. As of January 1, 2019 there are 754 public VETIs subordinated to MoES and 4 are under the jurisdiction of other central executive bodies (incl. IVET and CVET)⁶⁴.

The network of VET institutions subordinated to MoES: 327 professional lyceums; 166 higher VET schools; 89 VET centres; 68 VET schools; 64 VET schools at penal institutional households; 22 training institution of different type; 15 VETIs, which are structural units of HEIs; 3 professional colleges. The dynamic of key VET sector indicators is represented in the Table 2.

VET system is currently under reforming process, and the number of institutions is changing continuously. Reduction in VET schools number since the last Torino Process round (see Table 2) can

⁵⁴ <http://www.dcz.gov.ua>

⁵⁵ https://www.auc.org.ua/sites/default/files/sectors/u-137/zvit_yevo.pdf

⁵⁶ <http://zakon0.rada.gov.ua/laws/show/z1189-13>

⁵⁷ Those centres are under the jurisdiction of MoES and provide education-methodological and scientific-methodological support for VET schools of the region by means of teacher training, curriculum design, inter-levels communication, conducting analyses and researches of VET sector achievements etc.

⁵⁸ Temporary performance means until completion of transfer of the MoES-subordinated VET institutions from the state to municipal ownership.

⁵⁹ <https://zakon.rada.gov.ua/laws/show/831-2017-%D1%80>

⁶⁰ <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80>

⁶¹ In particular, development of curricular based on the standards; ensuring quality of education, choosing forms and methods of education.

⁶² <https://mon.gov.ua/ua/news/mon-proponuye-dlya-gromadskogo-obgovorennya-proekt-postanovi-kmu-pro-zatverdzhennya-tipovogo-polozhennya-pro-regionalnu-radu-profesijnoyi-osviti>

⁶³ adoption of the order will help to coordinate local executive and self-governing authorities, enterprises, institutions and public organizations activities for VET and development of efficient policy in this area

⁶⁴ According to MoES administrative data

be primarily explained by VET schools network optimisation through the accession to larger VET institutions.

The *enrolment* in VET schools subordinated to MoES is 253.9 thousand (61,95% men and 38,05% women). Students and trainees acquire more than 400 vocational professions and 65 specialities of 'junior specialist' level. Official statistics doesn't provide detailed classification of enrolment in VET by education programmes. At the same time, students and trainees can be generally grouped into 3 main categories, which represent different education programmes. These are programmes based of secondary education and complete secondary education (IVET) and programmes for unemployed population and employees (CVET) (see table 2).

In 2018 136.1 thousand students *entered* VETIs, in particular: 107.1 thousand of school leavers, 5.5 thousand of unemployed, 23.5 thousand of employees.

Table 2

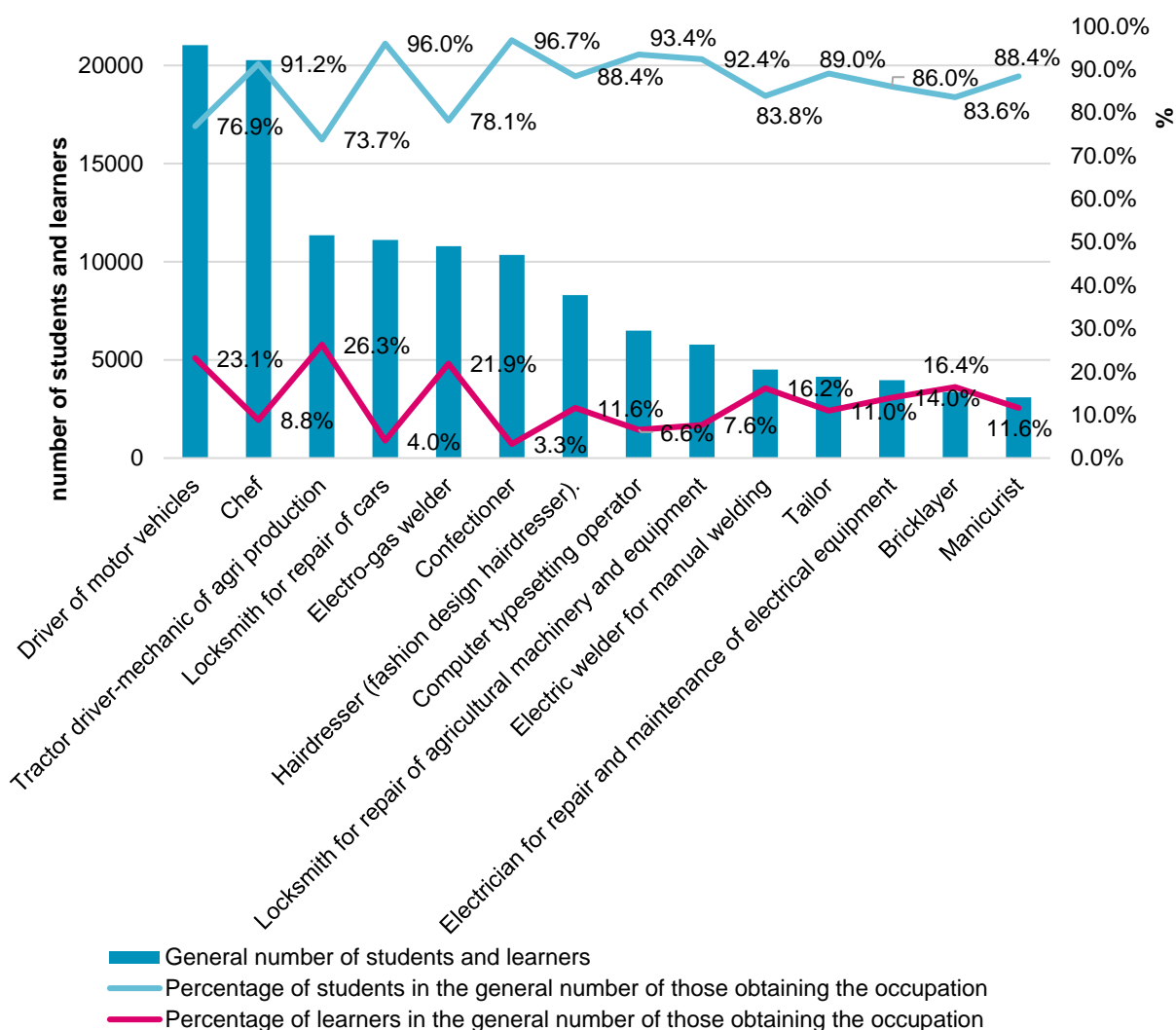
Key VET indicators 2016-2018 (IVET and CVET)

No		As of Jan 1, 2017	As of Jan 1, 2018	As of Jan 1, 2019
1	<i>Number of VET institutions by types:</i>	806	774	754
	higher VET schools	160	155	158
	higher arts vocational school	5	7	7
	Higher commercial vocational schools	1	1	1
	VET centres	71	85	89
	VET schools	82	72	67
	vocational lyceums	365	337	326
	vocational lyceums of arts profile	2	1	1
	arts vocational school	1	1	1
	Professional colleges	3	3	3
	structural VET units of HEI	23	21	15
	educational institutions of other types providing VET	23	22	22
	training centres at penal institutions, VET schools of social rehabilitation	70	69	64
	2	<i>Enrolment in VET (thousand), including:</i>	284.8	268.3
For programmes based on basic secondary education		187.4	184.5	178.1
For programmes based on complete secondary education		81.5	69.7	62.0
Unemployed population and employees		13.6	12.6	12.5
Orphaned children and children deprived of parental care		13.3	11.8	10.5
People with disabilities		4.4	4.3	4,1
3	<i>Number of entrants, total of</i>	157.5	146.5	136.1
4	<i>Graduates, total of</i>	152.4	140.1	133.1
5	<i>Teaching employee, including:</i>	37.9	34.4	33.9
	Senior foremen (masters), masters of vocational training	17.8	15.1	14.8

Source: MoES of Ukraine

During 2018 the following occupations were the most popular among students and learners of VETIs: driver of motor vehicles, chef, tractor driver-mechanic of agricultural (forestry) production, locksmith for repair of cars, electro-gas welder, confectioner, hairdresser (fashion design hairdresser), computer typesetting operator, locksmith for repair of agricultural machinery and equipment, electric welder for manual welding, and some other (as demonstrated on the Diagram 1). These occupations are primarily in demand among students and learners since 2011. The share of the students and learners who studied under the above-mentioned occupations is near 86.3% of the total VET contingent in 2011–2017.

Diagram 1. Most popular occupations among VET entrants in 2018



Source: MoES of Ukraine

In 2018 the lowest demand among students and learners of VETIs was for the occupations related to the operation of earthworks and the like machinery, of the thermal treatment plant for the metal, and mining equipment. The occupations of the machine operator of the pipe-laying machine, thermist and the distributor of hot metal are mastered by one person each, the driver of the conveyor — two persons. Occupations related to the subclass of mechanics and installers of agricultural and industrial machines, agricultural workers engaged in agriculture and cattle breeding are mastered by 9 people.

Declining enrolment, number of entrants and graduates over the reported period are the consequence of demographic situation in Ukraine (aging population, reduction in fertility); weak motivation for obtaining vocational qualifications; increasing the HE oriented youth share up to 80%; mismatch of education content, teaching methodology, modern labour market demands and a person's needs; imperfection of career guidance and counselling system for the youth and adults; lack of financing; the increasing trend toward external labour migration.

As of January 1, 2019 *teaching staff* accounted for 33.9 thousand people, including 14.8 thousand of senior foremen (masters) and masters of vocational training. The share of women is 54%. There are more than 3 thousand open vacancies (9% of staff schedule). Key factors for teaching personnel decrease are the drops in numbers of VET students and low salaries for this category of employees.

Additionally, *professional training for adults (CVET)* is provided by 11 VET Centres of SES in 11 regions of Ukraine⁶⁵. In general, 630 teachers offer CVET courses for almost 40 thousand people annually. Apart from that, there are more than 2000 *private VET institutions* where a large part is structural divisions of big industrial companies. 130 trainees obtain and upgrade the vocational qualification via work-based training⁶⁷.

*Consolidated Budget expenditures on VET in UAH and as a percentage of GDP*⁶⁸: in 2016 - UAH 6,182.3 m or 0.3% of GDP; 2017 - UAH 8,278.9 m or 0.3% of GDP; 2018 – UAH 10,004.0 m or 0.3% of GDP⁶⁹. In 2017, *public sector* covered 91.3% of the total VET expenditures, *private sector* - 8.7% (of which 6.7% was at the expense of households and 2.0% - of private companies and corporations)⁷⁰. By comparison, in 2016, similar *public* and *private sectors shares* amounted to 87.6% and 12.4% respectively, and in 2015 - 86.4% and 13.6% respectively.

A.2.4 Vision for VET and major reform undertakings

One of the key strategic documents defining the state policy in education sector, and VET in particular, is the **National Education Development Strategy for 2012-2021**⁷¹. The Strategy priorities, which can be attributed to VET as well, are the following: updating the regulatory framework of the education system, improving education system structure, modernising the content of education and its management system, introducing ICT technologies in (“informatisation” of) the sector, strengthening capacities of the education system human resources. There is a special action plan for the Strategy realisation until 2021, however, it is too general, outdated, contains indeterminate timelines and does not have any cost estimation of specific policy measures⁷². The broader vision of VET’s role for *human capital development* is foreseen in another programme document - the **Medium-Term Plan of the Government Priority Actions for the period till 2020**⁷³. VET modernisation was identified as one of the *key priorities for HCD* in Ukraine, a prerequisite for education development, living standards and productivity growth. The action plan includes specific target indicators for 2017-2020 to measure its implementation progress, in particular, VET schools network optimisation⁷⁴, development of state competence-based standards, creation of modern educational-practical centres⁷⁵, dual training elements introduction, teachers retraining. In furtherance of the Strategy, the annual action plan for the current year is adopted to outline specific deadlines and performance indicators of the policy measures⁷⁶.

On June 12, 2019, the CMU approved Resolution **"On approval of the concept for state policy realisation in VET sector “Modern Professional (Vocational) Education” until 2027”**⁷⁷. The purpose of the Concept is to carry out a systemic VET reform, which implies the implementation of three

⁶⁵ These centres provide VET for the unemployed, educational services for adults and employers in the regions of Dnipro, Donetsk, Ivano-Frankivsk, Luhansk, Lviv, Odesa, Poltava, Rivne, Sumy, Kharkiv and Kherson. They are licensed for providing educational activity on 90 jobs and offer qualification update on 240 disciplines for purpose-made courses needed at labour market to assure the operational training on employers’ demands.

⁶⁶ As reported by SES

⁶⁷ Torino Process 2016-2017:Ukraine. The analysis of vocational education and training (VET) system of Ukraine. European Training Foundation Project “Torino Process 2016-2017”, MoES of Ukraine, ETF

⁶⁸ excluding VET Centres of SES

⁶⁹ State Treasury of Ukraine, Budget implementation, Reporting on budget execution. Available at: <https://www.treasury.gov.ua/ua/file-storage/vikonannya-derzhavnogo-byudzhetu>

⁷⁰ Statistic report “National education accounts of Ukraine” State statistic service of Ukraine. Available at: <http://www.ukrstat.gov.ua/>

⁷¹ <http://zakon5.rada.gov.ua/laws/show/344/2013?test=4/UMFPEGznhhcc.Zi.6UFbkHl4wos80msh8le6>

⁷² <https://zakon.rada.gov.ua/laws/show/686-2013-%D1%80>

⁷³ approved by the CMU Order No 275-p from 03.04.2017

⁷⁴ reorganisation of VET institutions with a purpose to decrease their number to 789 in 2017, 779 in 2018, 771 in 2019, 765 in 2020.

⁷⁵ It is planned to create 5 centres in 2017 and 10 centres in 2018-2020.

⁷⁶ Specifically, in 2019 a new Draft Law of Ukraine “On Professional (Vocational) Education” has to be submitted to the Verkhovna Rada, 28 educational-practical centres are to be created, 15 state education standards are to be approved, qualified workers training on 25 professions of national significance are to be assured, pilot professional-guidance testing for 9th grade pupils are to be conducted, legislation on dual education and Centres of excellence functioning are to be approved.

⁷⁷ <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciyi-realizaciyi-derzhavnoyi-politiki-u-sferi-profesijnovi-profesijno-tehnichnovo-osviti-suchasna-profesijna-profesijno-tehnichna-osvita-na-period-do-2027-roku-i120619>

basic priorities: decentralising governance and financing⁷⁸; VET quality assurance⁷⁹; PPP and linkages with labour market⁸⁰. Policy measures *at the first stage (2019-2021)* include adoption of the Law "On Professional (Vocational) Education" and the Action Plan till 2027; continuing decentralisation; launching qualification centres network; introducing competence-based methodology for VET standards, etc. *At the second stage (2022-2024)* it is planned to complete a transition to regional budget financing for VETIs located in the cities of oblast (regional) significance, and region centres; to implement National Qualification System; to shift to competence-based education programmes and standards; to finalise internal quality assurance system development. Expected results *at the third stage (2025 - 2027)* are optimized VET schools network, completed preparatory work on the introduction of profile secondary education; created network of regional Centres of Excellence, full-scale functioning of internal and external quality assurance system. The responsibility for VET reform implementation is entrusted to the MoES of Ukraine on behalf of the Government, as well as regional and the city of Kyiv state administrations.

The Concept was used for the preparation of current **Draft Law of Ukraine "On Professional (Vocational) Education"**⁸¹. It envisages "reloading" of the entire VET system, including VETIs management approaches, education programmes development and use of equipment. At the same time, it focuses on human-centred principle to respond to student's educational and professional needs and link them with labour market. Besides, it is supposed to consolidate provisions on VET system decentralisation, launched in 2016.

Another crucial strategic document for VET development in Ukraine is the **Concept of dual vocational training** adopted by the CMU in autumn of 2018. It is aimed at combining work and learning in the area of vocational and higher education as well increasing youth employment rate⁸². The results of training process will be evaluated both by the employer and the education institution. The employer will be directly involved in the selection of students enrolled in the programme. **The Concept implementation phases** are the following: *phase I* – legislation and regulatory framework development (2018-2019); *phase II* – design of dual learning typical models and pilot projects delivery (2019-2020); *phase III* - creation of dual learning clusters (2020-2023). Elements of dual vocational training (DVT) have been implemented in Ukraine since 2015.

2018-2020 Roadmap for developing society and the digital economy also concerns VET development in Ukraine⁸³. It is focused on digitising education and stimulating digital transformation in the sector, which is in line with the New Ukrainian School approach⁸⁴.

A.3: The context of VET

A.3.1 Socioeconomic context

Between 2017 and 2018 (preceding presidential and parliamentary elections) Ukraine was characterized by positive economic trends due to macroeconomic stabilisation and more favorable situation on external agricultural markets. However, so far, the real sector growth remained moderate. In particular, the growth of industrial output accelerated to 1.6% y/y in 2018 due to recovery of positive dynamics in the extractive industry and energy sector. At the same time, metallurgy output practically remained unchanged (0,6%). It can be primarily explained by aggravation problems with logistics and transportation as a result of conflict escalation with the Russian Federation in the Sea of Azov. In 2018, the chemical industry growth slowed to 17.4% y/y (from 18.4%y/y in 2017), although it remained one of the most dynamic in the industrial sector. At the same time, the growth of machine-building, which is

⁷⁸ gradual delegation (transfer) of responsibilities for VET governance and financing to regional level and autonomy assurance for VET institutions

⁷⁹ ensuring competence-based education content and introducing the internal and external education quality assurance system; modernizing the educational environment and creating multi-level system for teachers training using motivation mechanisms

⁸⁰ creating a system of VET qualifications and common (single) education space, motivating employers to participate in education process and dual training; recognising formal and non-formal education; raising awareness of VET for the youth and providing career development and professional growth

⁸¹ <https://mon.gov.ua/ua/news/mon-proponuye-do-gromadskogo-obgovorennya-proekt-zakonu-ukrayini-pro-profesijnu-profesijno-tehnicnu-osvitu>

⁸² <https://zakon.rada.gov.ua/laws/show/660-2018-%D1%80>

⁸³ <http://www.me.gov.ua/News/Detail?lang=uk-UA&id=ad097ec8-d77d-4e1b-bb67-9483c3631ec2&title=UriadSkhvalivKontseptsiiuRozvitkuTsifrovoiEkonomikiTaSuspilstvaUkrainiNa2018-2020>

⁸⁴ particularly, it foresees providing Broad Band WL in the entire territory of Ukraine

one of the innovation drivers, slowed down significantly (to 1.6% in 2018 from 7.9% in 2017)⁸⁵. This may significantly limit the opportunities for spreading innovation in the economy. However, in general, Ukraine's industry maintains a fairly consistent demand for skilled workers with the tool.

In 2018, the agricultural output index increased by 7.8%, that confirms fairly high competitive advantages of Ukraine's agricultural sector. This creates opportunity for growth of labour productivity in the country's agriculture and progressive growth of need in skilled workers for agro-processing sector. Nevertheless, the share of low-qualified workforce in the employment structure of Ukraine's agricultural sector still remains significant. There is positive dynamics in the development of construction sector, even despite a certain slowdown as compared to previous year (to 4.4% in 2018). Insufficiently developed transport and road infrastructure, the need to increase cargo turnover and modernize infrastructure, the development of logistics sector stipulate for gradual increase in the need for middle and high level employees. However, the share of low-qualified employees still remains significant. The service sector also shows a stable demand for workers in trade sector whose employment does not require a high level of qualification. The development dynamic in innovation-oriented segments of the service sector (vocational, scientific and technical, administrative and support services) that require qualified workforce is insufficient.

The growing power of digitalisation in the economy operates through the automatisisation of production processes, the development of IT sector and e-governance in Ukraine. It increases the need for innovative competencies of the working population. Between 2017 and 2018, Ukrainian IT sector (mainly foreign customers-oriented) had positive dynamics generating further sustainable demand for IT specialists. In general, the dynamics of the structural changes in Ukraine's economy indicate a progressive increase in need for skilled workers to ensure the sustainable economic growth of the country.

On the regional level, the difference among regions in terms of their social and economic development remains significant. It has a great influence on labour demand and its structure. Traditionally, the share of Kyiv (23.4% in 2016), Dnipropetrovsk (10.2%), Kharkiv (6.5%) and Donetsk (5.8%) regions remained the most important in gross regional product structure⁸⁶. In general, the employment concentrates in the service sector and business-oriented services. Accordingly, the regional production structure significantly influences the regional demand for skills (professions), resulting in the maintenance of regional differentiation by the level of social and economic development. However, the intensification of decentralisation processes creates opportunities for sustainable development of the regions through attraction of investments and progressive increase of financial capabilities of the local communities.

To ensure a sustainable social and economic development of the country, it is necessary that the human resources be used efficiently. In recent years, the quality of the country's demographic potential has significantly deteriorated as a result of population ageing trends. For instance, the share of the older age groups remains rather high. As of the 1st of January 2018, the 0-15 years olds constituted 16,3% of the total resident population, people of 60 years old and older accounted for 23,0%, and the group of 16-59 years olds comprised 60,7%)⁸⁷.

Higher migration has caused serious risks for sustainable economic development of Ukraine. The visa-free regime with the EU countries has remarkably simplified for Ukrainians the departure abroad aimed at employment and higher incomes from wages. According to SSSU labour migration survey between 2015 and 2017 near 1.3 m worked abroad (or 4.5% of the corresponding age population)⁸⁸. Based on the Ptoukha Institute for Demography and Social Studies estimates, the number of Ukrainians working abroad is near 3.0 m including the scope of unregistered employment and the number of tax-payers in Ukraine⁸⁹. Empowerment for economically active population to work abroad, simplification of registration procedures with "blue cards" in Vishegrad Group countries significantly influenced labour supply. As a result, there is the leak of skilled personnel and growing competition among domestic employers for skilled workers. The problem of labour migration is stimulated, first of all, by low wages in Ukraine

⁸⁵ State Statistics Service of Ukraine, Indices of industrial output by type of activity in 2013-2018. Available at: http://www.ukrstat.gov.ua/operativ/operativ2007/pr/prm_ric/prm_ric_u/ipv13_17_u.xlsx

⁸⁶ State Statistics Service of Ukraine, Statistical publication 'Regions of Ukraine' 2018. Part II. Available at: http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/11/zb_region_2017.zip

⁸⁷ Information of the State Statistic Service of Ukraine. Ukraine's resident population by gender and age. Available at: http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/07/zb_rpn2019.xls

⁸⁸ The survey did not cover border labour migrants, permanent emigrants, people who left for work abroad until 2005.

⁸⁹ Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine, Ukrainian society: migration dimension: national report. Available at: https://idss.org.ua/arhiv/Ukraine_migration.pdf

compared to the EU countries. Such a 'skills drain' directly depletes human capital of the country, which inevitably reduces its chances for sustainable economic development.

Increase in educational migration between 2016 and 2018 also substantially affected the educational potential of the country. According to the CEDOS, 77.4 thousand students studied abroad at universities in 2016/2017 (as compared to 66.7 thousand in 2015/2016)⁹⁰. There is a weak motivation of students studying and obtaining modern skills and competences abroad to return to Ukraine. It greatly exacerbates the risks of ensuring high quality of human capital in the country. Apart from the desire to get high-quality education, the educational migration is viewed as a step towards further employment and living abroad. According to the 'Rating' estimates, the most important reasons for emigration among those who would like to go abroad for permanent residence were the following "In the hope of obtaining better living conditions" (64% of cases), and 'The desire to provide a better future for children' (34% of cases)⁹¹. This manifest that the risks which complicate the efficient use of demographic and economic potential to ensure sustainable social and economic development of the country in the prospective are growing.

A.3.2 Migration and refugee flows

According to the National monitoring system report on the situation of internally displaced persons (IDPs), the vast majority of IDPs registered in Donetsk and Luhansk regions is characterized by micro-pendulum migration. IDPs' ranking on age indicates the prevalence of older age groups in the Donetsk, Luhansk, Kharkiv, Sumy and Zaporizhzhya regions, which are considered the closest places of their previous residence. At the same time, the share of working-age population out of total IDPs in Lviv, Chernivtsi, Ivano-Frankivsk, Odessa, Vinnytsya regions and Kyiv remains the largest (varies from 51.0% to 55.0%).

Thus far, IDP's mobility remains insufficiently high due to the lack of transport and road infrastructure development as well as poorly developed rental housing market. The results of the National monitoring system report on the situation of IDPs have showed that in June 2018 near 62% of the polled respondents remained in their current place of residence for more than three years. At the same time, the share of respondents intended to return to their former residence after the end of the conflict accounted for 28%; while almost 38% of respondents expressed their intention not to return even after the end of the conflict⁹².

The IDP's education structure is characterized by the dominant share of household heads with higher education diploma (55% of the total figure). Near 27% of them have vocational education, 17% - complete and basic secondary education. This is the evidence of IDPs' sufficiently high education potential, their ability to acquire modern skills and competences for assuring employment opportunities.

A.3.3 Education sector context

The place of VET by its types (IVET/CVET) in the system of formal education and training in Ukraine is defined in the Law of Ukraine "On Education"⁹³. It should be noted that the new education system, based on the concept the "New Ukrainian School", and the modified component of VET *will be implemented gradually*. In particular, the programme of VET schools-based profiled secondary education must officially start working in Ukraine since September 1, 2027⁹⁴. At present (as of April, 2019), the profiled academic and vocational secondary education is not available for senior pupils.

Currently, VET (IVET) in Ukraine is provided based on (1) basic general secondary education or (2) complete general secondary education, or (3) without basic secondary education. In particular, VET

⁹⁰ Stadny Ye. Ukrainian Students Abroad: data before 2017/18 academic year. January, 21, 2019 – Available at: <https://cedos.org.ua/uk/articles/ukrainske-studentstvo-za-kordonom-dani-do-201718-navchalnoho-roku>, <https://cedos.org.ua/uk/articles/ukrainski-studenty-za-kordonom-skilky-ta-chomu>, <https://cedos.org.ua/uk/articles/ukrainski-studenty-za-kordonom-fakty-ta-stereotypy>

⁹¹ Migration moods of the Ukrainians in dynamics. September, 2017. Available at: http://ratinggroup.ua/en/research/ukraine/dinamika_migracionnyh_nastroeniy_ukraincev.html

⁹² Ministry of social policy, Ministry of the temporarily occupied territories and internally displaced persons, International organization for migration, the UN Migration Agency. National monitoring system report on the situation of internally displaced persons. June 2018 p. Available at: http://iom.org.ua/sites/default/files/nms_round_10_eng_press.pdf

⁹³ <https://zakon.rada.gov.ua/laws/show/2145-19#n149>

⁹⁴ The Law of Ukraine establishes a new structure for the education system: the 12-year education system will be introduced from 1 September 2018 for primary education, from 1 September 2022 for basic secondary education, and from 1 September 2027 for profiled secondary education.

acquisition based on basic secondary education is carried out simultaneously with completion of the full secondary education course (General Certificate of Education). VETs may also conduct training on certain occupations without ensuring complete secondary education. The access to VET is also open for individuals who, for some reason, cannot obtain complete secondary education or have no basic secondary education, as well as the ones in need of rehabilitation.

As indicated in section A.2.1 (see table 2), there are three levels of VET (IVET) in Ukraine: the first (initial), corresponding to 2 NQF level, the second (basic) – 3 NQF level, the third (higher) – 4 NQF level. An individual obtaining VET of certain level may continue studying at further levels of education, including a possibility of shortening the training programme. In June 2019, the Law “On Pre-tertiary Vocational Education” was approved to resolve the situation with pre-tertiary vocational education (5 NQF level)⁹⁵. It was implemented as a separate component of education, different from VET, although logically, they belong to one sphere. According to the Law, professional junior bachelor's programme will be launched in 2020.

All VET graduates with completed secondary education and passed external independent testing (EIT) have access to higher education (HE) and can continue their education in HEIs. Another possible option is the direct access to labour market.

CVET in the system of formal education and training in Ukraine is also under transformation and needs some clearer legislative regulation. The expected adoption of the relevant Law "On Adult Education" based on the framework Law "On Education" will allow to expand the existing opportunities in this area. CVET is mostly implemented as postgraduate education (higher or vocational education based). In fact, this is a professional training of enterprises (organisations) employees or the unemployed; re-training courses, further education or qualification upgrade courses, obtaining second higher education etc.

The situation on general secondary education (GSE) pupils transition to other levels of education is illustrated in the table 3⁹⁶. We can conclude that in 2018, only 15% of basic secondary education graduates in Ukraine chose studying in VET system, 64% continued their education for complete secondary education in secondary schools and 20.5% in HEIs (colleges, technical colleges). At the same time, there is a tendency of decreasing share of graduates who continued their education in VET.

Table 3

The share of 9th grade students of schools, who continue studying to obtain complete GSE as of December 1 (%)

Year	Graduated the 9th grade	Including students, who continue studying to obtain complete GSE				
		total	in the 10th grade of secondary school		in the 1st course of a VET school, providing complete secondary education	in the 1st course of HEIs(colleges, technical colleges)
			day-time	evening-time		
2016	100.0	99.3	58.4	2.2	16.7	22.0
2017	100.0	99.0	58.5	1.9	15.8	22.8
2018	100.0	99.3	62.3	1.5	15.0	20.5

Source: State Statistics Service of Ukraine

A.3.4 Lifelong learning context

Lifelong learning is one of the priorities of education in Ukraine defined by the Law of Ukraine “On Education” (Article 6). In addition, the Law defines the right of everyone to quality education, including *the right to receive lifelong education*, the right to affordable education, the right to free education according to the Constitution and laws of Ukraine (Article 3).

⁹⁵ <https://zakon.rada.gov.ua/laws/show/2745-19>

⁹⁶ http://www.ukrstat.gov.ua/operativ/menu/menu_u/osv.htm

The formal role and contribution of VET to implementation of this priority is defined by its objective. In particular, according to Article 15 of the Law of Ukraine "On Education", the purpose of VET is to ensure the competitiveness of a person in the labour market, mobility and lifelong career prospects.

Facilitation of citizens' access to lifelong learning is defined by the Law of Ukraine "On Employment of the Population"⁹⁷. The Law foresees mechanisms assuring conditions for CVET, namely, identification of CVET components and introducing the mechanisms for upskilling and proficiency enhancement. The public right of access to VET is realized via IVET, re-skilling, specific job preparation and further training, traineeship courses in VET institution (or in VET-units of HEIs), and postgraduate education establishments, work-base training or in service sector.

Lifelong learning issues are also reflected in the Law "On Professional Development of Employees"⁹⁸. In particular, the professional training of employees is defined as continuous. It is provided directly by the employer, VET or HE institutions (on a contractual basis) as well as other companies (organisations).

In addition, VETIs are directly involved in vocational training of the unemployed, which can also be considered as contribution of VET to the implementation of this priority (see more A.2.1). People without occupation are offered VET. Unemployed people with occupation who cannot find a job – retraining and those who need to train their skills and professional knowledge – further training services. VET is done through special curricula which are designed on the basis of standard programs approved by MoES and MoSP of Ukraine.

A concrete example that illustrates VET contribution to the realisation of lifelong learning priority is the provision of the *voucher-based training* (VBT)⁹⁹. To become a beneficiary of voucher program, one shouldn't be registered as unemployed. VBT is targeted at individuals of 45+ age group with minimum 15 year insurance period; dismissed from military service (except for army conscripts) and other social categories¹⁰⁰. The voucher gives a right for re-skilling, specific job preparation, proficiency enhancement, further education-qualification level training according to the approved list of professions (specialties)¹⁰¹. As of today there are 31 VET professions and 22 HE specialties. Since the launch of VBT in Ukraine more than 32.5 thousand individuals have received vouchers. Near 30% of them were for the occupations acquired by VET.

At the moment, *there is a lack of concept, strategy and consolidated regulatory framework for the lifelong learning*. It is important that it should embrace a wider view to life-long learning in Ukraine in the future. In particular apart from VET here the following components should be included, namely: (1) teaching literacy in the broader sense, including computer (digital skills), functional, social literacy; (2) general culture education not connected with labour activity; (3) entrepreneurial learning.

As to the latter – in the present conditions *it is important to teach skills necessary to start own business*. The contribution of VET system into implementing of this task in the context of lifelong learning is defined in the **SME Development Strategy in Ukraine till 2020**. In particular one of the priorities of the Strategy is the popularisation of entrepreneur culture and **development of entrepreneurial learning, stimulating lifelong learning**. As a part of this direction since the last round of TRP Ukraine has started implementing entrepreneur competence into education standards and VET curricula taking into account EU best practices. Training of teachers on new methods, involving SME representatives to cooperation with VET schools, conducting carrier guidance policies are also foreseen by the Strategy.

A.3.5 International cooperation context: partnerships and donor support

Table 4

Donor support for VET in Ukraine: current projects as of April, 2019

⁹⁷ <https://zakon.rada.gov.ua/laws/show/5067-17>

⁹⁸ <https://zakon.rada.gov.ua/laws/show/4312-17>

⁹⁹ According to the CMU Resolution No 207 as of March 20, 2013.

¹⁰⁰ Other categories include individuals exempted from internal affairs authorities, the State Service of Special Communications and Information Protection of Ukraine, civil protection bodies and departments, tax police and the State penitentiary service of Ukraine due to staff cutbacks or on medical grounds; the individuals exempted from military service after participation in ATO, with disabilities; IDPs of working age in virtue of the appropriate job absence.

¹⁰¹ According to the MoSP of Ukraine Order No 661 as of June 25, 2015.

Donor	Project	Objective/priorities/expected outcomes	Duration of support/ total amount earmarked
EU	EU4Skills: Better Skills for Better Jobs in Modern Ukraine 2018 - 2020 ¹⁰²¹⁰³	<p>Objective is to contribute to the modernisation of the VET, to ensure that the skills provided are more demand-driven and responsive to new competitive economy.</p> <p>Reform priorities: (1) Clear decentralized VET policy: Ukraine is well equipped with national and regional VET strategies and action plans. The network of the public VET providers is optimised in accordance with the regional and sectoral labour markets' needs. (2) Quality in VET provision: A NQA is established and operationalised, and the NQF is consistent with the EQF. 100 new relevant qualifications are developed, delivered and awarded. Modernisation of VET infrastructure: A number of newly Multifunctional Centres of Excellence are established in selected pilot regions, introducing modern new buildings and equipment, including credible VET Centres development strategies are in place; educational and training plans and curricular work; budgeting issues are well elaborated in cooperation with regional/local stakeholders.</p> <p>Expected outcomes: procurement of equipment; establishment of training practical centres (centres of excellence); updating content of education; raining of the teaching staff; drafting of new education standards.</p>	2019-2020, EUR 58.0 m
EU, ETF	The ETF's mid-term intervention strategy 2017-20 ¹⁰⁴	<p>Objective 1: To support the EU in developing a comprehensive external assistance intervention for vocational education and training development in Ukraine in the 2018-20 EU programming cycle (EU4Skills); Objective 2: To support VET decentralisation in Ukraine;</p> <p>Objective 3: To support the Ministry of Education and Science, relevant bodies and institutions to implement the Action Plan for the National Qualifications Framework, and improve the internal efficiency of the system;</p> <p>Objective 4: To support entrepreneurial learning.</p>	2017-2020
German Federal Ministry of Food and Agriculture (BMEL)	Promoting the development of vocational education in agrarian colleges of Ukraine ¹⁰⁵	<p>Objective: improve methods and content of VET in agricultural colleges of Ukraine, which are oriented on practical activities (creation of a unified information and methodological platform, including development of electronic manuals, textbooks, open online courses, educational videos)</p>	2017-2020 USD 3.9 m
The EU and its member countries (Denmark, Estonia, Germany, Poland and Sweden)	"U-LEAD with Europe" ¹⁰⁶	<p>Overall priorities: (1) Enhancement of the capacities of key stakeholders at the national, regional and local levels to implement the regional policy and decentralisation reforms (2) Empowerment of amalgamated communities to deliver high quality administrative services to their citizens aims at contributing to the ongoing decentralisation reform in Ukraine.</p> <p>Intervention package for VET (separate component): "Promoting evidence-based management of VET in Ukraine"(pilot VET activities in Rivne and Lviv). Objective of the VET component: to support establishment of greater responsiveness of VET to LM needs and regional development objectives. Priority 1: Establish effective methods and practices of co-operation between VET schools and employers for determining vocational specialisation of schools and for training programmes development and delivery; Priority 2: Establish LMI and research/forecasting mechanisms on the local and regional levels; Priority 3: Improved supervisory, planning and regulatory frameworks for evidence-based and performance-based management of VET in the regions.</p>	2016-2020, EUR 102 m (total amount for all priorities, incl. VET)

¹⁰² <https://www.etf.europa.eu/en/news-and-events/news/better-skills-modern-ukraine>

¹⁰³ http://search.ligazakon.ua/l_doc2.nsf/link1/MU18097.html

¹⁰⁴ https://www.etf.europa.eu/sites/default/files/document/Country%20Strategy%20Paper%202017-20%20Actions%202019_Ukraine.pdf

¹⁰⁵ <http://agrarausbildung-ukraine.net/projekt/?lang=uk>

¹⁰⁶ <https://donors.decentralization.gov.ua/project/u-lead/>

Donor	Project	Objective/priorities/expected outcomes	Duration of support/ total amount earmarked
German Federal Ministry for Economic Cooperation and Development (BMZ), GIZ	Vocational Integration of Internally Displaced Persons in Ukraine ¹⁰⁷	Objective 1: Provision of short-term training courses and programmes for IDPs, mothers with children and single mothers to improve and improve their employment opportunities (based on private educational institutions and SES training centres). Objective 2: Creation of Qualification Fund for innovative projects aimed at improving the conditions for employment for people affected by the conflict.	2017-2021, EUR 4.0 m
Estonian Ministry of Foreign Affairs (INNOVE)	Sharing Estonian experience to support Ukrainian vocational education reforms ¹⁰⁸	Objectives: (1) creating development plans for Ukrainian pilot schools; conducting training and internship for school administrations and teachers; (2) conducting master classes implementing modern teaching methodologies; (3) supporting the conduction of output-based curricula, engaging employers from the chosen sector	2018-2020
Donor support to other sectors, where the role of VET is important:			
EU, Save the Children in Ukraine ¹⁰⁹	EU4Youth project 'Best Skills for a Better Future' ¹¹⁰	Separate component of the project related to VET (conducted by 'Save the Children in Ukraine'); provide training for young people, including IDP and local population affected by the conflict in Slovyansk, Kramatorsk, Bakhmut, Luman and Pokrovsk to develop technical, organisational, analytical and entrepreneurial skills and increase the chances for further employment.	2018-2019, EUR 22.8 m (total amount for 6 countries) ¹¹¹
Ministry for Foreign Affairs, Finland	Learning together - Finland's Support to the Ukrainian School Reform ¹¹²	Objective: to support the realisation of the New Vision of the Ukrainian school. The Project has a national coverage and it focuses on three policy areas which are linked to each other: (1)Teacher Competence Development, (2) Education Promotion, (3) Education Environments.	2018-2022, EUR 6.0 m
EU	EU SURE (EU Support to Ukraine to Re-launch the Economy) ¹¹³	Objective: to support the development of the SMEs across the Ukrainian regions and to contribute to the re-launch of the Ukrainian economy to create growth and employment. This also includes the conflict affected areas and neighbouring regions actively participating in the re-integration of IDPs. At national level: to provide technical assistance and policy advice to complete the ongoing SMEs deregulation and the national and regional economic development strategies, and to create a web info portal for SMEs. At regional level: to provide business advice and entrepreneurial skills for SMEs, through a network of Business Support Centres. Priorities: (1) support to de-regulation, (2) capacity building and policy dialogue (3) access to information for SMEs and public consultation on de-regulation.	2016- 2020, EUR 95 m (EU total funding, including a loan guarantee facility worth EUR 40 m)
Swiss Agency for Development and Cooperation, Geberit International Sales AG.	Public Private Partnership to Improved Sanitary Education in Ukraine ¹¹⁴	Objective: to develop PPP to improve vocational training in the field of sanitary engineering. Priorities: (1) developing a new training curriculum for plumbers; (2) improvement of professional competences of pedagogical staff; (3) creation of six educational and practical centres based on VET institutions facilities; (4) introduction of a new curriculum to VET; (5) facilitation in employment for graduates (plumbers)	2014–2022, CHF 400 thousand and CHF 72 thousand (two phases)

¹⁰⁷ <https://www.kmu.gov.ua/ua/news/mtot-ta-giz-vprovadzhuje-proekt-profesijna-integraciya-vnutrishno-peremishenih-osib-v-ukrayini>

¹⁰⁸ <https://www.innove.ee/en/international-cooperation/sharing-estonian-experience-support-ukrainian-vocational-education-reforms/>

¹⁰⁹ <https://ukraine.savethechildren.net/>

¹¹⁰ <https://www.euneighbours.eu/en/east/stay-informed/projects/eu4youth>

¹¹¹ Total budget of the project is EUR 22.75 m (EU Investment: EUR 20 m). Countries covered: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.

¹¹² <http://www.fcg.fi/eng/news/2018/08/fcg-international-launched-a-four-year-school-reform-project-in-ukraine/>

¹¹³ <https://euukrainecoop.com/2015/05/09/eusure/>

¹¹⁴ According to MoE of Ukraine

Donor	Project	Objective/priorities/expected outcomes	Duration of support/ total amount earmarked
ILO (funded by the Ministry of Foreign Affairs of Denmark)	Inclusive Labour Markets for Job Creation in Ukraine (part of the Danish Neighborhood Program (DANEP) for 2017-2021 and provided under the Danish Program for Ukraine) ¹¹⁵	<p>Objective: to assist the Government of Ukraine in its efforts to improve the Labour market governance through the strengthening of employment services and other labour market institutions, to better align the skills development with the demand for skills and improve tripartite social dialogue.</p> <p>Priorities: (1) contributing to strategic development of Ukrainian labour market through development of sustainable tripartite social dialogue; (2) partnership-driven active labour market frameworks at the local level and helping create jobs and effective services provided to constituents of the social partners.</p>	2017-2021 (USD 8.7 m)

Building block B: Economic and labour market environment

Thematic questions

B.1: VET, economy, and labour markets

Identification of issues

B.1.1 Labour market situation

The development of Ukrainian labour market in 2017–2018 was characterised by positive changes, which reflected in the increase of the number of employed against the background of decreasing unemployment rate. However, the economic activity of population in the age of 15–70 remained insufficient, ranging from 62.0% in the 4th quarter of 2017 and 62.6% in the 4th quarter of 2018. The economic activity of men in 2018 was traditionally higher (69.0%) than that of women (56.8%).

Despite the steady growth of employment rate in the last years (from 56.1% in the 4th quarter of 2017 to 57.1% in the 4th quarter of 2018), the differentiation of employment rates among various gender and age

¹¹⁵ <https://www.kmu.gov.ua/ua/news/u-minsocpolitiki-obgovorili-novij-proekt-mop-inklyuzivnij-rinok-praci-dlya-stvorennya-robochih-misc-v-ukrayini>

groups remained significant. The traditionally lower employment rate of women compared to men (52.5% vs 62.1% in 2018) is, to a great extent, a consequence of gender differences in work-life balance. Persisting segmentation of the labour market results in a significant differentiation of employment rates by age groups. In particular, the lowest employment rate was seen among the young people aged 15–24 (27.6% in the 4th quarter of 2018), while the age group of 40–49 retained the highest employment rate of 79.4%.¹¹⁶¹¹⁷

Employment rates by the level of education attainment also differed greatly. In particular, in 2017, employment situation was characterised by the following distribution by education levels: people with complete HE – 70.5%, basic HE – 45.7%, incomplete HE – 61.2%, VET – 61.6%, complete general education – 42.6%.¹¹⁸ At the same time, the number of jobs with decent working conditions and remuneration remains limited. Share of vacancies for skilled workers using specific tools registered by employers with SES grew from 22.1% in 2016 to 23.7% in 2018, elementary occupations – from 11.6% to 12.7%, while a share of vacancies for professionals decreased from 8.9% to 8.8% in the same period.¹¹⁹¹²⁰

A mismatch between skills acquired by graduates and employers' needs remains a serious challenge for the labour market. According to the World Bank's survey *Skills for Modern Ukraine*, almost 38 per cent of surveyed firms report that skills gaps prevent them from achieving their business objectives.¹²¹ Workforce demand and supply mismatch (in terms of occupations and qualifications) significantly limits the possibilities for the transition of the economy to the innovation-driven development pathway as it requires additional costs to improve quality of acquired knowledge and enhance practical skills of the graduates.

The Ukrainian labour market was characterised by the decrease of unemployment (under ILO methodology) from 9.5% of the active population in 2017 to 8.8% in 2018. The women unemployment rate in 2018 was 7.4%, and male 10.0%. At the same time, high unemployment of youth which was 17.9% in 2018 (19.3% among young women and 16.9% among young men) remains one of the critical problems of the Ukrainian labour market. In general, this speaks of existing gender specifics of young people entering the world of work (linked primarily with child-bearing of young women).¹²²

Nevertheless, it is also necessary to stir up the economic activity of the population on the labour market by improving the effectiveness of vocational training programmes and implementing active employment policy measures. In 2018, 44% of the unemployed registered by SES had higher education, 37% had vocational education, 19% – GSE. In terms of occupational groups of the registered unemployed, equipment and machinery operators and maintenance workers are in the lead (19.9%), followed by trade and service sector occupations (15.1%), elementary occupations (14.1%), and top public officers and managers (13.2%).¹²³

¹¹⁶ Employment by gender, location types, and age groups. Data of the State Statistics Service of Ukraine accessible at http://www.ukrstat.gov.ua/operativ/operativ2017/rp/eans/eans_u/arch_znsmv_u.htm

¹¹⁷ The age group of 40–59 comprised almost half of all employed population of Ukraine in 2018, while 29% fell in to the age group of 30–39, and about 20% in the age group of 15–29.

¹¹⁸ Economic activity of population. Statistical compilation. State Statistics Service. Accessible at http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/07/zb_EAN_2017w.rar

¹¹⁹ Data of the State Employment Service of Ukraine. Accessible at https://www.dcz.gov.ua/sites/default/files/inf/files/dotatky_pp_kviten_2019.xls

¹²⁰ According to SES data by types of economic activity as of January 1, 2019, most vacancies were registered in the manufacturing industry (22%), in trade (16%), and in transport sector (11%). In terms of occupational groups, the highest demand was registered for skilled workers using specific tools (24%), and for equipment and machinery operators and maintenance workers (17%).

¹²¹ Skills for Modern Ukraine (2017). International Bank for Reconstruction and Development, World Bank. Accessible at <https://openknowledge.worldbank.org/bitstream/handle/10986/25741/210890ovUK.pdf?sequence=5>

¹²² In 2018, the unemployment rate of 25–29 year-olds stood at 9.8%, and for those under 25 at 17.9% of the economically active population of the respective age group. 30% of the unemployed were aged from 15 to 29, another 30% were in the age of 30 to 39, 25% were aged 40 to 49, and 20% – 50 to 59 years old.

¹²³ Data of the State Employment Service of Ukraine. Analytical and statistical information. Supply and demand on the labour market by professions and activity types. Accessible at <https://www.dcz.gov.ua/analytics/68>

A significant part of informally employed population was preserved due to the slow pace of economic restructuring, despite the decrease in the share of the employed population (from 24.3% of the total population in 2016 to 21.6% in 2018). In 2018, the biggest shares of informal employment were concentrated in agriculture (42.9%), wholesale and retail trade (18.2%), and construction (15.9%), while the informal employment itself was most widespread among those aged 40 to 49.¹²⁴ Accordingly, there is still a significant number of jobs in the economy that do not require a high level of qualification, which greatly limits the possibilities for improving the quality of occupation.

It is still a common practice to grant unpaid leaves (for the period of work suspension) and put employees on half-time for economic reasons. In 2018, the largest shares of employees facing such problems were concentrated in the industry sector (5.9% of the total number of employees), professional, scientific, and technical activities (3.8%). The existence of this forced half-time employment practice, as well as wage arrears, remain serious challenges for the development of Ukrainian labour market.

Regional differences in labour market development remain significant. This is caused by uneven socio-economic development of various regions. Specifically, the economically developed regions customarily demonstrate the highest employment rates (61.8% in Kyiv city and 60.6% in Kharkiv Region), while the lowest are observed in Volyn (48.8%) and Donetsk Regions (49.4%).

Another serious risk for the development of Ukrainian labour market is not only the growth of labour migration abroad, but also the gradual loss of professional skills by those labour migrants who could not find a job adequate to their profession and qualification level. According to observations of the State Service of Statistics, almost 36.1% of labour migrants worked on jobs that did not require any qualification. Only 26.8% of migrant workers worked in accordance with their qualification.¹²⁵ Another significant challenge is a growing motivation of the youth for educational migration (see A.3.1). If the orientation of youth to seek employment abroad after obtaining education persists, the quality of the national human potential can degrade significantly. Considering the above, the persistence of the gross differentiation of the Ukrainian labour market can strongly affect the development of education by aggravating the challenges caused by a notable mismatch between the scope and structure of workforce demand and supply (in terms of occupations and qualifications).

B.1.2 Specific challenges and opportunities: skill mismatch

Problem description: A mismatch between the skills and qualifications acquired by graduates at educational institutions and demands of the labour market remains considerable. This results in a growing imbalance of occupations and qualifications in the labour market and complicates the implementation of lifelong learning concept (idea) in real life. According to The Global Talent Competitiveness Index,¹²⁶ in 2017, Ukrainian employers experienced difficulties finding skilled employees (4.53 points out of 7 possible).¹²⁷ At the same time, the experts evaluated the relevance of the education system to the economy in Ukraine as insufficient (3.86 points out of 7).¹²⁸ This is evidence of significant problems with matching the acquired skills and competences to economic needs. Thus, according to the World Bank survey Skills for Modern Ukraine, the most lacking were the practical skills (reported by 72% of the surveyed experts), socio-emotional skills (almost 58%), up-to-date knowledge (56%), and self-discipline (almost 42%).¹²⁹ The survey also defines that the mismatch of the skills is not the biggest barrier for companies operation. Nevertheless, it limits their efficiency and productivity.

¹²⁴ Informal employment by types of economic activity. Data of the State Statistics Service. Accessible at http://www.ukrstat.gov.ua/operativ/operativ2018/rp/eans/nzn_ved_2018_u.xls

¹²⁵ Outward labour migration (based on findings of the modular sampling survey). Statistical Bulletin. State Employment Service of Ukraine, 2017. Accessible at http://www.ukrstat.gov.ua/druk/publicat/kat_u/2017/bl/12/bl_ztm_2017_w.zip

¹²⁶ "The Global Talent Competitiveness Index" Entrepreneurial Talent and Global Competitiveness. 2019 by INSEAD, the Adecco Group, and Tata Communications. Available at: <https://gtcistudy.com/wp-content/uploads/2019/01/GTCI-2019-Report.pdf>

¹²⁷ Compare to 5.67 points in the USA and 5.61 points in Finland.

¹²⁸ For comparison, the leaders of innovative development had 6.19 points (Switzerland), 5.82 points (Singapore), 5.81 (USA).

¹²⁹ Skills for Modern Ukraine (2017). International Bank for Reconstruction and Development, World Bank. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/25741/210890ovUK.pdf?sequence=5>

Partially, it can be explained by the weak collaboration between the labour market and educational system. In particular, there is insufficient participation of employers in the development of educational standards, preparation of curricula, organisation of employment training for students and teachers of educational institutions at the companies, undetermined mechanism of cooperation in the field of public-private partnership (PPP). Other factors aggravating the problem include insufficient digitalization of the VET sector; low rate of participation in VET (80% of youth are oriented at acquiring HE)¹³⁰; low relevance of the content of education and teaching methodology to the needs of a modern labour market and personality. Also, it is currently difficult to engage professionals having practical experience in the industry to teach at VET institutions for remuneration matching their qualification. There are many other reasons for the mismatch. For instance, there are sectors where salaries are low, and even if skills are available, people are not interested to work due to salary issue.

Also, in the employers' opinion, the problem lies in deficiencies of existing labour legislation. Despite the fact that in the majority of cases there is no barriers for VET graduates to employment and certain positions, these limits may exist in particular sectors of the economy. For instance, according to the current requirements of qualification improvement established by the metal and mining sector, a grade 1 worker would be able to obtain grade 4 at least after 2.5 years of working experience, while characteristics of modern equipment in the metal and mining sector require that the newly-hired workers already had at least grade 3. At the same time, the 1st grade is prescribed in qualification requirements of a small amount of professions (occupations). Despite the fact that professions are included into the Classifier by proposals of the employers, the VET slowly re-orient to the up-to-date trends on the labour market¹³¹.

It is also important to introduce in the legislation a clear procedure for recognising full and partial qualifications (currently, only occupations can be recognized) and validation of non-formal learning.

At the same time, the situation in CVET looks much better. According to the Analysis of Labour Market Needs, Challenges and Possibilities in the Eastern Ukraine study (November 2018 – May 2019), carried out by the Institute of Professional Qualifications as a part of the GIZ project up to 93% of the surveyed employers from six Eastern regions of Ukraine are satisfied with the list of professional competences of adult VET graduates as regards to 6 occupations (chosen for the research)¹³².

Impact of VET on the problem: As it has been mentioned in building block A.2.3, the VET system includes 11 VET centres of SES. SES VET centres involve Advisory Committees comprising of regional employers and Advisory Councils for occupations from various industries. The role of these bodies is to update the outdated content of training and implement modern technologies. Training programs and curricula for 88 occupations are developed in SES VET centres in line with the requirements of qualification profiles/occupational standards. These programs and curricula are approved by Employers' Councils established at each SES VET centre. To bring VET as close as possible to the requirements of modern industry, SES VET centres implement dual training practices (with a proportion of 30% (40%) of theory and 70% (60%) of practical training). This approach is aimed at solving the problem of mismatch between the skills of job seekers and the needs of the labour market. It also helps to increase the responsibility of employers for the quality of workforce training. Similar developments exist in VETIs under MoES of Ukraine. In general, a new model of practice-oriented training of skilled worker training is being formed in Ukraine based on the principles of social partnership. Existing policy measures that could help to solve this problem are described in clauses building blocks B.1.5, B.1.6. and B.1.7 (as to ensure consistency of skills and labour market policies), and D.1.3 and D.1.4 (as to the improvement of teaching methods at VETIs and improvement of the educational environment).

Overall, to solve the problem different policies should be used: changing structure of VET governance, improving training programmes and curricula, developing efficient monitoring system as to labour market

¹³⁰ http://www.ukrstat.gov.ua/operativ/menu/menu_u/osv.htm

¹³¹ This refers to Classifier of Professions of Ukraine DK 003:2010, which defines professional names of jobs and is used by all enterprises searching for new employees. It contains up to 11 000 professional names of jobs. At the same time, the VET still provide training for some 480 professions, and the higher education system - nearly 300 specialities.

¹³² http://www.ipq.org.ua/upload/files/files/03_Novyny/2019.05.15_Zvit/IPQ_Report_09.05.19.pdf

situation and training programmes, amending labour laws etc.

B.1.3 Specific challenges and opportunities: migration

External labour and student migration. According to one of the rankings included in the Global Economy Watch analytical review by PricewaterhouseCoopers (PwC), Ukraine is expected to have the fastest-shrinking workforce in 2019.¹³³ Thus, over a third of Ukrainian enterprises experience workforce shortage caused by labour migration.¹³⁴ Preservation of workforce capacity becomes an issue of the national economic security. *Labour migration results in the following negative consequences: skills mismatch and shortage of workforce, especially in vocational professions, loss of tax revenue and social contributions necessary to support the state financially.* According to the Pension Fund of Ukraine, 10 employed Ukrainians are accounted for 11 pensioners,¹³⁵ while the unemployment rate in 2018 (under ILO methodology) stood at 1.6 m people.¹³⁶

Labour and student migration is growing in Ukraine. This is because of development of international cooperation and deeper economic ties with EU (the visa-free regime with the EU countries, simplification of registration procedures with "blue cards" in Vishegrad Group countries), more affordable education abroad (mainly in EU countries borders with Ukraine). According to SSSU labour migration survey between 2015 and 2017, near 4.5% (1.3 m) of 15-70 year-olds worked abroad, that is 10.3% more than in previous survey (between 2010 –2012)¹³⁷. According to other estimates – around 3.0 m people¹³⁸¹³⁹. *The reason for labour migration for 84% of people is low wages.*

The consequence of such emigration flows is a certain *trend to "brain drain" from Ukraine*. According to SES in 2018 half of labour migrants had full HE and one third – VET¹⁴⁰¹⁴¹. When they went abroad 29% of them had positions of directors, specialists, professional workers; 26% – were qualified workers, 37% – low qualified workers. At the same time the possibility of labour migrants' employment on received specialty abroad is rather limited. For instance, only 26.8% of labour migrants had jobs abroad matched to their specialty, while 36.1% had jobs which required no qualification, and 29.5% had jobs that mismatched their specialty¹⁴². *It may lead not only to depletion of qualified workforce, but also to gradual deskilling of workers motivated to return to Ukraine.*

One more important problem is the *educational migration of young Ukraine's population* to EU countries (most to Poland), USA, Canada, and Australia (see also p. A.3.1). The number of students studying abroad has increased by 16% in 2016/2017, as compared to 2015/2016 (from 66.7 thousand to 77.4 thousand)¹⁴³. The growing educational migration is driven not only by desire to get high-quality education, but is also viewed as a potential opportunity for further employment and living abroad.

¹³³ www.pwc.com/gx/en/issues/economy/global-economy-watch/assets/pdfs/predictions-2019.pdf

¹³⁴ According to the Federation of Employers of Ukraine

¹³⁵ According to the Pension Fund of Ukraine: <http://argumentua.com/novosti/v-ukra-n-na-desyatokh-prats-vnik-v-pripada-11-pens-oner-v-golova-pfu>

¹³⁶ State Employment Service of Ukraine. Analytical and statistical information. Labour market situation and results of the State Employment Service. Available at: <https://www.dcz.gov.ua/analitics/68>

¹³⁷ <https://www.msp.gov.ua/news/15731.html?PrintVersion>

¹³⁸ Ukrainian society: Migration dimension: national report of Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine. – K., 2018. – 396 pages. Available at: https://idss.org.ua/arhiv/Ukraine_migration.pdf

¹³⁹ According to experts' estimates (Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine) from 3m up to 9m according to other estimates of citizens working abroad. There is a problem with exact number of labour migrants because citizens of Ukraine avoid declaring that they go abroad to work, they go as tourists or on private affairs.

¹⁴⁰ State Employment Service of Ukraine. Analytical and statistical information. Registered labour migration. Available at: <https://www.dcz.gov.ua/analitics/68>

¹⁴¹ It should be mentioned that this report reflects other not-relevant segment of registered labour migration, because major part of citizens of Ukraine find work abroad without intermediaries.

¹⁴² The report didn't count for cross-border circular labour migrants who came to work abroad before 2005. Available at: http://www.ukrstat.gov.ua/druk/publicat/kat_u/2017/bl/12/bl_ztm_2017_w.zip

¹⁴³ Stadny Ye. "Ukrainian Students Abroad: data before 2017/18 academic year. January 21, 2019. – Available at: http://iom.org.ua/sites/default/files/nms_round_10_eng_press.pdf – Name on the screen: <https://cedos.org.ua/uk/articles/ukrainske-studentstvo-za-kordonom-dani-do-201718-navchalnoho-roku>, <https://cedos.org.ua/uk/articles/ukrainski-studenty-za-kordonom-skillky-ta-chomu>, <https://cedos.org.ua/uk/articles/ukrainski-studenty-za-kordonom-fakty-ta-stereotypy>

According to the 'Rating' estimates, the most important reasons for emigration among those who would like to go abroad for permanent residence were the following: "In the hope of obtaining better living conditions" (64% of cases), and 'The desire to provide a better future for children' (34% of cases)¹⁴⁴.

Analysis of migration moods of young people of Ukraine for past years tells about relatively high, but stable level of intentions to try to go abroad especially to earn money. Thus, 53% of young people aged under 30 would agree to leave Ukraine if they had such opportunity, at the same time the average figure for all age groups accounted 32%¹⁴⁵. *This presents an extra risk for labour market for short- and medium-term.*

Summing up, **external factors** of labour migration: attractive and spacious labour market in developed countries, with average level of wages higher than Ukrainian. **Internal factors:** mismatched demand for workforce and low wages in the country. **Negative consequences:** threats of human capital depletion because of qualified workforce outflow from the country, poor social and legal protection of labour migrants, weak insurance (pension) policies, less possibilities for economic growth of Ukraine. **Positive consequences:** employment of unemployed, preserving or training labour skills, increase in consuming capacity on the domestic market and income from abroad due to the earnings of labour migrants¹⁴⁶. According to the NBU, in 2018 transfers to Ukraine from labour migrants amounted to USD 11.1 bn or 8.5% of GDP (in 2017- USD 9.3 bn or 8.2% of GDP; in 2016 - USD 7.5 bn or 8.1% of GDP; in 2015 - USD 7 bn or 7.6% of GDP respectively)¹⁴⁷. However, part of these transfers comes from IT sector specialists who physically stays in Ukraine and receive their income working for foreign companies.

Labour migration also *increases competition between local employers for qualified workers*¹⁴⁸. As the result, the risk to lose qualified workers due to migration flows made local export-oriented industry employers *gradually increase wages*. In particular, in the 4th quarter of 2018 wages of a steelmaker in Ukraine amounted to UAH 26.5 thousand compared to UAH 18.5 thousand (in hryvnia equivalent) in Poland¹⁴⁹.

Internal migration (IDP). Since the previous round of TRP the situation with IDP employment has remained almost unchanged. Share of employed IDPs in December, 2018 was 44% (compared with 41% in March, 2017).¹⁵⁰ Around 67% of IDPs said that their current work matches their qualification. *The decrease of IDPs working in industrial sector is observed.* It is explained by difference in industry structure in Donetsk and Luhansk regions compared to recipient regions. As the metallurgy and coal-mining industries prevail in Donetsk many IDPs cannot find the work according to their profiles in other parts of Ukraine where such vacancies are not required. At the same time *the issue of employment of IDP in host regions is still one of the most urgent*¹⁵¹. 90% of IDPs who were job-seekers told that they faced with difficulties. The most frequent problem was lack of vacancies (77%) and low wages in vacancies offered (62%).

IDP mobility is still not very high¹⁵². 69% of IDPs told that they had stayed at current place of residence for about three years. Almost 34% of respondents expressed the intention not to return even when the conflict would end. The share of respondents intended to return to their permanent residence after the end of the conflict accounted for only 28%. *Excessive concentration of professionals and specialists*

¹⁴⁴ Migration moods of the Ukrainians in dynamics. September 2017. Available at: http://ratinggroup.ua/research/ukraine/dinamika_migracionnyh_nastroeniy_ukraincev.html

¹⁴⁵ Research & Branding Group. Migration moods in Ukraine (June, 2017).– Available at: <http://rb.com.ua/blog/migracionnye-nastroenija-v-ukraine-ijun-2017-g/>

¹⁴⁶ How many Ukrainians went abroad and what the state should do with it: Presentation of the survey of Centre for Economic Strategy.– Available at: <https://www.slideshare.net/UkraineCrisisMediaCenter/ss-95001771>

¹⁴⁷ National Bank of Ukraine, Money transfers (2008-2018) .- Available at: <https://bank.gov.ua/doccatalog/document?id=19208357>

¹⁴⁸ It leads to inflation of wages and partial increase in consumer prices. Employers consider how to increase labour productivity to afford more "expensive" workers without losing competition advantages.

¹⁴⁹ According to All-Ukrainian Association of Regional Organizations of Employers of the Enterprises of Metallurgical Complex "Federation of Metallurgists of Ukraine"

National monitoring system report on the situation of internally displaced persons. December 2018 // MoSP of Ukraine, Ministry of Temporary Occupied Territories and Internally Displaced Persons, International Organization for Migration IOM, the UN Migration Agency Available at: http://iom.org.ua/sites/default/files/nms_round_12_ukr_screen.pdf

¹⁵¹ Among those IDP who seek employment (8% of respondents), 29% were unemployed up to one year, 40% were unemployed from one year to four, 16% were unemployed for more than four years.

¹⁵² The reason for low mobility is undeveloped transport and road infrastructure, poor rental housing market.

with the same skills in one city or region causes over-saturation and disproportions of certain labour markets.

Education structure of IDPs is characterised by larger share of households' heads who have HE (54%); near 27% of them have VET, 18% – complete and basic secondary education. *This is the evidence of IDPs' sufficiently high education potential, their ability to acquire modern skills and competences for assuring employment opportunities.* The most significant part of IDPs is a part of working age population of Lviv, Chernivtsi, Ivano-Frankivsk, Odesa, Vinnytsia regions and city of Kyiv (varies from 51.0% to 55.0%)¹⁵³. *It respectively increased supply of workforce in these regions.*

Regardless the package of policies implemented in past years¹⁵⁴, *the mentioned problems remain and further state policies* to minimize negative impact of external and internal migration on the labour market are needed, unshadowing of labour migration process, promoting youth employment and raising competition advantages of Ukrainian labour market¹⁵⁵.

B.1.4 Specific challenges and opportunities: digital transformation

VET digitalisation is the critical present requirement to meet current and future challenges of the society:

- a) development of the following digital technologies: mobile, cloud, biometric verification, blockchain, virtual, augmented reality, additive (3D printing), identification, artificial intelligence;
- b) development of the IT sector including active employment of Ukrainians into this sector on freelance basis¹⁵⁶;
- c) growing popularity of IT sector employment among young Ukrainians¹⁵⁷;
- d) searching new forms and ways of learning to obtain skills for living and working in Industry 4.0¹⁵⁸ conditions.

Digital transformation affects mismatch of professional skills and thus raises expectations from VET. First and foremost it is connected with the fact that today **the issues of digitising domestic VET** are closely intermingled with the issues of the *society digitalisation in general and sectors of economy in particular*, namely:

- developing digital competences of all active population of Ukraine;
- implementing a concept of digital workplace;
- real sector of economy digitalisation;
- developing substantial national policy of digital education including VET;
- agriculture sector digitalisation that is a need in using geoformation systems, on-board computers, smart equipment; implementing innovative ways of plants and soils treatment, setting

¹⁵³ But senior age groups prevail in the regions not distant from permanent residence (Donetsk, Luhansk, Kharkiv, Sumy and Zaporizhzhia regions).

¹⁵⁴ Adoption of the Law of Ukraine "On external labour migration" (2015), the Action plan on implementing labour migrant and their families reintegration into society (2017), CMU Order N 602-p from August 29, 2018. "On approval of Action plan for 2018-2020 to implement the Strategy of the State Migration Policy of Ukraine till 2025" (2018), Law of Ukraine "On amending certain laws of Ukraine to increase social protection of Internally Displaced Persons" (2015), CMU Order N 352 "On amendment the Order of the Cabinet of Ministers of Ukraine from October 1, 2014". N 509" and N 365 "Some questions on welfare payment to internally displaced persons" etc.

¹⁵⁵ Actions necessary to take for IDPs: their integration into new labour markets, creation new jobs and benefits for employers if they employ IDPs, further financing professional training and re-training of IDPs, stimulating IDPs to start business. Regarding external migration: providing a steady growth of economy of the country; reducing unemployment level and creating sufficient number of jobs, implementing a system of life-long learning. The new ways of youth employment promotion and young employees competitiveness increase should be introduced in the labour market.

¹⁵⁶ World Economic Forum in Davos (2019). Available at: <https://www.weforum.org/system-initiatives/shaping-the-future-of-digital-economy-and-society>

¹⁵⁷ International Labour Organization 2018. Work on Digital Labour Platforms in Ukraine: Issues and Policy Perspective. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_635370.pdf

¹⁵⁸ World Economic Forum in Davos (2019)

fertilizers and chemical meliorants, using means of plant protection, operating with soil scanners, vertical greenhouses and drones, helicopter sprayers etc.¹⁵⁹;

- worsening of ranking positions (2018 – 46th position out of 140 in Skills and 74th – in Lifelong learning)¹⁶⁰;

- updating content of existing curricula of VET in the prospective of digital skills development;

- developing self-education, media literacy and e-learning skills for lifelong advanced training¹⁶¹.

In the course of industrial development of Ukraine there is a problem of skilled workforce deficit (this is the second out of eight problems in domestic industry development)¹⁶². This problem is critically important in the prospective of Industry 4.0 development. Under conditions of digital transformation along with general problem of skilled workforce lack the *demand for technical employees, technological equipment and machinery operators grows significantly*¹⁶³.

In VET sector there is a need to create relevant information and education environment of VET schools. This defines a need of updating the content of education (revising text-books and teaching sets), conditions and resources (financial and human) and its implementing, monitoring and control etc. In particular, low level of digital-skills of teachers and management is a serious barrier for the processes of VET digitalisation. So advancing the level of digital competence and digital culture of teaching staff is very crucial.

Opportunities of VET digitalisation are reflected in the following findings:

- designing information and educational environment of VET schools based on SMART-sets; developing and implementing SMART-sets for training of skilled workers for agriculture, construction, heavy engineering sectors and corresponding teaching and methodological guidance of their development; implementation appropriate methodology of teaching VET students¹⁶⁴;
- elaborating guidelines for distance courses design for VET, guidelines for self-study organisation for future skilled workers using distance learning (DL); guidelines for monitoring and control of academic progress of skilled workers using distance learning in VET¹⁶⁵.

A good example of meeting present challenges in the context of **promoting digitalisation in the education sector** is the creation and operation of Educational Centres (EC) “Crimea is Ukraine” and “Donbas is Ukraine” in 2016¹⁶⁶ ¹⁶⁷. Other examples are DL technologies of Zolotov Vocational School¹⁶⁸ in Luhansk Region and ready “e-lessons” of Regional Centre of Vocational Education of Construction Technologies in Kharkiv Region¹⁶⁹.

¹⁵⁹ On approval the Concept of digital economy and society of Ukraine development for 2018—2020 and adopting Action plan to implement it. Available at: <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciji-rozvitku-cifrovoyi-ekonomiki-ta-suspilstva-ukrayini-na-20182020-roki-ta-zatverdzhennya-planu-zahodiv-shodo-yiyi-realizaciyi>

¹⁶⁰ The Global Competitiveness Report 2018. World Economic Forum. Available at: <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>

¹⁶¹ Analytical note of the National Institute for Strategic Studies “On priorities to ensure digital transformations in the context of raising competitiveness of national economy” (13.05.2019).

¹⁶² On Approval the Strategy of Industrial System of Ukraine Development till 2025. Available at: <http://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=10ef5b65-0209-4aa1-a724-49fd0877d8d6&title=ProektRozporiadzhenniaKabinetuMinistrivUkrainiproSkhvalenniaStrategiiRozvitkuPromislovoogoKompleksuUkrainiNaPeriodDo2025-Roku> (Date of application: 2 May, 2019).

¹⁶³ According to SES in early 2018 the demand for skilled workers with tools was almost 24% out of total number of announced vacancies; demand for technical employees, technological equipment and machinery operators etc doubled.

¹⁶⁴ Laboratory of E-learning Resources of the VET Institute of the NAES of Ukraine. Available at: <https://ivet.edu.ua/labs/ee-res>

¹⁶⁵ Laboratory of Distance Learning of the VET Institute of the NAES of Ukraine. Available at: <https://ivet.edu.ua/labs/dist-edu>

¹⁶⁶ MoES of Ukraine. For candidates from occupied territories the centres “Donbas is Ukraine” and “Crimea is Ukraine” were opened. The candidates can enter without EIT results, passport or secondary school certificate. Available at: <https://mon.gov.ua/ua/news/dlya-vstupnikiv-z-okupovanih-teritorij-vidkrilisy-centri-donbas-ukrayina-j-krim-ukrayini-tam-mozhna-vstupiti-bez-zno-pasporta-ta-atestata>

¹⁶⁷ Centres “Crimea is Ukraine” were opened on the basis of 35 HEIs in 8 regions (Odesa, Mykolaiv, Zaporizhzhia, Kherson, Kharkiv, Lviv, Dnepropetrovsk regions and city of Kyiv). “Donbas is Ukraine” centres operate on the basis of 40 HEIs displaced from JFO zone and located on the territory of Donetsk and Luhansk regions controlled by Ukraine. In 2016 the number of such candidates was 1 thousand, but now the number is already almost 2 thousand.

¹⁶⁸ https://www.etf.europa.eu/sites/default/files/document/Session%203_Svitlana%20Mozgova_EN.pdf

¹⁶⁹ http://www.etf.europa.eu/sites/default/files/document/Session%203_Yuriy%20Podolych_EN.pdf

Best practices: introduction of digitalisation in VET sector

Luhansk region: introduction of the elements of distance learning. In 2018, an all-Ukrainian experiment of introduction of distance learning started in Zolotov Vocational School. To facilitate access to learning materials and communication between the subjects of educational activities, the school received a united informational learning environment which includes an e-library, a virtual methodology office, an online psychologist's office and an online consultation service. In addition, the monitoring system of education quality helps to track the rating of teachers and trainers, the quality of knowledge that the students acquired, etc. The 1st round of the experimental activities included preparation of facilities and resources of the pilot VET institution; signing an agreement on common educational activities with the Regional Employment Service; deployment of hardware and software complex (on Moodle platform); checking the readiness of the teaching staff. As of January 1, 2019, the pilot project covered 206 students/learners, 6 of them from the territories not controlled by the Government, 10 IDPs and 42 from the "grey zone". The plans for the 2nd round (2019) include: to develop support system for the use of distance learning; to create electronic learning materials for distance learning; to test organisational and teaching environment of the distance learning and assess its efficiency for the students/learners.

Kharkiv region: creating electronic textbooks and using SMART-complexes. The Regional Centre of Vocational Education of Construction Technologies has become a basis for an online educational environment for VET of qualified workers. This includes e-textbooks, e-lessons, webpages and other learning materials to ensure better quality of education process. 12 years of fruitful work of the teaching staff resulted in creation of e-textbooks that received "Recommended by the MoES of Ukraine" form heading for 3 specialities: "Installer of plasterboard constructions", "Bricklayer", "Electric welder for manual welding". A particular part of the project includes creation of online "Module lessons" (all learning materials are assembled into a module that is available regardless of the schedule). The educational process is accompanied by stories, motivating exercises, tests, elements of game which help to master the topics of the curriculum. Another example is Kharkiv Higher Vocational School No 6 that actively uses SMART-complex developed at Eliademy platform to study the subject "Engineering drafting" within the speciality 8211 "Multiskilled Layout Designer". Eliademy is a free platform for creation of educational courses, forums and tasks, as well as sharing materials from various online sources (Slide-share, YouTube, Google Docs etc). It has a simple and handy interface both for the teacher and the student and does not require special skills.

Sumy region: creation of modern learning tools using information technology. In 2018, the School for IT Competence Development was launched at the EPC of the region. The school provides on-line training through the Internet network. In 2018, the distance course "Creating Modern Learning Tools Using Information Technologies", consisting of 4 modules, was developed (created). Training on modules was aimed at forming the following competences: training videos creation and use; online testing implementation; an online board use in educational activities; creating tasks using Google applications; educational websites development. In 2019, four more online courses were approved: (1) visual content creation and use; (2) interactive content creation and use; (3) online-board in the educational process; (4) cloud technology in the educational process. These courses aim at the forming both theoretical knowledge and practical skills. During the training, test designers of Google Form, My Test, TestW2, Online Test Pad, Master Test are considered (used) as well as on-line designers – Lino it, Padlet; mind map designers Mindmeister, Popplet, Google Docs applications, Google Drawing, Google Photos, Google Drive etc. Within the framework of the School, the online master-classes are held ("Service for creating interactive presentations Mentimeter", "Google Class – a distance learning tool", "Using the Google Maps service in the educational process of VET institutions", etc.). The educational video channel "School for IT Competency Development" is constantly working on You Tube.

The examples of *advancing digital competence and culture of teaching staff* are the projects of the Academy of Innovative Development and Education (IECM) offering wide array of on-line courses and trainings for teachers¹⁷⁰, and also the distance learning courses for teachers to advance their digital competence designed by Scientific and Methodology Centre of Vocational Education in Zaporizhzhia Region¹⁷¹.

Prospective of VET digitalisation in the context of building digital society and developing digital economy of Ukraine is: PPP strengthening; implementing dual education; organisation of distance and blended learning; introducing inclusive learning; using competence-based approach; creation of scientific and educational on-line platforms; building in VET schools individual learning trajectories for "digital workplaces" employment; implementing new forms and methods of advancing digital competence of VET teaching staff and management (digital workshops, barCamps, virtual labs)¹⁷².

¹⁷⁰ http://www.etf.europa.eu/sites/default/files/document/Session%203%20Natalia%20Kliassen_EN.pdf

¹⁷¹ http://www.etf.europa.eu/sites/default/files/document/Session%203_Nataliya%20Osina_EN.pdf

¹⁷² Yershov M.-O. (2019) Digitalisation of Vocational and Special Education of Ukraine: problems and prospective.

Description of policies

B.1.5 Strategic policy responses involving education and VET

Implemented policies: To minimize negative impact of issues described in preceding questions, the number of policies has been implemented since the last round of TRP, which include: (1) **macroeconomic policies**, aimed at creating new jobs, (2) **active labour market policies**, (3) **migration policies** and (4) **policies directly or indirectly linked with the system of education or VET** in particular.

The key strategic documents on defining mentioned directions: Medium-Term Priority Action Plan of the Government until 2020¹⁷³, Strategy of the State Migration Policy of Ukraine till 2025¹⁷⁴, Law of Ukraine “On amending certain laws of Ukraine to increase social security of Internally Displaced Persons”¹⁷⁵, the national Poverty Reduction Strategy¹⁷⁶ and the Action plan of its implementation¹⁷⁷, MoSP of Ukraine Strategic Action Plan for 2019 and two fiscal periods after the planning period (2020-2021)¹⁷⁸, “Pact for Youth — 2020” (partnership between the business and education sector, to provide training and first job opportunities for youth, coaching support in building career¹⁷⁹, Action plan for social reintegration of labour migrants and their families¹⁸⁰, 2018–20 Roadmap for developing society and the digital economy in Ukraine¹⁸¹, Law of Ukraine “On education” based on the concept of the New Ukrainian School¹⁸², Law of Ukraine “On Pre-tertiary Vocational Education”¹⁸³, Concept of State Policy in the Field of Professional (Vocational) Education “Modern Professional (Vocational) Education” until 2027¹⁸⁴, Concept of dual education which is aimed at integration of education and work in VET and HE¹⁸⁵ etc. **As we can see only a part of documents is directly related to education and VET in particular, in this connection comprehensive approach to solve issues described in responses mentioned above should be used.**

One of the important steps for *macroeconomic block of policies* was the creation of “Export promotion office in Ukraine”¹⁸⁶ in 2018 and adopting the draft of the Law of Ukraine “On common transit regime” (2019) aimed at increasing high value-added technological export requiring skilled workforce. Strengthened investment component of economic growth stimulated the creation of jobs in the processing industry. *Detailed policies on the labour market* are considered in B.1.6. The approval of Action plan for 2018-2020 to implement the Strategy of the State Migration Policy of Ukraine until 2025 was the key document for developing and *implementing state migration policy* aimed at meeting the economic needs of workforce¹⁸⁷. First of all it concerns automation of processes of unified migration information and analytical system, which is necessary for the proper governance of migratory processes, improvement of organisation and collection procedure of migration data; employment promotion of labour migrants after they return to Ukraine which meets labour market demands.

Policies directly or indirectly linked to VET system: Apart from strategic documents on education mentioned above the *Procedures for Development and Adoption of Professional Standards (2017)*¹⁸⁸ and *Methods Guides for Development of Professional Standards (2018)*¹⁸⁹ have been elaborated and approved to provide compliance of vocational skills with modern labour market demands. Also to improve educational process quality and to increase its practical application in compliance with MoES

¹⁷³ approved by CMU Order from April 3, 2017 N 275-p.

¹⁷⁴ <https://zakon.rada.gov.ua/laws/show/482-2017-%D1%80>

¹⁷⁵ <https://zakon.rada.gov.ua/laws/show/921-viii>

¹⁷⁶ <https://www.kmu.gov.ua/ua/npas/248898080>

¹⁷⁷ <https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-planu-zahodiv-na-2019-rik-z-realizaciyi-strategiyi-podolannya-bidnosti>

¹⁷⁸ https://www.msp.gov.ua/files/prior_min/434.pdf

¹⁷⁹ http://www.dsmsu.gov.ua/media/2017/04/13/45/Prezentaciya_PAKTy.pdf

¹⁸⁰ <https://zakon.rada.gov.ua/laws/show/257-2017-%D1%80>

¹⁸¹ <https://zakon.rada.gov.ua/laws/show/67-2018-%D1%80>

¹⁸² <https://zakon.rada.gov.ua/laws/show/2145-19#n149>

¹⁸³ <https://zakon.rada.gov.ua/laws/show/2745-19>

¹⁸⁴ <https://zakon.rada.gov.ua/laws/show/419-2019-%D1%80?lang=en>

¹⁸⁵ <https://zakon.rada.gov.ua/laws/show/660-2018-%D1%80>

¹⁸⁶ CMU Order N 199-p from 28.03.2018 “On approval of state office creation “Export Promotion Office in Ukraine”. Available at:

<https://www.kmu.gov.ua/ua/npas/pro-utvorennya-derzhavn>

¹⁸⁷ <https://zakon.rada.gov.ua/laws/show/602-2018-%D1%80>

¹⁸⁸ Resolution of the CMU No 373 from 31.05.2017 “On approval the Procedures for Development and Adoption of Professional Standards”. Available at: <https://zakon.rada.gov.ua/laws/show/373-2017-%D0%BF>

¹⁸⁹ Order of the MoSP N 74 from 22.01.2018 (registered at the Ministry of Justice of Ukraine on 13.02.2018 N 165/31617) “On approval the Methods Guides for Development of Professional Standards”. Available at: <https://zakon.rada.gov.ua/laws/show/z0165-18#n13>

order “On elaborating the standards of vocational (technical – vocational) education using competence-based approach” in 2018¹⁹⁰, the list of professions was approved to develop VET standards. The strengthening of practice-based content of education and training will be also supported by introducing elements of dual training into training of skilled workers which is directed at VET content update¹⁹¹. The approved the CMU Order “On approval Action plan on implementing the Concept of state system of career guidance of the population”¹⁹² is aimed at balancing of demand and supply on the labour market. It improves quality of training the skilled personnel, reduces costs for vocational choice.

Planned policies connected with VET system: To increase efficiency of VET system performance in order to solve issues mentioned above the new law on VET should be adopted and the Concept of implementing state policy of VET system (adopted in June 2019) should be implemented. These documents are aimed at systemic reform of all VET components: content; system of management; structure and schools network; multichannel financing system of VET; conducting education and training; provision of new legal and regulatory basis etc. The activity of VET regional councils requires improvement as well to identify trends of skilled personnel training opportunities based on regional demand and regional peculiarities taking into account interests of all stakeholders. The important thing is developing and implementing substantial national policy of digital education (including VET in particular) in compliance with 2018–20 Roadmap for developing society and the digital economy in Ukraine.

B.1.6 The role of VET in remedies through active labour market policies (ALMPs)

Current policies review: According to the Laws of Ukraine “On Employment of the Population” and “On compulsory state social insurance against unemployment” Ukraine has a wide range of *active labour market policies*, in particular:

- vocational training or retraining, further training in VET, HEI, SES training facilities, in companies (organisations);
- career guidance (see. C.3.4);
- employment incentivising including social works and other temporary jobs;
- providing compensations for employers if they employ (by opening new working positions) citizens which are uncompetitive on the labour market¹⁹³;
- providing vouchers for training (for priority professions/specialties required on the market)¹⁹⁴;
- offering unemployed to open their business, in particular by opening in EC of SES centres of business development and business incubators, lump-sum benefit (one-time financial assistance) to open own business etc¹⁹⁵;
- implementing policies to incentivise employment of IDPs, ATO participants, disabled persons and vulnerable groups of population etc;
- various information and consulting services to facilitate employment; jobseeker’s Internet accounts; employment fairs, career days, career guidance days, open house days in EC of SES etc.

Since the last round of TRP SES has introduced new social e-services for citizens and employers in particular, “Internet account (cabinet) for a jobseeker (unemployed)” and “Internet account (cabinet) for

¹⁹⁰ Order of MoES of Ukraine N 320 from 04.04.2018 “On elaborating the standards of vocational (technical – vocational) education using competence-based approach in 2018” Available at: <https://mon.gov.ua/ua/npa/pro-rozroblennya-standartiv-profesijnoyi-profesijno-tehnichnoyi-osviti-na-osnovi-kompetentnisnogo-pidhodu-v-2018-roci>

¹⁹¹ Order of MoES of Ukraine N 473 from 15.05.2018 “On extension of the list of schools of vocational (vocational – technical) education to implement elements of dual training” Available at: <https://mon.gov.ua/ua/npa/pro-rozshirennya-pereliku-zakladiv-profesijnoyi-profesijno-tehnichnoyi-osviti-dlya-vprovadzhennya-elementiv-dualnoyi-formi-navchannya>

¹⁹² Order of MoES of N 469 -p from 04.07.2018 “On approval the Action plan of implementing the Concept of state system of career guidance of the population” Available at: <https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-planu-zahodiv-z-realizaciyi-koncepciyi-derzhavnoyi-sistemi-profesijnoyi-orijentaciyi-naseleennya>

¹⁹³ Order of CMU N 33 from 31.01.2018 “On approval of standards for evaluation of state assistance feasibility for commercial subjects if they employ certain categories of workers and create new jobs”. Available at: <https://zakon.rada.gov.ua/laws/show/33-2018-%D0%BF>

¹⁹⁴ State Employment Service. Vouchers. Available at: <https://www.dcz.gov.ua/storinka/vauchery>

¹⁹⁵ According to Part Seven of Article 22 of the Law of Ukraine “On compulsory state social insurance against unemployment” job seeking allowance can be paid once to organize business to unemployed who are not able to find a suitable job because it is absent on the labour market. But before that the person is entitled to hear one month courses of business basics, including book-keeping and financial accounting.

an employer". They are used to reduce time and raise comfort level for jobseekers to interact with employers and SES¹⁹⁶. The active implementing of profiling of jobseekers started to minimize risks of long-term unemployment and also to provide social support based on the case-management. The e-services have become popular (e-queues, video-resumes and on-line interviews with employers)¹⁹⁷. Besides, in September, 2018 *the institution of career counsellor* was introduced, which allows to provide individual approach for every client of SES and raise quality of career planning service¹⁹⁸. Also in 2018 in order to provide distance services of career guidance the IT platform "Career guidance and career development" was introduced. All these policies are aimed at increasing efficiency of labour market institutions and raising activity level and employability of population, as well as reducing the level of informal employment.

Coordination of policies on the labour market with system of education and/or VET: To promote employment EC organises vocational trainings for unemployed on employer's demand as well as business skills training of unemployed on their request. It can be implemented in **HE institutions, VET schools, training facilities of SES**, in the companies (organisations) or at employers. Jobseekers without profession can be trained a relevant profession to the labour market. If a profession (speciality) is not relevant to labour market needs, SES gives the jobseeker a possibility to be retrained or have further training (employment training¹⁹⁹, where the jobseeker wants to work), raise qualification category, complete the special course to obtain a new competence. The unemployed who wish to start their own business get skills how to do it. If an employer orders vocational training for jobseeker **at educational institution, at VET school in particular** and is committed to employ them, EC makes an agreement with such employer.

In 2018 according to SES 147.3 thousand jobseekers (unemployed) had vocational training (including 47.6 thousand - at SES educational institutions). 263 educational institutions and 27.6 thousand enterprises (organisations) were involved into cooperation. 148 occupations were offered for training and retraining of jobseekers. Employment rate for those who finished training in 2018 reached 96.1% that is 0.5% more than in 2017. *Since the last round of the TRP education institutions have used new forms of education* to provide more quality training. In 2018 in VET centres of SES over 2.9 thousand jobseekers had vocational training with *distance technology elements*. *VET uses elements of dual training by connecting training of unemployed at educational institutions with their work-based training*. During 2018 according to cooperation agreements with VET centres of SES and employers 1.7 thousand people had training with dual-training elements.

Planned activities: Plans for implementing active labour market policies are reflected in *Action plan for 2019 of implementing Poverty Reduction Strategy*²⁰⁰, *Strategic Action Plan of MoSP of Ukraine for 2019 fiscal year and two fiscal years following the planned (2020-2021)*²⁰¹, *Action plans of MoSP for 2019*²⁰² etc. In particular they foresee adoption of the Law of Ukraine "On activation of job seeking process for unemployed and those who seek job"²⁰³, CMU Order "Basic directions of state policy of population employment for medium-term prospective", redirection of SES work for individual services of employment and provision of customer-oriented approach in line with international requirements. Planned activities also include change of approaches for training of jobseekers and selection of educational institutions where they will have VET, implementing e-services, provision of well-functional institution of career counsellor and full-scale operation of National register of vacancies. Introducing and implementing initiative "Pact for Youth — 2020" (business and education sector partnership, to provide internship and first job opportunities for youth, mentors' support in career building)²⁰⁴. At the same time more changes are needed to intensify population participation on labour market and to consolidate the

¹⁹⁶ In particular this technology helps a registered unemployed person prepare resume, find a job, learn information about temporary employment and possibilities of VET.

¹⁹⁷ The Cabinet of Ministers of Ukraine In 2018 Employment Service will actively implement case-management work and launch new web-site. Available at: <https://www.kmu.gov.ua/ua/news/u-2018-roci-sluzhba-zajnyatosti-shiroko-zaprovadit-u-robotu-kejs-menedzhment-ta-zapustit-novij-sajt>

¹⁹⁸ <https://zakon.rada.gov.ua/laws/show/792-2018-%D0%BF>

¹⁹⁹ The internship is done on employers demand following the tailor-made programme approved by the employer and coordinated with EC. Unemployed who received vocational training before and need practical experience use internship likewise those who haven't worked for a considerable time, but decided to renew or improve their skills and abilities.

²⁰⁰ <https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-planu-zahodiv-na-2019-rik-z-realizaciyi-strategiyi-podolannya-bidnosti>

²⁰¹ https://www.msp.gov.ua/files/prior_min/434.pdf

²⁰² https://www.msp.gov.ua/files/prior_min/571.pdf

²⁰³ <https://www.msp.gov.ua/projects/238/>

²⁰⁴ http://www.dsmsu.gov.ua/media/2017/04/13/45/Prezentaciya_PAKTy.pdf

use of innovative forms of employment. In particular, it is expected to amend Labour Code of Ukraine, Law On employment with definitions of terms “outsourcing”, “transit workplace”, “profiling”.

B.1.7 Identification of skills demand and its bearing on VET provision

Implemented policies. *There is no centralized system for forecasting of demand for professional skills in the labour market in Ukraine.*

The Law of Ukraine “On the Formation and Placement of the State Order for the Training of Specialists, Scientific, Scientific and Pedagogical, and Workers' Personnel, Continuous Training and Re-training of Personnel” (2014) regulates the peculiarities of relationship arising in connection with the formation and placement of public order²⁰⁵. Besides, the Law envisages mandatory preparation of Medium-term forecast of demand for specialists and working staff in the labour market. At present (and up to 2021), MoEDT calculates the *medium-term needs of the labour market* in terms of specialists and labour resources by occupational groups on the basis of the methodology approved by the Decree of MoEDT of Ukraine № 305 as of March 26, 2013. The methodology is based on the calculation of the number of people employed by the type of economic activity. This is necessary in order to meet the additional need in the workforce by occupations (according to the classifier of professions) for certain types of economic activities. The methodology compares the obtained values of the forecasted additional demand with the proposals of central and local executive authorities and social partners.

In addition to that, the Institute for Educational Analytics (IEA) of the MoES²⁰⁶ is engaged in research and elaboration of a methodology to determine the scope and areas of training of workers in accordance with the needs of regional labour markets.

Also, since the last round of TRP, as part of decentralisation of the VET sector, *the Methodological recommendations for the formation and placement of a regional order for the training of specialists and workers* (2016)²⁰⁷ were approved. These recommendations provide a single approach to the formation and placement of a regional order for the training of specialists and workforce. Besides, they determine the modalities of interaction of local executive authorities, bodies of local self-governance, and the civil society organisations.

However, ***there is a need to improve methodological approaches to arrange systematic accumulation and analysis of information related to regional and national labour markets, while identifying the correlation between the professions on demand in the respective labour markets and the capacity of the VETIs network to train the needed professions.***²⁰⁸ The identified and systematized data on the state of certain markets will enable short-term and mid-term forecasts (up to 5 years) defining the forecasted number of the workforce by occupations (in line with the classifier of occupations). Such forecasts should take in account regional economic development programmes (strategies) and provide an ongoing feedback between the respective bodies of the regions and employers.

Professional standards *that establish requirements for the competencies of employees that serve as the basis for the formation of occupational qualifications*²⁰⁹. The Procedure to elaborate occupational standards²¹⁰ and the Methodology for their elaboration²¹¹ today form the basis for an effective way of

²⁰⁵ <https://zakon.rada.gov.ua/laws/show/5499-17>

²⁰⁶ Namely, section of statistics and analytics of vocational education.

²⁰⁷ <https://zakon.rada.gov.ua/laws/show/994-2016-p>

²⁰⁸ In particular, the study was conducted by experts from the Institute of Professional Qualifications under the project “Analysis of Needs for Labour Market, of Challenges and Opportunities in Eastern Ukraine” (http://ipq.org.ua/upload/files/files/03_Novyny/2019.05.15_Zvit/IPQ_Report_09.05.19.pdf)

²⁰⁹ Art. 39 Law of Ukraine «On Education». Available at: <https://zakon.rada.gov.ua/laws/show/2145-19>

²¹⁰ <https://zakon.rada.gov.ua/laws/show/373-2017-n>

²¹¹ <https://zakon.rada.gov.ua/laws/show/z0165-18>

identification of occupational skills with the participation of employers²¹²²¹³²¹⁴. As of May 01, 2019, the Register has established 9 professional standards²¹⁵ while 117 applications have been registered.

Regardless of the implemented policies, **there is a sharp need in the further development of forecasting of professional skills** in order to increase the relevance of educational services, and to adapt the training programs of VET system to the needs of the labour market.

System of confirmation of outcomes informal learning and recognition of qualifications obtained in other countries. In Ukraine, a mechanism for confirming the results of non-formal vocational training for respective occupations has been introduced²¹⁶. This mechanism is the same for *all categories of individuals*, including *migrants and refugees*. Ukrainian citizens, foreigners and individuals without citizenship permanently residing in Ukraine and having refugee status, those having been granted an asylum in Ukraine, and those recognized as requiring additional protection, who have been granted a temporary asylum, as well as those who received a permission for immigration to Ukraine, can prove their qualifications. Confirmation of non-formal learning is performed by the subjects of confirmation (enterprises, institutions, organisations irrespective of ownership forms). It was established a consultative and advisory body under the MoSP, the Interagency Working Group on compliance of enterprises, institutions, and organisations with the established requirements, to confirm outcomes of non-formal professional education of persons within working professions. It is composed of representatives of the MoSP, the MoES, the State Labour Service and other central bodies of executive power and social partners. Key task of the Working Group is to consider submitted proposals to the List of Subjects of Confirmation, and justifications of compliance of enterprises, institutions, and organisations with the Requirements to Subjects of Confirmation.

Subjects of confirmation authorised to do the assessment of outcomes of nonformal professional education within working professions, shall create a commission for confirmation of qualifications, which consists of specialists in the relevant sector of industry or area of services that have a work experience of at least 5 years in the corresponding occupation (specialization) and the corresponding level of qualification. Qualification confirmation is based on the results of determination of the level of occupational knowledge, abilities and skills of an individual with the application of the means of measurement and evaluation criteria, which are approved by the subject of confirmation in accordance with the requirements of qualification characteristics of occupations, occupational standards with the consent of the MoSP, the MoES and social partners.

Regardless of the drafted legal framework, the approved *lists of working professions (occupations)* used to confirm the outcomes of non-formal professional education of persons within working professions and the Subjects of confirmation of the outcomes of non-formal professional education of persons within working professions.²¹⁷

In 2015, a separate Procedure for recognition of documents on secondary, secondary vocational, vocational education issued by educational institutions of other states (countries) was adopted in Ukraine²¹⁸. This was done in order to improve the procedure to recognize and to establish the

²¹² With the purpose to build modern competency-based standards of vocational education on the basis of occupational standards.

²¹³ The working group on elaboration of occupational standards is mandatory made of the representatives of employers, trade unions and their associations. At present, the MoSP is appointed as the authorized body responsible for the registration of applications for elaboration of occupational standards and the Register of occupational standards. The developed occupational standards are verified to comply with the requirements of the Procedure for elaboration of occupational standards and the conformity of the Methodology. An occupational standard is considered effective since the moment of its inclusion to the Register of Occupational Standards.

²¹⁴ To identify *the need in professional skills and requirements to employees' competences*, the Steelworkers Federation of Ukraine has created a Sectoral Council for development of occupational standards and of the strategy of professional qualifications development.

²¹⁵ <https://zakon.rada.gov.ua/laws/show/z0491-18> ; <https://zakon.rada.gov.ua/laws/show/z0665-17>

²¹⁶ CMU Order No 340 as of May 15, 2013 "On approval of the Procedure of non-formal VET outcomes validation by the working professions (occupations)". Available at: <https://zakon.rada.gov.ua/laws/show/340-2013-n>

²¹⁷ <https://zakon.rada.gov.ua/laws/show/z0491-18> ; <https://zakon.rada.gov.ua/laws/show/z0665-17>

²¹⁸ <https://zakon.rada.gov.ua/laws/show/z0615-15#n4>

equivalence of educational documents issued by educational institutions of other states (countries) in Ukraine (see paragraph B.1.8).

Planned policies. The establishment of *mechanisms for the recognition of non-formal and informal education* is delegated to the newly established National Agency for Qualifications (NAQ)²¹⁹. The NAQ, after the introduction of its full functioning, will have the mandate to ensure the forecasting of labour market needs in qualifications, and to develop criteria and procedures in order to recognize occupational qualifications obtained in foreign countries, etc.²²⁰. It is important to consistently allocate the powers between the newly established NAQ and the MoSP which functions cover provision for efficiency of performance of the system of confirmation of outcomes of non-formal professional education within working professions. Development of professional standards shall be stimulated, as well as the respective update of VET content. It shall be facilitated by the EU4Skills project which objective is to reform the VET sector in Ukraine.

In particular, in accordance with the Agreement between Ukraine and the European Commission on funding of the “EU4Skills” project, signed on December 17, 2018²²¹, the foreseen investments in the reform of the VET system shall make up 58 m euro. A certain portion of these funds will be directed to update the content of VET programs, in particular, *to the elaboration of occupational and educational standards*.

B.1.8 Supporting migrants and refugees through VET

At present recognition of foreign diplomas and degrees (convalidation) is performed individually. It aims at protecting rights of citizens who were educated in other countries to continue education or work in Ukraine.

Recognition of foreign diploma and degrees (convalidation) in Ukraine is conducted in line with the Convention on the Recognition of Qualifications concerning HE in the European Region, which was ratified by the corresponding Law of Ukraine No 1273-XIV on December 3, 1999 and by the recommendations of this Convention. As the result of recognition the owner of foreign documents certifying degrees gets the certificate validating the documents issued by an educational institution of other country. It gives the owner the right to continue education or work based on acquired speciality in Ukrainian HEI or institutions in any part of Ukraine. Such certificate is issued on the basis of decision of authority – HEI or MoES of Ukraine. The procedure of convalidation includes: authenticity verification of documents, confirmation of educational institution status and/or its curriculum, qualification assessment or period of study and validating equivalence to academic and/or vocational degree in Ukraine. Recognition procedure in Ukraine conducted by all competent authorities is set out in the MoES Order No 504 as of May 5, 2015²²². This Order stipulates recognition procedures of degrees awarded in foreign HEI and also *documents on secondary vocational education and VET*.

The important principle of Lisbon Convention is to ensure rights of refugees and persons in refugee-like situations for recognition of their qualification even if it is impossible to confirm it with documents certifying qualification awarded on the territory of one of the Parties. Procedures of foreign documents on education recognition were entered into force by MoES Order No 504 as of May, 2015. They set conditions for all authorities to apply procedure of qualification recognition as to **refugees and persons who seek additional or temporary protection**. The procedure of recognition can be provided without presenting full package of necessary documents. In such case the ground to commence recognition procedure is refugee’s IDs, ID of a person who seeks additional protection, ID of person who has temporary protection and corresponding application to perform the procedure. To perform the recognition procedure refugees and persons who seek additional or temporary protection shall present their documents on education, including those not outlined in the list of documents, such as: copies of documents on education or periods of education, student ID cards, academic records, courses description, documents on non-formal and non-official education or other documents that can confirm the fact of training and/or obtaining qualification; as well as available documents confirming work

²¹⁹ Resolution of CMU on some issues of the National Agency for Qualifications. Available at: <https://zakon.rada.gov.ua/laws/show/1029-2018-%D0%BF>

²²⁰ <https://mon.gov.ua/ua/osvita/nacionalna-ramka-kvalifikacij/nacionalne-agenstvo-kvalifikacij-nrk>

²²¹ <https://mon.gov.ua/ua/news/yevropa-nadaye-58-mln-mln-yevro-na-modernizaciyu-profesijnoyi-osviti-v-ukrayini-v-bryusseli-pidpisano-ugodu-pro-finansuvannya-proektu-eu4skills>

²²² registered in the Ministry of Justice of Ukraine in 27.05.2015 under N 614/27059

experience such as: labour record certificate, labour contract, employment record book, certificates from work or other documents which can confirm the qualification. In case there is a lack of information to recognise documents on education of refugees and persons who seek additional and temporary protection exams, tests or interviews specially designed by authority can be used.

B.2: Entrepreneurial learning and entrepreneurship

Identification of issues

B.2.1 Job creation and VET

VET contributes to job creation in Ukraine, for instance through self-employment of VET graduates. The official data on the share of self-employed VET graduates is not available. At the same time SSSU issues the report (Form No1 on VET) where data on VET graduates employment are presented by economic sectors²²³. Sectors, which are more typical of self-employment include commerce and foodservice, household services and partially construction. According to the estimates made on the basis of this report and administrative data for 2017/18 academic year, share of self-employed VET graduates accounted for IVET – 34.9-41.1%, for CVET – 15.2-19.3%. Overall for VET sector is near 29.8%-35.4%.

Description of policies

B.2.2 VET policies to promote entrepreneurship

The development of entrepreneurial competency with learners is a pertinent issue in Ukraine. In 2017–2018, The Institute of VET of the NAPS of Ukraine ran a survey over 1000 learners from VET schools in the cities of Vinnytsya and Khmelnytskyi and in rural areas of Volyn region. It covered learners of I-III years of studies. A typical finding was the reduced numbers of learners, with every year, who plan to be engaged in entrepreneurial activities. The trend is especially clearly shown with learners in rural VET schools where the number of learners went down from 34.1% in the first year to 9.7% in the third year, i. e. 3.5 times lower (for urban population, it was from 33.8% to 25.8%, respectively). The survey also showed that over 60% of respondents did not have any clear understanding of entrepreneurial activities, while most respondents (about 70%) could not list any personal characteristics relevant for entrepreneurial activities. It must be noted that the situation was also typical in 2018²²⁴, the same as ten years ago²²⁵, and 25 years ago²²⁶.

Data on self-employment of VET graduates: On a national scale, the general system for monitoring of self-employment of VET graduates is not available. The data is not available, either, in SME related statistics²²⁷. Data on self-employment of VET graduates is occasionally traced on a regional level by education authorities, SES and SSSU.

Activities implemented to spread and develop entrepreneurship. Since the last round of TRP, there has been a significant progress to include into the Law of Ukraine “On Education” one of the key competencies of GSE – entrepreneurship and financial literacy. Upon the whole, it complies with the Framework Program of Updated Key Competencies for Life-Long Learning (EUC, 2018)²²⁸. Before that, Initiative and Entrepreneurship were identified as a key competence in a Concept for “New Ukrainian School”²²⁹. The next step was to *include entrepreneurship and financial literacy into the list of key competences of VET*. It is provided in the Concept of State Policy in the Field of Professional

²²³ State Statistics Service of Ukraine. Statistical publication. General secondary and vocational education in Ukraine in 2018. Available at: http://www.ukrstat.gov.ua/druk/publicat/kat_u/publosvita_u.htm

²²⁴ Tkachenko V.M., 2018. Formation of Entrepreneurial Competency of Future Experts in Restaurant Business in VET Schools. Candidate of Sciences. Institute of Vocational Education and Training at the NAPS of Ukraine.

²²⁵ Zakatnov D.O., 2008. Organizational and Pedagogical Support for Training Young Adult Learners to Build their Careers. Theoretical and Methodological Problems in Educating Children and Young Adult Learners: collection of research essays, 10, Vol.II, p. 373–381.

²²⁶ Zakatnov D.O., Tymenko M.P., 1993. Training Modern Entrepreneurs. Ridna Shkola Publishing, 3, p. 20–22.

²²⁷ OECD, Compendium of Enterprise Statistics in Ukraine 2018. Available at: <https://www.oecd.org/eurasia/competitiveness-programme/eastern-partners/Compendium-Enterprise-Statistics-Ukraine-2018-EN.pdf>

²²⁸ European Union, 2018. *Council Recommendation of 22 May 2018 on key competences for lifelong learning*, [online]. Available at: https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-key-competences-for-lifelong-learning_en

²²⁹ <https://www.kmu.gov.ua/storage/app/media/reforms/ukrainska-shkola-compressed.pdf>

(Vocational) Education “Modern Professional (Vocational) Education” until 2027 (2019)²³⁰. Currently, mastering basics of entrepreneurship is a general professional competence stated in VET standards and included into typical curriculum of VET²³¹. Moreover, “Basic Principles of Market Economy and Entrepreneurship” are included into general competences in typical curricula for training of junior specialist on the grounds of basic GSE²³².

Under the auspices of the MoES and IECM under the project of USAID FINREP –II (“Development of Financial Sector”) in 2018–2019 the training process gets a new elective course on “Financial Literacy”²³³. Another project that facilitates the development of entrepreneurship in VET started in 2018 with support of ILO “Inclusive Labour Market for New Jobs in Ukraine”, such as the implementation of the program of global entrepreneurial activities of ILO “Start and Improve Your Business”²³⁴. Ministry of Youth and Sports, Centre “CSR Development,” and UNFPA jointly implemented a program “Skills lab: Successful Career.”²³⁵ Under the program, all-Ukrainian training sessions were conducted for the development and improvement of skills required for starting one’s own business. Activities of the newly created Small and Medium Business Development Office (SMEDO) established in the late 2018 under the project “EU4Business” is also aimed at drafting of targeted programs for SME support and expansion of entrepreneurial capacity of young people²³⁶.

On the basis of VET schools, in order to train experts for entrepreneurial activities, training firms (TFs) are established. The TF is a form of practical training based on activities of a provisional (virtual) commercial firm (Association “Ukrainian National Centre for Training Firms “Central”²³⁷. In particular, on the premises of the state educational institution “Higher Vocational School No 11 of Khmelnytskyi City” a business centre for learning was established²³⁸. In addition, due to cooperation of the Institute for VET at the NAPS of Ukraine and the Free Enterprise and Entrepreneurship Foundation, Poland, under the Erasmus+ program, it was designed, organized, and held an international exchange project for students “Joker — my business, my identity” (Joker — moja firma, moje ja)»²³⁹. The project intended to develop entrepreneurial competency, to drill the skills to transform a business idea into a business project. The project engaged learners from VET schools selected on competitive basis. Upon the studies in Warsaw, participants designed and presented projects that had either commercial or social focus.

SES fosters registered unemployed persons to engage in entrepreneurial activities if they wish to start their businesses (see Sections B.1.6 and C.3.3)²⁴⁰. In 2018, employment centres held 488 activities for 16,800 young adult learners²⁴¹. The unemployed persons who decided to start their businesses can get support of the SES and learn basics of entrepreneurship in educational establishments, VET schools among them.

Planned policies (monitoring of self-employment): The Memorandum on Cooperation signed on June, 3, 2019, between the MoES, MoSP, MoYS, and the SES stipulates the creation of a monitoring system for HE and VET graduates, including also those who are self-employed²⁴². The system would enable tracing the success of further career development of graduates (as related to the graduated institution), the data on education quality and opportunities the education institutions open up, in order

²³⁰ <https://zakon.rada.gov.ua/laws/show/419-2019-%D1%80>

²³¹ <https://mon.gov.ua/ua/osvita/profesijno-tehnicna-osvita/derzhavni-standarti-navchalni-plani-ta-programi/zatverdzeni-standarti-profesijnoyi-osviti-2019>

²³² <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-tipovoyi-osvitnoyi-programi-profilnoyi-serednoyi-osviti-zakladiv-osviti-sho-zdiisnyuyut-pidgotovku-molodshih-specialistiv-na-osnovi-bazovoyi-zagalnoyi-serednoyi-osviti>

²³³ <https://imzo.gov.ua/kurs-finansova-gramotnist/>

²³⁴ Project objective is to provide support to 4 regions with the help of the concept of local employment partnerships (LEP) to modernize 3 curricula for VET, to create 5 new services for 4 SES regional offices, to train 7 major and 75 local trainers from the ILO program “Start and Improve Your Business”, to provide for training of 4,500 persons at entrepreneurial courses.

²³⁵ <http://csr-ua.info/csr-ukraine/article/%D0%BE%D0%B1%D0%B3%D0%BE%D0%B2%D0%BE%D1%80%D0%B5%D0%BD%D0%BD%D1%8F-%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC-skills-labs/>

²³⁶ <http://eu4business.eu/news/ukraine-sets-sme-development-office-eu-support>

²³⁷ <http://central-ntf.com.ua>

²³⁸ <http://dnz-vpu11.km.ua/index.php/nash-zaklad/biznes-tsentr>

²³⁹ <http://naps.gov.ua/ua/press/releases/755/>

²⁴⁰ Various formats and scales of activities are held (business forums, competitions, meetings, round tables, workshops, trainings, consultations) on promotion of entrepreneurial activities among young adult learners. The focus is on raising awareness and informing about promising trends in business activities for the region; with organizations, projects, donor programs, and crowdfunding platforms that offer support to start one’s own business; opportunities to learn basics of entrepreneurship, in particular, with support of the SES.

²⁴¹ According to operational data of SES.

²⁴² <https://mon.gov.ua/ua/news/proforiyentaciyu-molodi-bilshe-roboti-zi-shkolyarami-centri-karyeri-u-vishah-ta-proftehah-rozrobka-metodmaterialiv-mon-minsoc-minmolodsport-ta-dsz-pidpisali-memorandum>

to adjust educational policy for the MoES²⁴³. The process is complicated by the need to merge (unite) the Unified State E-Data Basis on Education and the Register for Insured Persons administered by the Pension Fund²⁴⁴.

At the same time, the question on how the plans on creation of a such monitoring system will be implemented remains open and it is currently being discussed in the MoES. Relevant amendments to the legislation are needed at the level of the Verkhovna Rada and the CMU on the use of databases on HE and VET graduates, which are at the disposal of different institutions. *An action plan is currently being developed.*

A major challenge for the development of entrepreneurship in Ukraine can be also referred to a post-Soviet mentality still persisting, when entrepreneurship is taken not as a virtue. On the other hand, there is insufficient understanding of the phenomenon of social responsibility (many businesspersons operate in a shadow sector). Other obstacles for SME development, pursuant to the Quarterly Monitoring of Obstacles for SME Development in the first quarter of 2018 (USAID program "Leadership in Economic Governance") included a low demand (69.7%), financial issues (48.6%), high tax burden (33.1%), unfavourable political situation (23.2%), lack of qualified workforce (13.4%), high regulatory pressure (12.7%), and corruption (12.0%)²⁴⁵. Another problem identified in the OECD survey (Index of Economic Policy on SME) is the lack of interaction between national authorities and state support of SMEs²⁴⁶.

II. 'Open floor'

III. Summary and analytical conclusions

Challenges/factors: The development of labour market of Ukraine in 2017–2018 was characterised by positive changes which were reflected in the increased numbers of employed with the simultaneous reduction of unemployment rate. At the same time, there are still the following key challenges:

- **Challenge 1:** *Growth of labour and student migration abroad causes imbalance of demand and supply in the labour market and understaffing.* **Factors:** mismatched demand for workforce and comparatively low wages in the country, visa liberalisation with EU, simplification of registration procedures with "blue cards" in Vishegrad Group countries. Increase of educational migration (student migration) is related not only to the willingness to gain a quality education and increased accessibility to education abroad, but also to the prospective opportunities of further employment and living abroad.
- **Challenge 2:** *large differentiation of the labour market of Ukraine and the remaining high share of the informally employed population (especially, in rural areas).* **Factors:** slow rate of restructuring of economy, large number of jobs that do not require high qualification levels from employees, etc.
- **Challenge 3:** *disproportions on regional labour markets due to unequal distribution of economic capacity of the regions, low territorial mobility of people, problems with employment of IDPs.* **Factors:** Excessive concentration of professionals and specialists with the same skills in one city or region, lack of qualified staff in certain regions.

²⁴³ <https://mon.gov.ua/ua/news/liliya-grinevich-v-ukrayini-zyavitsya-sistema-monitoringu-pracevlashtuvannya-vipusknikiv-proftehiiv-ta-vishiv>

²⁴⁴ It requires not only the cooperation but also changes to the law. MoES has already drafted the required changes. Adoption in the Parliament is the next step to be taken.

²⁴⁵ http://www.ier.com.ua/files/publications/Newsletter/SME_Barriers/SME_monitoring_newsletter_No.9_2018.pdf

²⁴⁶ SME Policy Index: Eastern Partner Countries 2016: Assessing the Implementation of the Small Business Act for Europe, SME Policy Index, OECD Publishing, Paris. Available at: https://read.oecd-ilibrary.org/development/sme-policy-index-eastern-partner-countries-2016_9789264246249-en#page1

- **Challenge 4:** *mismatch between VET graduates' skills and qualifications and the needs of the labour market*, which causes increase in professional-qualification imbalance in the labour. **Factors:** weak interaction between the labour market and educational system, low engagement of employers in education process, underdeveloped mechanisms of PPP, insufficient digitalisation of VET sector, low participation level in VET (near 80% of young people are oriented to obtain HE), mismatch of quality of training and market requirements for professional qualifications, low motivation of teachers and problems in engaging teachers and trainers with practical experience, imperfection of current labour legislation and problems with skills forecasting on the labour market of Ukraine.
- **Challenge 5:** *decreasing number of VET graduates who plan to engage in entrepreneurship in the future.* **Factors:** low awareness of students and learners in basics of entrepreneurship and low level of developing of entrepreneurial competences in VETIs.

Solutions to these challenges (implemented measures), and progress achieved since the recent round of TRP:

(1) **macroeconomic measures** aimed at job creation (challenges 1-3): creation of “Export promotion office in Ukraine” in 2018 and adoption of the draft Law of Ukraine “On common transit regime” (2019) and the Medium-Term Priority Action Plan of the Government until 2020.

(2) **active measures on the labour market** aimed at enhancing efficiency of the labour market institutions as well growing activity and employment rates of citizens, decreasing of informal employment (challenges 1-4): providing for retraining and professional advancement in educational institutions and in the workplace; implementation of career guidance activities; granting compensation to employers for employment of individuals non-competitive in the labour market; offering vouchers for training; opening business-centres and business incubators, paying a one-time support to open one’s own business; information and consulting services, etc. Since the *end of the previous round of Torino Process*, it has been introduced an institute of career counsellor, new e-services for social services (“Internet account (cabinet) for a jobseeker (unemployed)” and “Internet account (cabinet) for an employer”), IT-platform “Career Guidance and Career Development”.

(3) **activities on migration policy** (challenge 1 and challenge 3): adoption of the Action Plan for 2018-2021 on the implementation of the Strategy for State Migration Policy of Ukraine until 2025, Action Plan on Ensuring Reintegration of Labour Migrants and Their Family Members into Society, Law of Ukraine “On Introducing Changes to Some Laws of Ukraine on Enhancing Social Protection of Internally Displaced Persons.” Key activities in this area – improvement of the system for managing migration processes, assistance in employment of labour migrants upon their return to Ukraine with account for the needs of the labour market.

(4) **activities which are directly or indirectly related to the system of education and VET** (challenges 1-5): adoption of strategic documents on education (Law of Ukraine “On Education” on the basis of the concept of the New Ukrainian School, Law of Ukraine “On Pre-Tertiary Vocational Education”, Concept on State Policy in VET System “Modern Vocational (Professional) Education and Training” by 2027, Concept of Dual-Based Training). In addition, since the last TRP round, Methodical Guidelines on development and applying a regional order for training of professionals and working staff was adopted. Besides, the Government approved the Procedures on Development of Professional Standards (2017) and the Methodology for their development (2018) grounded on competence-based approach. As a result, employers are able to draft requirements to knowledge, skills, and abilities of a worker, which ensure quality fulfilment of basic labour functions. In order to adjust an outdated content of training, to introduce modern technologies, it was created Advisory Committees composed of employers from the companies in the regions, and Consulting Councils by professions in different industries; elements of DVT are being introduced (challenge 4). In order to provide for coordination of activities of stakeholders and organisations in the field of VET on identifying a regional order for training of staff, to modernise the network of VETIs, regional VET councils were established (challenge 4). To address an issue under challenge 5, entrepreneurship and financial literacy were included into the list of key competencies in VET, training firms are established on the basis of VETIs.

Planned activities (challenges 1-5):

- adoption of a new law on VET and implementation of activities provided in the Concept for implementation of public policy in VET (update of all VET components: content; governance system; VET structure and network; system of multichannel funding; educational activities);
- improvement of activities of regional VET councils on identifying prospective areas for training of qualified working staff on the basis of a regional order;
- development and implementation of a national state policy for digitalisation in education (VET, included) under the Concept for the Development of Digital Economy and Society in Ukraine for 2018-2020;
- creating the system of monitoring of VET graduates employment, including the monitoring of self-employment;
- efficient distribution of powers between the newly created NAQ and MoSP on the functions to confirm results of non-formal vocational training by working occupations;
- redirecting the activities of SES to offer individual services in search for employment and providing client-oriented operations, further implementation of e-services, providing for full-fledged functioning of the institute of career counsellors and the unimpeded functioning of the state register of vacancies, providing implementation of an initiative “Pact for Youth – 2020”;
- improvement of methodological approaches to establish a systematic collection and analysis of information as regards to regional and national labour markets.

Recommendations:

on challenge 1: providing for sustainable economic development of the country; creation of efficient jobs and decrease of unemployment; introduction of the system of lifelong learning, support for employment of young people and enhancement of competitiveness of young employees on the labour market.

on challenge 2: creating jobs which require a high level of qualification, ‘boosting’ (speeding-up) economy restructuring and its unshadowing.

on challenge 3: integration of IDPs in the labour market, creating jobs and motivating employers to employ the IDPs, further funding of vocational training and retraining of IDPs, encouraging IDPs to entrepreneurial activities.

on challenge 4: implementation of a set of activities: changes in the structure of VET governance, improvement of the VET content and labour market monitoring system, amending labour legislation, development of WBL, digitisation of VET (creation of research and education on-line platforms; further introduction of a distance learning, use of “digital jobs” technology; introduction of new forms and methods to enhance digital competence of teachers).

on challenge 5: introduction of encouraging activities for VET graduates who intend to open their own business.

Building block C: Social environment and individual demand for VET

I. Thematic questions

C.1: Participation in VET and lifelong learning

Identification of issues

C.1.1 Participation

Key problem with access and participation in VET is low attractiveness and prestige of VET. This problem is mostly a *feature of VET compared to other sectors of education*. For several decades the status value of VET has gradually fallen due to:

- absence of necessary investments into VET modernisation (see D.1.2)²⁴⁷;

²⁴⁷ https://www.auc.org.ua/sites/default/files/sectors/u-137/zvit_yevo.pdf

- mismatch of demand and supply, quality of training and market requirements for professional qualifications (see B.1.2);
- low accessibility level of HE²⁴⁸;
- poor system of career guidance and career counselling of learners, young people and adults (see C.3.4).

Crisis in VET was aggravated by *global problems and modern challenges*: worsening of the demographic situation both in Ukraine and abroad, increase in labour migration, too high expectations of young people for job attractiveness and access to foreign education (see A.3.1 and A.3.2). Besides, we should consider unfinished reform of the education governance system on the local level (regional and local budgets), low responsibility of local self-government for decisions made, for implementation of state policy in education sector in particular (see E.1.1 and E.1.2).

The interrelated problems are:

- weak motivation of population to obtain vocational qualifications;
- increase of young people share willing to obtain HE to 80%²⁴⁹;
- deficit of skilled workforce on the labour market;
- mismatch of content, duration of VET to obtain vocational qualification and its quality;
- mismatch between material and technical provision of VETIs and modern production technologies;
- lack of monitoring of labour market needs in vocational qualifications;
- too formalised VET governance system;
- lowering (downgrading) of VET teaching staff social status.

Among the other problems there are preserving institutions with poor training quality in the network, especially understaffed VETIs. In the field of *adult education* the key problem is the absence of integral education system of adults which can help to implement lifelong learning concept and legal and regulatory support of adults' education.

These problems are indicated in the Concept of State Policy in the Field of Professional (Vocational) Education "Modern Professional (Vocational) Education" until 2027 approved by CMU on June 12, 2019.²⁵⁰

As the result, **since the last TRP round** the overall trend to reduce the number of people receiving (getting) VET both among youth and adults has been preserved. According to MoES of Ukraine (see A.2.3 and Table 2), the number of IVET and CVET students reduced from 284.8 thousand to 253.9 thousand in 2016-2018; entrance – from 157.5 thousand to 136.1 thousand; graduation – from 152.4 thousand to 133.1 thousand. Reduction in total numbers of VET students and low salaries of VET teachers resulted in respective reduction of VET teaching staff (from 17.8 thousand to 14.8 thousand). There are currently more than 3 thousand open vacancies for pedagogical personnel (which is 9% of the staffing table).

C.1.2 VET opportunities for vulnerable and marginalised groups

Key vulnerable and marginalized groups of population which are eligible for IVET opportunities:

- People with special educational needs and people with disabilities²⁵¹;
- orphans and children deprived of parental care, children from families on welfare benefits (orphans and half-orphans, children from low income families and needy families)²⁵²;
- children of parents who suffered during the Revolution of Dignity, war veterans, people with war-related disabilities²⁵³;
- children with one parent died (gone missing) in Anti-Terrorist Operation zone;
- children with one parent died at time of mass mobilisations of social movements or died as the result of injury, contused wound or maiming at time of mass mobilisations of social movements;

²⁴⁸ According to the draft of the Concept of State Policy in the Field of Professional (Vocational) Education "Modern Professional (Vocational) Education" until 2027.

²⁴⁹ As reported by MoES

²⁵⁰ <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciji-realizaciji-derzhavnovi-politiki-u-sferi-profesijnovi-profesijno-tehnichnivi-osviti-suchasna-profesijna-profesijno-tehnichna-osvita-na-period-do-2027-roku-i120619>

²⁵¹ <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80>

²⁵² according to the Law of Ukraine "On State Social Assistance to Needy Families"

²⁵³ according to the Law of Ukraine "On War Veterans Status and Their Social Protection Guarantees"

- children who live in settlements on the line of contact;
- children registered as IDPs, including children who study full-time in VET schools, – till the time of their graduation from school, but not longer than they are 23 year-old.

With regard for the lack of an official definition of CVET in the laws of Ukraine, key vulnerable groups of population eligible for educational opportunities via retraining and professional advancement (according to CVET definition within the TP context) are identified along with IVET.

In particular, the following categories enjoy preferences when enrolled into VETIs:

- persons granted with the right under the Law of Ukraine “On Raising the Prestige of Miners’ Work”²⁵⁴
- persons granted with the right under the Law of Ukraine “On the Status of War Veterans, and the Guarantees of their Social Protection”
- children of parents who died or became disabled in mining companies, when enrolling for mining specialities and professions, under the Presidential Decree dated May, 19, 1999 No. 524 “On State Welfare Benefits to Children in Training for Mining Specialities, and Whose Parents Died or Received Disability at Mining Companies”²⁵⁵
- orphaned children and children deprived of parental care, as well as persons of the same group aged 18 to 23, under the Resolution of the CMU dated April, 05, 1994, No. 226 “On Improvement of Raising, Education, Social Protection and Material Support of orphan children and children devoid of parental care”²⁵⁶
- children with disabilities and adults with disabilities with no contraindications within the chosen field (speciality), under Art. 22 of the Law of Ukraine “On Fundamentals of Social Protection of People with Disabilities in Ukraine”²⁵⁷
- persons granted the right under the Law of Ukraine “On Status and Social Protection of Citizens Affected by Consequences of Chernobyl Disaster”²⁵⁸ , including also citizens referred to category 3, - provided such citizens get positive scores at entrance exams;
- children of servicemen of the Armed Forces of Ukraine, other military formations, law-enforcement staff who died on duty, for positions provided by public order. In that case, enrollees shall submit the respective document confirming their parent declared as such who died on duty, under the Presidential Decree dated February, 21, 2002, No. 157 “On Additional Measures to Enhance Care about Defenders of the Homeland, their legal and social status, and to Improve Military Patriotic Education of Young People”²⁵⁹

Legal, organisational, social principles and guarantees for state support for orphaned children and children deprived of parental care, young adults who were orphans or children deprived of parental care are set by the Law of Ukraine “On Ensuring Organisational and Legal Conditions for Social Protection of Orphans and Children Deprived of Parental Care.”²⁶⁰ The state ensures full provision for orphans and children deprived of parental care, as well as for persons of this category. Persons from the category of orphans and children deprived of parental care who are doing their studies, in addition to full state provision, are also paid a scholarship 50% higher than a scholarship in the educational establishment, and the 100% of a salary accrued during WBL and work placement.

Besides, at present the state provides *target support* for suffered participants of the Revolution of Dignity, war veterans and children whose parents died during these events, IDPs (adults and children)

²⁵⁴ <https://zakon.rada.gov.ua/laws/show/345-17>

²⁵⁵ <https://zakon.rada.gov.ua/laws/show/524/99>

²⁵⁶ <https://zakon.rada.gov.ua/laws/show/226-94-%D0%BF>

²⁵⁷ <https://zakon.rada.gov.ua/laws/show/875-12>

²⁵⁸ <https://zakon.rada.gov.ua/laws/show/796-12>

²⁵⁹ <https://zakon.rada.gov.ua/laws/show/157/2002>

²⁶⁰ <https://zakon.rada.gov.ua/laws/show/2342-15>

and other categories of people to obtain IVET and CVET²⁶¹. It can be granted in the form of partial or full compensation for study at the expense of educational subvention from the state or local budgets; preferential long-term loans for education; social scholarship; free of charge text-books; free access to Internet, access to state and municipal databases of educational institutions; free of charge hostel accommodation; other benefits approved by the CMU²⁶².

The Law “On Education” defines that the state and local self-government authorities should create the conditions to provide people with special educational needs with opportunities to obtain education on all levels on par with the others. The state trains vocational staff to work with people with special educational needs. The categories of people with special educational needs are specified in the regulatory acts of the Government.

To align with framework Law “On Education” in 2018 the Law “On Professional (Vocational) Education” was considerably amended and *opportunities for people with special educational needs were extended*. At present it is legally defined that VET institutions can form inclusive groups to train people with special educational needs. Buildings, premises and rooms of VETIs should meet the requirements of accessibility for people with special educational needs in line with the National Construction Regulations and Standards. For people with special educational needs content timing and schedule of training process is defined by the education programmes and curricula of a VET institution which (if necessary) can be adjusted to the individual curricula according to individual development programme. People with special educational need are entitled to be trained on individual programme including individual development programme.

The Government adopted Procedures for organisation of inclusive education in VETIs. The document defines organisational principles for inclusive education in such institutions regardless of the ownership form and affiliation, in order to exercise the rights of persons with special educational needs to receive the high quality vocational education and training, retraining, and professional advancement, with account for their needs and capacity (resolution of the CMU dated July, 10, 2019, No.636)²⁶³.

This correlates with general education system in the following: In 2014 the Law “On amending several laws of Ukraine on education to organise inclusive training” was adopted. This Law amended the Law “On general secondary education” according to which special educational needs in training and education of every child including children with special educational needs are taken into account according to the principles of inclusive education. Children with special educational needs who study in special and inclusive classes of GSE schools are provided with free of charge hot catering within all period of study. A teacher of secondary special school (boarding school) should have an assistant-teacher for inclusive classes.

People belonging to national minorities in Ukraine have a right to study in their mother tongue in pre-schools and primary schools. For VET learners and HE students there are a possibility to learn the mother tongue as a separate subject if it is requested by such learners. MoES also provides psychological assistance for learners registered as IDPs and free of charge education for everyone who was enrolled by the state order.

In 2018 according to the SSSU 4 617 people with disabilities (1.8 % of total number of VET learners) entered VET; 10 539 orphans and children deprived of parental care (4.1%); 28 889 children with one

²⁶¹ children of parents considered to be suffered during Revolution of Dignity, war veterans, people with war-related disabilities; children with one parent died (gone missing) in Anti-Terrorist Operation zone; children with one parent died at time of mass mobilizations of social movements or died as the result of injury, contused wound or maiming at time of mass mobilizations of social movements; children registered as IDPs, including children who study full-time in VET schools, – until the time of their graduation from school, but not longer than they are 23 year-old etc.

²⁶² The procedure and conditions of providing state target support for mentioned categories of citizens to obtain VET is defined by CMU

²⁶³ Resolution of the CMU dated July, 10, 2019, No. 636 “On Adopting Procedures for Organization of Inclusive Education in vocational education and training institutions” – Online source. – Available from: <https://zakon.rada.gov.ua/laws/show/636-2019-%D0%BF>

parent (11.3%); 5 091- from disadvantaged families (2.0%), 12 286 - from needy families (4.8%). In 2017/18 academic year among VET graduates 79.2% of orphans and children deprived of parental care and 65.5% of people with disabilities were employed.

Description of policies

C.1.3 Policies to improve VET access and participation

Implemented policies. In Ukraine, VET is accessible to all citizens, except for those who have certain health and age restrictions, and also restrictions by the parameters of occupational capability determined by the CMU²⁶⁴. VET is obtained by Ukrainian citizens in the state and municipal VETIs free of charge, at the expense of the state – within the professions of all-national status, which list is defined in the resolution of the CMU No.818 dated November 16, 2016²⁶⁵. At the expense of regional and/or city budgets – on conditions of the regional order (free of charge for learners).

Social policies to increase the accessibility of VET (in particular, in the form of targeted social programs) are foreseen only for the vulnerable and marginalised groups (see point C.1.4). At the same time, large-scale targeted programs that can be considered as preventive and proactive actions to increase the share of the young people with technical and occupational skills, have not yet been introduced in Ukraine. At the same time, career guidance activities are conducted in schools (see C.3.4). Actions to increase the accessibility of VET also include the use of distance learning technology, online courses and training, the creation and operation of the «Crimea-Ukraine» and «Donbass-Ukraine» educational centres (ECs), electronic libraries and electronic cabinets, etc. (see point B.1.4). A significant role in this area is played by training centres on the basis of VETIs.

In addition to that, in order to resolve the problems mentioned in paragraph C.1.1, starting from November 2018, the Directorate of Vocational Education of the MoES of Ukraine conducts a research of the VET applicants' opinions on their *motivation for obtaining VET in the form of an online questionnaire*^{266,267}. With the purpose to promote working professions, national and regional professional excellence competitions among students of vocational schools are being conducted, as well as a nationwide competition WorldSkills²⁶⁸. Starting from 2014, Goethe-Institute in Ukraine, in co-operation with IVET, NAES of Ukraine, has been conducting contests for students of VET institutions who are studying German²⁶⁹.

Planned policies. One of the main priorities according to the Concept for implementation of the state policy in the area of VET approved in June 2019, which should be implemented by 2027, is *popularisation of VET among the citizens*, as well as *modernisation of the educational environment that provides innovation and access to education*²⁷⁰.

C.1.4 Promoting VET access and participation for vulnerable and marginalised groups

The information on privileges and programs for supporting vulnerable groups of people, including ATO /OJF²⁷¹, is posted on the VET schools web sites. It can be found in the section "Entry Rules". In addition, the following information is provided during the Doors Open Day in VET schools ²⁷², as well as in the videos "How to get professional education". It is posted on the MoES website. The categories of persons provided with such assistance are listed in B.1.2.

The persons of a vulnerable group are given a preferential right to be enrolled in VET schools. For the duration of studies the State ensures their full subsistence and they are provided with the target financing

²⁶⁴ <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80?find=1&text=%E4%EE%F1%F2%F3%EF>

²⁶⁵ <https://zakon.rada.gov.ua/laws/show/818-2016-%D0%BF>

²⁶⁶ As to the research of the VET applicants' opinions on their motivation for obtaining vocational education. Available at: <http://ru.osvita.ua/legislation/proftech/62289/>

²⁶⁷ VET applicant's questionnaire. Available at: https://docs.google.com/forms/d/e/1FAIpQLScbq8C-A2z59tkc_rSE8Z3m6MltgCV7WGm2By0q7QTTfJk3A/viewform

²⁶⁸ World Skills Ukraine. Available at: <http://www.worldskillsukraine.org/>

²⁶⁹ My occupation is the best. Available at: <https://ivet.edu.ua/component/k2/244-moya-profesiya-navkrashcha>

²⁷⁰ <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciyi-realizaciyi-derzhavnoyi-politiki-u-sferi-profesijnoyi-profesijno-tehnichnoyi-osviti-suchasna-profesijna-profesijno-tehnichna-osvita-na-period-do-2027-roku-i120619>

²⁷¹ OIF-Operation of Joint Forces

²⁷² <https://mon.gov.ua/ua/news/u-zakladah-profosviti-startuyut-dni-vidkritih-dverej-oprilyudneno-grafik>

of these expenses. The graduates are supported with public welfare payment, which is set by the CMU. The graduates are also guaranteed employed according to the acquired professions. The public targeted aid for combatants and their children has already been provided in the form of: (1) full or partial compensation for study at the expense of educational subvention from the state or local budgets; (2) preferential long-term loans for education; (3) social scholarships; (4) free of charge textbooks provision; (5) free of charge access to the Internet, database systems in state and communal education institutions; (6) complimentary accommodation in the dormitories²⁷³.

In recent years, most of the activities have been focused on IDPs. At present they mostly make use of social benefits for education, medical care, social assistance, pensions. They are provided with these benefits even if they do not have a residence registration at their new place of stay. The important step was the adoption of the CMU Resolution "On providing the state targeted support to certain categories of citizens for vocational and higher education" (2016)²⁷⁴, the MoES Order "On approval the entry procedure for people living at temporarily occupied territory of Ukraine to obtain higher and vocational education"(2016) ²⁷⁵, as well as relevant amendments to the Law "On Education" ²⁷⁶ and "On Professional (Vocational) Education" ²⁷⁷. The MoES together with the "Open Policy" Foundation created and posted videos on simplified access to the VET for persons from the temporarily occupied territories²⁷⁸. The MoES made arrangements for educational centres "Crimea-Ukraine" and "Donbass-Ukraine" ²⁷⁹.

C.1.5 Flexible VET provision in support of participation in VET

Up to the present the VET system hasn't been flexible enough and well-connected with all other sectors of education except general secondary education.

Implemented policies: Since the last round of TRP the progress has been made in this sphere due to the adoption of the Law "On education" (2017) which stipulates the *basis for VET system flexibility* and connection with all levels of education starting from GSE to education of adults, thus, the *lifelong learning principle is being developed*. In particular, according to the Law, VET is to ensure the competitiveness of a person in the labour market, mobility and *lifelong career promotion*. VET is for the first time used in the Law in the context of GSE after basic secondary education in transition to the profile education (*VET schools-based profiled secondary education*), which will be implemented from September 1, 2027 (see A.3.3)²⁸⁰. It means that the profile education will envision obtaining certain qualifications along with complete GSE.

Certain *flexibility in the developing of own learning trajectory* for VET students now lies in the fact that it is not mandatory to have complete GSE to obtain VET. In particular, people who due to some reasons are not able to obtain VET and complete GSE at the same time and those who need rehabilitation, are entitled to get VET (without completing GSE).

A person who obtained a certain level of VET may continue with further levels of education, including *shortened training programme* in cases specified by the law. The principle to preserve the succession and *lifelong learning* as well as obtaining new qualifications is set.

VET schools train, retrain and provide advanced training (upskilling). According to the current legislation a person has a *possibility to obtain full or partial qualification after certain module-based courses*. However, partial qualifications are not widely used at present. MoES of Ukraine continues to renew VET

²⁷³ according to the Law of Ukraine "On veterans' status and their social protection guarantees". Available at: <https://zakon.rada.gov.ua/laws/show/3551-12>

²⁷⁴ as of November, 23, 2016 № 975

²⁷⁵ as of 24.05.2016 № 560

²⁷⁶ <https://zakon.rada.gov.ua/laws/show/2145-19>

²⁷⁷ <https://zakon3.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80>

²⁷⁸ <https://www.youtube.com/embed/77qt-pOaIO0?fbclid=IwAR0rxRCCUKZqpWgnAg3V5Y99Hj7snMoeFGAZodU-VMdZDhy7dlWkOHYnIXY>

²⁷⁹ <https://mon.gov.ua/ua/tag/zhitelyam-donbasu-ta-krimu>

²⁸⁰ According to the Law "On education" the profile secondary education consists of two components, one of them is vocational focused on the labour market profile training based on the combining general educational content defined by the standards of the general secondary education and professionally-based approach to training taking into account abilities and needs of pupils.

content introducing VET standards for certain occupations with competence-based approach²⁸¹. The approach means structuring such module-blocks of training according to qualifications. However, *partial qualifications* can be included into VET standard only if they are in standard of corresponding occupation. Thus, a student in fact can exercise the right to study separate training modules in line with approved standards and this is certified by a respective document²⁸². In its turn, it is possible to obtain *partial qualification* on a short-term course that is confirmed by a document record or a certificate.

It should be noted that VET standards on module- and competence-based approach are developed on *flexible principles*. With approval of the Guidance on VET standards development on competence-based approach *the development of education programme will be carried out at the level of a VET school and agreed with employers at the regional level* in line with the regional labour market demand²⁸³.

Currently VET standards provide for 20% of variable component in educational content in a total time for obtaining the qualification chosen by the VET school. This optional component is bound to be coordinated with employer on the regional level.

In addition, the Law “On Pre-tertiary Vocational Education” (which is legally separated from VET, but practically belongs to the same sphere) envisions the participation of students in development of *individual curriculum, selection of courses* within the corresponding education programme as well as a possibility to *define duration of this programme* upon approval of the VET school²⁸⁴.

Planned policies: New Draft Law of Ukraine “On Professional (vocational) education” foresees the right to select form of VET, its iterations, change of learning trajectory, and continuation of lifelong learning to obtain vocational qualifications of higher NQF level. Time schedule for students will be planned *according to their personal needs, learning conditions* based on the contract.

Besides, there is the MoES Draft Order “On approval provisions on institutional form of Professional (Vocational) Education” according to the Article 9 of the Law “On Education” where the approaches to different forms of VET obtaining are stipulated: *full-time (daytime), part-time (evening classes), extramural, distance and network*. Implementing these forms will give the opportunity to provide education services to wider range of students *on different learning programmes, modules and work-based in particular*²⁸⁵. This will certainly expand the range of trainings offered by VET.

C.1.6 Validation of non-formal and informal learning

Implemented policies: The laws of Ukraine “On Professional Development of Employees” and “On Employment of the Population” introduce *mechanism of validating outcomes of non-formal VET according to the profession (occupation)*. A person who due to non-formal learning, self-study, and practical experience has obtained an occupation can validate his/her qualification and obtain a standardised document certifying qualification level. It ensures an additional chance for those who were early school leavers to have a facilitated access to formal VET and higher motivation for studying.

As of today Ukraine has a number of adopted regulations necessary for the functioning of the non-formal learning outcomes validation system. In particular, *procedure of non-formal VET outcomes validation*

²⁸¹ Module and competence based approach – is comprehensive approach to develop training content for certain job, focused on obtaining necessary knowledge, abilities and skills for future labour activity.

²⁸² Training module – is a logically completed component of VET standard, based on a separate unit of professional standard, contains training material necessary to train professional, key competences and belongs to a certain level of qualification.

²⁸³ In particular it was fixed already in the CMU Order from 31.05.2017 N 373 “On approval Procedure for development and approval professional standards”; CMU Order from 14.12.2016 N 1077 “On approval Action plan on implementing the National Qualification Framework for 2016-2020”; order of MoSP of Ukraine from 22.01.2018 N 74 “On approval the Guidelines for professional standards development”; Order of the MoES of Ukraine from June 30, 2017 N 946 “On development the standards of professional (vocational) education using competence-based approach in 2018”, which allow to develop VET standards using competence-based approach and on their basis the schools can prepare educational programmes using module- and competence based approach.

²⁸⁴ <https://zakon.rada.gov.ua/laws/show/2745-19>

²⁸⁵ <https://mon.gov.ua/ua/news/mon-proponuye-dlya-gromadskogo-obgovorennya-proekt-polozhennya-pro-instituciju-formu-zdobuttya-profesijnoyi-osviti>

according to the professions (occupations) was approved by the CMU Order No 340 as of May 15, 2013. Citizens of Ukraine, foreigners and not-citizens who have permanent residence in Ukraine and people who are considered to be refugees, people who have asylum in Ukraine, who require additional protection, who are provided temporary protection and those who are granted permit for immigration to Ukraine can validate their qualification. *The mechanism of validation is the same for all categories of people.*

List of professions which are included into non-formal VET validation mechanism is approved by the MoSP Order No 886 as of December 23, 2013²⁸⁶. At present it is possible to validate results on 6 professions²⁸⁷.

Validation bodies are companies, institutions, organisations, regardless the forms of ownership in line with the agreement made between the validation body and a person or employer. Requirements for such bodies are listed in the Order of MoSP and MoES N 875/1776 as of December 16, 2013²⁸⁸²⁸⁹. To consider issues of conformity of validation bodies to requirements set by the MoSP a guidance counselling body – *Interdepartmental work group*²⁹⁰ was established. As a result of the Group's meetings the List of validating bodies²⁹¹, which is approved by MoSP, was formed. The commissions on qualification validation created by the validation bodies include representatives of employers – experts from relevant sector of industry or service with the relevant work experience not less than 5 years and with corresponding level of qualification.

A person who validated qualification obtains *documents certifying the outcomes of non-formal VET*: certificate on awarding (reskilling) VET according to outcomes of non-formal VET and assessment certificate of non-formal VET outcomes²⁹². As of May 1, 2019 the VET qualification “Cook” was validated and certificates were given to 181 persons and certificate on validation of partial qualification was given to 2 persons. The number of people who want to validate the outcomes (results) of non-formal learning is growing. Thus, in 2016 the qualification was validated by 14 people; in 2017 – 60 people; in 2018 – 85 people; in January-April, 2019 – 24 people. The number of companies and education institutions which want to be Entitled as Validation body is also growing²⁹³.

It should be noted that validation of outcomes of non-formal learning is done by way of assessment and measurement of the level of professional knowledge, abilities and skills. The assessment and measurement is based on criteria developed and approved by the validation bodies. To assist the work of such bodies *Guidelines for assessment criteria of professional knowledge, abilities and skills, list of tools to measure professional knowledge, abilities and skills, self-assessment of non-formal VET outcomes questionnaires (2015)*²⁹⁴ and *Guidelines for assessment process and validation of outcomes of non-formal VET on vocational professions(2016)*²⁹⁵ were developed. The provisions of these documents are in line with the implemented process of validation *included into NQF*²⁹⁶.

Planned policies: At present there is a need to expand the List of profession (occupations) for non-formal learning outcomes (results) validation. In 2018 the regional employment centres asked employers

²⁸⁶ registered in the Ministry of Justice in 09.01.2014 under N 5/24782

²⁸⁷ “cook”, “welder”, “security guard”, “electric manual welder”, “nonfood goods seller”, “maintenance fitter”.

²⁸⁸ registered in the Ministry of Justice in 08.01.2014 under N 3/24780

²⁸⁹ Qualification validation is based on outcomes of assessment and measurement of the level of professional knowledge of a person, abilities and skills. The assessment and measurement are based on criteria developed and approved by the validation body in coordination with the MoSP, MoES and social partners.

²⁹⁰ where representatives of MoSP, MoES, State Labour Service, other VCS and social partners are included.

²⁹¹ In particular for validation body to validate the outcomes of non-formal vocational training people on “Cook” profession Odesa VET, Rivne VET and VET N33 of Kyiv were appointed (MoSP Order N 256 from 16.03.2016 amended).

²⁹² The procedure of issue and forms of documents on validation the outcomes of non-formal VET are approved by the MoSP Order from 17.07.2014 N 477

²⁹³ Employers can provide formal or non-formal learning of employees taking into account needs of their business or other business in compliance with the law.

²⁹⁴ <https://www.msp.gov.ua/news/8111.html?PrintVersion>

²⁹⁵ <https://www.msp.gov.ua/files/MR.pdf>

²⁹⁶ <https://zakon.rada.gov.ua/laws/show/1341-2011-%D0%BF>

and jobseekers (unemployed) about arrangement of non-formal learning validation process²⁹⁷. As a result of the questionnaire 15 professions were defined by jobseekers and employers as the most requested professions to be included into the List of validated professions. Besides that, the MoSP received propositions from employers from mining, electricity and energy industries and the railroad company. In 2019 it resulted in consideration of these professions and the List of professions (occupations) was expanded by more than 50 items.

Development of professional standards which set requirements for workforce qualification, professional and overall competences is an impetus to further work on validation of non-formal learning. Besides, at present there is no Procedure and guidelines of assessing standards development. Their development ensures unified approach to validate qualification obtained not only after non-formal or informal learning, but also the outcomes of formal learning.

In general the mechanism of non-formal learning outcomes validation requires improvement; in particular, creation of functioning independent qualification centres (to validate outcomes of vocational non-formal learning according to each profession or qualification or partial qualification)²⁹⁸. Recently founded National Qualification Agency is also expected to have a function of developing requirements for procedures to award qualification, validate outcomes of non-formal and informal learning.

C.2: Equity and equal opportunity in VET

Identification of issues

C.2.1 Success of learners in VET

At the national level, neither information on the graduation rate by type of VET and programme, nor on the percentage of students or learners repeating the year is available.

Partially, there is data on students enrolled within the framework of the state or regional order who dropped out during the first year: in 2018, they made 4.5% of the total number of students enrolled on the state-order or regional-order basis. This indicator did not considerably change compared to previous years: the corresponding share remained nearly the same (in 2017 — 4.5%, in 2016 — 4.9%, in 2015 — 4.2%, respectively)²⁹⁹. As for the other segments of education system (HE and GSE), the information on dropouts is not officially published.

According to the focus groups organised by the MoES in May and June 2019, with the participation of the departments of education and science of oblast (regional) state administrations, *the main reasons for dropouts of VET students are the following: insufficient motivation, missing of lessons, poor discipline*, etc. This is also affected by the lack of competitive selection of learners.

VETIs need to find the best ways to preserve the contingent of learners, which became an important problem in recent years.

According to the results of training, in addition to the usual diplomas of a qualified worker, **diplomas with distinction** were also received, as average, by from 0.5% to 2% of graduates of VET system.

C.2.2 VET learners in need of additional learning and training support

VET system in Ukraine is socially oriented, that means that it serves to protect vulnerable groups of youth. These are orphans and children deprived of parental care; individuals with disabilities; children with one parent; children from families in difficult living conditions, low-income families, etc.

²⁹⁷ 38.4 thousand unemployed took part, 13.2 % of them pointed that they wanted to validate their qualification after non-formal learning and 16.1 % of unemployed believed that the validation of non-formal learning would promote their employment. 27.9 thousand employers took part, 4.7 % of them pointed that they had a need to validate qualification of their employees.

²⁹⁸ According to the Law of Ukraine “On Education” centres for assessment and validation of learning results (in particular those which are non-formal or informal) are accredited to award and/or validate corresponding vocational qualifications.

²⁹⁹ State Statistic Service of Ukraine. Statistical Book “General educational and VET institutions of Ukraine”. Available at: http://www.ukrstat.gov.ua/druk/publicat/kat_u/publosvita_u.htm

A complete list of such categories of individuals and the corresponding types of aid (benefits) are presented in clauses C.1.2 and C.1.4.

Orphaned children and children deprived of parental care are entitled to free accommodation in a hostel with necessary living conditions and conveniences; employment is provided in the event of completion of training, financial aid is provided for the purchase of textbooks, educational supplies, clothes, footwear, and other household goods. According to the current legislation, funds are allocated for the payment of social and academic scholarships to the corresponding categories of learners that are expended every year. Financial support for all categories of orphans and children deprived of parental care and similar individuals include disbursements of cash aid during the processes of employment. Besides, 3 meals a day are provided (for orphans). With the support of local authorities, funds from the regional budgets are allocated for health improvement of VET learners representing the abovementioned groups.

IDPs also enjoy the majority of social benefits — education, medical care, social assistance, pensions — even if they do not have a residence registration at their new place of residence. Significant support is also provided to combatants, children of combatants (ATO participants and individuals affected during the Revolution of Dignity) those who suffered in the result of Chernobyl nuclear disaster (see C.1.2 and C.1.4.).

In VET institutions, proper conditions for training, upbringing, living, rest and unhindered access to quality VET are created for learners from socially deprived groups; they are also provided with psycho-pedagogical, social-medical, consultative-informational, financial, material assistance and ensuring with social protection

At the same time, there are technical problems related to the lack of appropriate conditions for people with special needs: the absence of special external and internal elevators for wheelchairs, bathroom stalls, mobile handholds and other equipment (see point D.1.2). In addition, some VET institutions face ***a problem of the lack of special staff which is needed to arrange proper training for people with special needs.*** *The situation in other sectors of education, in particular in GSE and HE institutions, looks relatively better considering the fact of the differences present in the financing system of these sectors.*

The number of children-orphans and children deprived of parental care who were trained in VET institutions during 2011–2017 was an average of 4.4-4.7% of the total contingent and individuals with a disability — 1.4-1.7%. In 2018, the situation has not changed very much. The respective shares were as 4.1% and 1.8% respectively³⁰⁰.

In 2018, VET institutions graduated 4 455 orphans and children deprived of parental care (3.3% of the total number of graduates); and 1 707 individuals with physical and/or mental disabilities (or 1.6% of the total).

Statistics as to the contingent of VET institutions graduates which are IDPs, combatants, children of combatants (ATO participants, individuals affected during the Revolution of Dignity) are not currently published separately.

Description of policies

C.2.3 Measures in support of equity in VET

VET system is open for graduates from both institutions of GSE and special educational institutions (boarding schools), since the enrolment for study at the first-cycle VET does not require that an applicant should have basic or complete secondary education³⁰¹. VET sector currently provides education for all learners, including representatives of socially vulnerable and marginalised groups of the population.

An important change to maintain equality in VET system, since the last round of TRP, was the

³⁰⁰ State Statistic Service of Ukraine. Statistical Book "General educational and VET institutions of Ukraine". Available at: http://www.ukrstat.gov.ua/druk/publicat/kat_u/publosvita_u.htm

³⁰¹ In accordance with paragraph 28 of the CMU resolution as of August 17, 2002, No. 1135 "On Approval of the State Standard of Vocational Education".

adoption of the Law “On Education” (2017) and the Law “On Amendments to certain Laws of Ukraine as to Access of Individuals with Special Educational Needs to Educational Services” (2018). As a result, the relevant changes were made to the Law on VET in order to ensure the right of people with special educational needs to acquire an education and to receive psychological, pedagogical, remedial and developmental services.

In VET system for people with special educational needs, along with the traditional ones, **alternative forms of learning are allowed to be applied**.

In accordance with the individual characteristics of educational and cognitive activity for each learner with special educational needs, **an individual program of personal development (an adapted curriculum) is designed** that provides personalising of training and defines specific training strategies and approaches.

The hours planned for remedial and developmental classes are not taken into account when determining the maximum allowed weekly training load for learners with special educational needs. Remedial and developmental classes are conducted taking into account the peculiarities of the learner’s educational and cognitive activity. **Special groups** are completed with 6–12 learners basing on the homogeneity of disorders and recommendations of psychological, medical and pedagogical consultation.

For learners with physical and/or mental disabilities, *the duration of vocational training* can be increased by 1.5–2 times, depending on the type and severity of the disease and the complexity of training material. The Pedagogical Council can approve appropriate decisions at its meetings³⁰².

The full implementation of these actions is constrained by the lack of financing of VET sector and the lack of specially trained staff to work with the representatives of socially unprotected and marginalised groups of population.

These policies and practices are typical not only of VET system, they make a part of a broader approach to the Ukrainian system of education. In particular, it is related to the development of inclusive education, an area in which a significant step has been made over the last three years (see in detail paragraph C.2.4).

³⁰² In accordance with "Methodological recommendations for the development of working curricula for occupations of the second and third levels of VET in accordance with the requirements of state VET standards of specific labour occupations", approved by the order of the MoES dated August 23, 2006 No. 633.

Best practices

Supporting equity in VET: training of students with special education needs

Kherson region. In order to provide access to VET for graduates of special schools (boarding schools) with intellectual disabilities, which require a special approach to learning process organisation, the institutions of Kherson region have developed curricula and programs for these groups of population. Students with special education needs study in special groups at four educational institutions: Kherson Professional Lyceum of Communication and Polygraph, Kherson Professional Lyceum of Food Industry, Arkhangelsk Professional Agrarian Lyceum, Oleshkiv Professional Lyceum. They obtain the following occupations: seamstress, cook, baker, wood painter, locksmith repairer. In the 2016/2017 academic year there were enrolled 142 persons, in 2017/2018 – 107, and in 2018/2019 – 103. The maximum number per group is 12 persons. Over the past three years, 144 skilled workers have been graduated from these institutions, of which 129 have found jobs. In order to organise the appropriate educational process for people with special educational needs in 2019, these 4 VET schools received funds from the State budget to purchase special learning tools (total of 1,133.8 thousand UAH).

Kyiv region: a database on the number of children with special education needs and conditions for obtaining education in VET schools was created and is annually updated. The roadmap for organising the training of such individuals in groups of VET schools was developed. Students with disabilities obtain the occupation of “Wood and Birch Barker” in a special group at Bila Tserkva Vocational Lyceum. The curriculum and programs are adjusted taking into account the physical characteristics of students with hearing impairments, including in the subject “Protection of the Fatherland”. Teaching of subjects is carried out with the help of a specialist in sign language translation. In addition, to classes in a special group on physical education are provided by trainers from the Bila Tserkva Youth Sports School twice a week on a special program. Students with autism study at Vasykiv Vocational Lyceum. The students with a delay in mental development, chronic diseases (heart disease and allergies); neuropsychiatric diseases with visual impairment study at this VET institution as well. With the MoES assistance 13 new professions for inclusive education were licensed, including: seamstress, cook, baker, bank teller, information and software processing operator, decorator for window premises and buildings etc. The modern material and technical base has been provided for that purpose in the institution. For professional integration of children with disabilities, an information resource centre with modern equipment operates at Vasykiv Vocational Lyceum; EPC for service sector; EPC for sewing industry.

C.2.4 Inclusive education and VET

Definition of “inclusive education” and implemented policies: In December 2015 Ukraine ratified basic international agreements in the field of children’s rights protection in line with international standards of education, social protection and healthcare. First of all it is the Article 24 of UN Convention on the Rights of Persons with Disabilities which sets out the obligation of the State to ensure realisation of inclusive education model. In other words it creates special educational and space environment to ensure that all children are equal participants of educational process in inclusive educational environment in accordance with their needs, capabilities and opportunities. This model is an alternative to the boarding school system or to home or individual education where these children are educated and kept separately from other children.

The remarkable progress since the last round of Torino Process was the adoption of the law of Ukraine “On Education” in 2017, where *one of the main priorities of state policy in education was the development of inclusive educational environment*. It included educational institutions which were nearest and the most accessible to the place of residence of people with special educational needs³⁰³. According to the Law *inclusive education* is a system of educational services guaranteed by the State which is based on the principle of non-discrimination, human diversities, effective involvement and engagement of all participants of the education into this process. *Inclusive educational environment* is a set of conditions, ways and means of their realisation for co-education, upbringing and development of learners based on their needs and capabilities. *Person with special educational needs* is a person that needs additional permanent or temporary support in the educational process in order to ensure his/her right to education. According to the Article 19 of the Law, the State and local self-government authorities have to create conditions to exercise rights and opportunities of persons with special educational needs to obtain education at all its levels based on their individual needs, capabilities and interests³⁰⁴. The State ensures training professionals for work with such persons.

Besides, in autumn 2018 the amendments in terms of inclusive education were made to the Law of Ukraine “On Professional (vocational) education”³⁰⁵, according to which *inclusive professional (vocational) education* is defined as a system of educational services guaranteed by the State to obtain

³⁰³ <https://zakon.rada.gov.ua/laws/show/2145-19>

³⁰⁴ Education is provided to persons with special educational needs equal with other persons, including provision of duly financial, staff, material and technical means and also reasonable corrections based on individual needs of such persons listed in the individual development curricula.

³⁰⁵ <https://zakon.rada.gov.ua/laws/show/103/98-%D0%B2%D1%80?find=1&text=%B3%ED%EA%EB%FE%E7>

VET skills by people with special educational needs. It is expected that VETIs can form inclusive groups to train people with special educational needs. A person with special educational needs, his/her parents, or proxies should write an application and submit it to a head of a state VET school. The head has to *form inclusive groups for people with special educational needs*.

Last year's novelty was the creation of *inclusive resource centres (IRCs)* according to the CMU Order "Some questions on resource centres for inclusive education support and inclusive resource centres creation" (2018)³⁰⁶. This brand-new institution in Ukraine was created to exercise the right of children with special educational needs aged from 2 to 18 to obtain pre-school and GSE in particular in **VETIs** and other educational institutions, which ensure realisation of comprehensive psychological and educational assessment of a child development, psychological and educational, correction and development services and their systemic and qualified support.

In addition, provisions for inclusive education are envisioned in the *National Strategy for the Reform of the Institutional Care and Upbringing of Children for 2017-2026 (2017)*³⁰⁷.

The Government adopted the *Procedures for Organisation of Inclusive Education in VET institutions* by the Resolution of the CMU dated July, 10, 2019, No.636.³⁰⁸ The document stipulates organisational principles for inclusive learning in such educational institutions regardless of ownership and affiliation, in order to exercise the right of people with special educational needs to obtain a quality VET, retraining, or professional advancement, with account for their needs and capacity. The Resolution ensures the provision of modern equipment for educational institutions, in accordance with their educational needs; the development of various learning forms and methods (such as distance form), barrier-free access to buildings and facilities of the educational institution for people with disabilities; engagement of the respective teaching staff (sign language interpreter, visual impairment specialist, special education teacher, speech therapist, occupational therapist, practicing psychologist); providing an assistant for people with special educational needs during their stay in the educational institution; career advice.

In 2017 it was the first time when the Ukrainian government funded inclusive education through target subsidy from the State budget, which amounted to UAH 209.4 m³⁰⁹. In 2018 the amount of state support was UAH 460.5 m (including UAH 304.5 m to support people with special educational needs; UAH 100 m to equip IRC offices, UAH 56 m to elaborate guidelines for comprehensive assessment of such children development progress). The CMU changed the initial amount of funding for conducting lessons and of purchasing correctional devices, increasing the amount for the latter (from 80:20 to 66:34 respectively). It also approved purchase of equipment for common (joint) use if an education institution enrolls several children with the same needs. In 2019 the planned educational subsidy is set at UAH 504 m. For the first time it is planned to fund: UAH 37 m – for inclusion in pre-school education, **UAH 25 m – for inclusion in VET**; the increase in the pay-rates for teachers' assistants (from 0.5 to 1). Additionally, UAH 624 m was allocated from the State budget for wages for the IRC staff. In 2016-2018 the number of GSE schools with inclusive classes increased by a factor of 2.5 (from 1518 to 3788), the number of students – threefold (from 4180 to 11839). 11560 schools provided non-barrier access to the first floor – 74% of total number of GSE schools. In 2018 there were 516 IRCs and 24 regional resource centres, in 2019 it is planned to open 184 more IRCs³¹⁰.

Best practices: inclusive education

Kharkiv region: the Regional Vocational Training Centre for Innovative Technologies in Construction and Industry pays particular attention to introduction of inclusive education. Every year, the Centre enrolls 60 students with special needs, 25 of them with disabilities. They are trained for such professions (occupations) as "Gardener" (26 students); "Painter" (14 students) and "Plasterer" (20 students). After graduation, all of them get employment according to their profession. The Centre has a team of specialists and teachers that create the necessary environment for appropriate education of these students in inclusive groups. In 2017, the Centre has opened a bibliotherapeutic centre for students with special needs "BIBLIO-ART Workshop".

Planned policies: Ukraine has managed to make a remarkable progress in inclusive education development. Taking into account abovementioned it is primarily related to GSE sector. But despite

³⁰⁶ <https://zakon.rada.gov.ua/laws/show/ru/617-2018-%D0%BF>

³⁰⁷ <https://zakon.rada.gov.ua/laws/show/526-2017-%D1%80/stru>

³⁰⁸ <https://zakon.rada.gov.ua/laws/show/636-2019-%D0%BF>

³⁰⁹ <https://mon.gov.ua/ua/statistichni-dani>

³¹⁰ MoES of Ukraine Inclusion for everybody: Educational policy and practice (Liliya Hrynevych the Minister of Education and Science of Ukraine, January 25, 2019). Available at: <https://mon.gov.ua/storage/app/media/inkluzyvne-navchannya/prezentacii/mon2019-01-25inkluzivne.pdf>

numerous changes in the legislature, the actual expansion of inclusive education in VET sector is rather low. In this context, an important step will be in the implementation of activities stipulated by the CMU Resolution On *the procedure of organisation of inclusive education for people with special educational needs in VET* approved in July, 2019³¹¹.

C.3: Active support to employment

Identification of issues

C.3.1 Employability of VET graduates

In Ukraine, the mechanism for the VET graduates employment is determined by the Procedure for the employment of VET institutions graduates trained for the state order³¹².

Under the conditions of workforce shortage and mass labour migration of Ukrainian workers the employment capacity for VET graduates is high. According to MoES administrative data, in the 2017/2018 academic year 109.6 thousand of VET graduates were employed according to the acquired professions. It is 82.8% of the total number of graduates (89.7% in 2016/2017, respectively). In 2019 the VET graduates are the most demanded in the labour market for such professions as welders and gas cutters, mechanics and assemblers of agricultural and industrial machines, electromechanics and electrical installers, motor vehicle drivers and vehicle maintenance workers³¹³.

The results of the "School-to-work transition surveys" confirm that a young person's education affects the stage of his/her transition to the labour market, and, accordingly, the employment opportunities. In particular, 62.6% of those polled completed their transition to the labour market. 36.1% were "in transition process" and 1.3% was at the "not yet started transition" stage (compared to 69.7%, 29.0% and 1.3% of young people with HE). At the same time, the corresponding shares for persons with primary and basic secondary education are 46.2%; 49.1% and 4.7%, respectively³¹⁴. This research confirmed the existence of significant obstacles for young people on their way to the labour market. These impediments refer to problem of identification of young people's skills; the significant youth employment in the informal economy; low youth awareness of labour rights; unreasonable underestimation of wages and widespread practice of extra-working hours for young workers.

Another problem is lower than expected wages offered by employers to VET graduates in majority of economic sectors. It contributes to labour migration. Mostly, it does not refer to mining and metallurgical industry enterprises. Qualified workers in these sectors are one of the most highly paid³¹⁵. Also, the imperfection of the current labour legislation does not allow employers to raise workers' wages in many cases. In particular, for an employee to occupy a higher position with better wages, it is necessary to work long³¹⁶. The crucial problem is the mismatch between VET graduates' knowledge and skills and the employers' demand.

³¹¹ <https://mon.gov.ua/ua/news/mon-proponuye-dlya-obgovorennya-poryadok-organizaciyi-inklyuzivnogo-navchannya-u-zakladah-profesijnovi-profesijno-tehnichnovi-osviti>

³¹² <https://zakon.rada.gov.ua/laws/show/784-2010-%D0%BF>

³¹³ The Institute of professional qualifications. GIZ Project. The analysis of labour market needs challenges and possibilities at the Eastern Ukraine territory. Available at: http://www.ipg.org.ua/upload/files/files/03_Novyny/2019.05.15_Zvit/IPQ_Report_09.05.19.pdf

³¹⁴ The Ukrainian youth transition to labour market: the results of international study «School-to-work transition surveys» in Ukraine in 2013 and 2015 / Ella Libanova, Oleksandr Tsymbal, Oleh Yarosh and Larysa Lisogor // International Labour Organisation. Geneva. Available at: https://www.ilo.org/employment/areas/youth-employment/work-for-youth/publications/national-reports/WCMS_536293/lang--en/index.htm

³¹⁵ Based on information of the Steel workers federation of Ukraine in January 2019 the average monthly salary of a locomotive operator was from 19 722 to 28 129 UAH, a chuteman – from 14 644 to 29 595 UAH, of a Ukrainian steelworker from 18 220 to 34 193 UAH.

³¹⁶ For instance, qualification requirements for a pipes and rough materials cutter could get the higher skill-category and wage only after having 0.5-1 year of the working experience of a lower category. In other words, the 1 category worker will have the fourth category no earlier than in 2.5 years.

C.3.2 Economic factors with an impact on transition

Mentioned economic factors (lack of labour demand because of insufficient job creation, oversupply of labour due to migration) are not typical for Ukraine. On the contrary, as it was mentioned in B.1.3 and C.3.1, there is a lack of labour resources and mass labour migration of Ukrainian workforce. *The key economic factor* in this situation is **limited number of jobs with suitable working conditions and wages**. Significant share of young people engaged in informal economy should also be taken into account³¹⁷.

Besides, the lack of motivation to take available jobs significantly decreases employment opportunities of VET graduates. The reason is in hard labour conditions and complicated labour processes, low motivation of graduates to be employed because of low wages offered. Therefore, the priorities are to improve jobs quality, stimulate young people to transit earlier to labour market as well as to raise wages. Additionally, there are some administrative barriers preventing VET graduates from access to certain positions which should be minimised (see B.1.2).

It should be noted that the *non-economic factors* mostly discourage VET graduates to enter the labour market. Above all, *employers are reluctant to hire VET graduates as they have no working experience*. Besides, there is an *obligation to follow labour legislation when employing young graduates*. Also, there is a mismatch between the level of knowledge and skills obtained by graduates and employers' needs; problems with organisation of students' and teachers' WBL to ensure quality of VET etc.

Description of policies

C.3.3 Overview of policies in support of employability and transition to employment

State policies (implemented and planned) in support of employability of young people by ways of **improving the quality and relevance of skills development in VET** are described in the Building block on internal efficiency and operation of VET system (see blocks D.1.3, D.1.4, and D.3). They include a wide range of policies connected with improving quality and relevance of VET content to labour market needs, renewal of educational content, improving teaching methods, improving educational environment which finally facilitates transition of young people to employment.

Policies in support of **employability and from VET to employment transition of young people** are some active labour market policies described in details in B.1.6, including implemented and planned policies. In particular, according to the Laws of Ukraine "On Employment of the Population" and "On compulsory state social insurance against unemployment" these policies include various information and consulting services related to employment; career guidance; promotion entrepreneurship for VET graduates, by means of opening entrepreneurship development centres and business incubators, single paid assistance to open own business etc.³¹⁸; further training or work-based learning³¹⁹; support of employability including community and other temporary work; providing employers who employ VET graduates with compensations; organising employment fairs, career days, career guidance days, open house days in EC of SES etc. In particular, review of policies in support of employability and transition of young people to employment with the help of **career guidance** and **entrepreneurial development** is presented in B.2.2 and C.3.4.

Since the last round of TRP in order to renew the content of vocational career guidance for population, especially **the youth**, in 2018 the *Concept of state system of vocational career guidance for the population* was renewed and the relevant *Action Plan* of its implementation was approved³²⁰³²¹. The

³¹⁷ Ukrainian young people transition to work: International survey "School-to-work transition surveys" results in Ukraine in 2013 and 2015/ Ella Libanova, Oleksander Tsymbol, Oleh Yarosh and Larisa Lisoher. // International Labour Organization. Geneva. Available at: https://www.ilo.org/employment/areas/youth-employment/work-for-youth/publications/national-reports/WCMS_536293/lang--en/index.htm

³¹⁸ According to the Part Seven of the Article 22 of the Law of Ukraine "On compulsory state social insurance against unemployment" job seeking allowance can be paid once to organize business to jobseekers who are not able to find a suitable job because there is no on the labour market.

³¹⁹ According to the Law of Ukraine "On Employment of the Population" HE and VET students have right to obtain internship relevant to their vocational training, in enterprises, institutions and organisations regardless the form of ownership in line with the agreement on internship in time free from learning.

³²⁰ CMU Order No 561 as of 09.08.2017.

³²¹ CMU Order No 469 as of 04.07.2018.

Plan envisions innovative career guidance services for population, implementing public-social governance, more comprehensive coverage of population with vocational services.

Besides that, as part of support of productive employment the Cabinet of Ministers of Ukraine has approved *the Procedure of registration and renewal of registration for jobseekers (2018)*³²². This document is the legal basis for implementing:

- *career guidance counsellor institution*, who can provide an individual approach to every client of SES, quality service of career planning taking into account employers needs and jobseekers' possibilities;
- *profiling of unemployed and jobseekers* to assess possibility of their employment with their skills, qualifications and providing target services to return these people to the labour market;
- *individual plans for providing employment services*. These plans will be a joint venture (programme) of career guidance counsellor (with individual support and organisation of service) and a jobseeker or a registered unemployed with mutual obligations for seeking a job.

This document realisation will improve the quality of SES services, in particular, it will facilitate better selected vacancies for jobseekers or registered unemployed, increase of the number of successful cases of bringing such people back to the labour market and establishing cooperation with employers in finding skilled workers. At the same time, cooperation with employers in organisation of work-based learning for young people is being developed³²³. The principle of individual further training programmes is applied, including in-company internship to obtain new competences.

SES supports the promotion entrepreneurship for young people. The business-forums, competitions, meetings, round tables, workshops, trainings, consultations for the promotion entrepreneurship for young people have been held. Highlights are made to inform people on much-in demand directions of entrepreneurship in the region; about organisations, projects, donor-programmes, crowd-funding platforms that give support to open business; possibilities to learn business basics especially in support of the SES. In 2018 the Employment Centres held 488 events for 16.8 thousand young people³²⁴. People who expressed their wish to organize their own business can take part in the workshops "How to start business?", "Workshop on issues how to organise green tourism" etc. (8 thousand workshops were conducted with over 90 thousand people participated in 2018). The individual career guidance services have been provided with the use of psychodiagnostic testing to assess entrepreneurial skills. Unemployed who decided to start their own business with SES support are trained entrepreneurial basics in educational institutions. The consulting centres and centres for entrepreneurial development provide free of charge expert counselling. Single paid assistance to open own business is provided. During 2018 893 people aged under 35 used this service. The Order approved by the MoSP "On approval Guidance recommendations on mentoring" (2017) to provide professional adaptation of workers who start their work in the company³²⁵.

C.3.4 Career guidance

Activities aimed at enhancing employability among young adults include, among others, career guidance and career planning. Present-day social economic conditions in Ukraine require the establishment of an entire system for professional orientation. It shall provide for the choice of profession relevant for the labour market, and training of qualified workforce able for lifelong learning, advance their qualification levels, and get a new profession, if required.

Implemented policies: The renewal of *the Concept of state system of career guidance for the population (2018)* has become the important step of such integral system creation *since the last TRP round*³²⁶. To implement this system *the Action Plan for the implementation the Concept of state system of career guidance for the population (2018)* was approved³²⁷. The Plan envisions to engage communities and business into the management of career guidance for the population; to provide

³²² <https://zakon.rada.gov.ua/laws/show/792-2018-%D0%BF>

³²³ In May 2018 SES held a round table "Vocational work-based training of unemployed people development: current status, problems, perspectives". The recommendations were sent to MoSP, MoES, Joint Representative Body of Employers on the national level, ESTI SES, Regional Employment Services.

³²⁴ as reported by SES

³²⁵ N 1611 from 11.10.2017.

³²⁶ CMU Order N 561 from 09.08.2017.

³²⁷ CMU Order N 469 from 04.07.2018.

systemic and comprehensive service coverage for all groups of population; to give innovative, career guidance services to population. Among others regulations concerning issue there have been the CMU Orders “On Approval of State Targeted Social Programme “Youth of Ukraine” for 2016 - 2020” (2016)³²⁸, SES Programmes for career guidance for 2017 – 2020 (2017)³²⁹, Action Plan for the Programme “Basic tasks and mechanisms of implementing SES Programme for career guidance for 2017-2020” (2017)³³⁰.

Today the career guidance work involves *government authorities, social dialogue stakeholders and civil society institutions*. SES plays the most important role among the government bodies. Employment Centres provide young people with *career guidance services, giving them information on market-forming companies, much-in-demand jobs, vocational training courses, vocational schools, individual career guidance consultations, including testing technologies*³³¹. The focus is made on the career guidance for people not in employment, education or training. Along with that the career guidance support of students and GSE graduates is conducted to implement SES career guidance programme for 2017-2020³³². The consultations *how to select a job are carried out, career guidance lessons, career guidance tours, educational institutions’ open house days, interactive competitive and motivating events (vocational tournaments, master-classes, quizzes), employment fairs, career days etc.* As a part of cooperation with Career Centres *psychodiagnostic consultations, meetings with employers are provided, graduates resume databases are created* for young people who **study in VET etc.**

Employment centres promote modern forms of job seeking and employment using Internet, resume and video-resume database services, on-line interviews, psychodiagnostic testing in automated working station “Profkonsultant” (Vocational consultant). The possibility of distance learning for young people with help of free of charge educational web-portals is also provided. In 2018 SES introduced career guidance testing on “Career guidance and career development”³³³ and “My job: Consulting network” web-platforms³³⁴³³⁵. According to SES in 2018 over 30 thousand people were tested on these Platforms.

During 2018 1.3 m of young people received career guidance services from SES, they studied in different types of educational institutions. In particular, there were 80 thousand HEI students, *64 thousand VET students* and 1.2 m GSE pupils³³⁶. In 2018 in order to do the career guidance work over 11 thousand GSE schools (68%) were engaged by EC³³⁷. In cooperation with social partners and employer’s organisations over 14.5 thousand career guidance events were held for young people to motivate them to choose VET occupations³³⁸.

Overall, 360.6 thousand unemployed young people aged under 35 (95.7%) got 1.6 m career guidance services in 2018. They were provided with 597.5 thousand career counselling services, incl. 55.4 thousand consultations with psychodiagnostic tests. 10.3 thousand young people took part in vocational occupation selection on employers’ demand. As the result – 44.4 thousand young people selected occupations in demand in the labour market and 124 thousand young jobseekers found a job. Summing up, in 2018 over 1 m jobseekers got the career guidance services (96.6% of registered unemployed); over 97 thousand events were held; 4.8 m career guidance services were provided.

The forms and methods of information, counselling and career guidance work *with adult population* are developed (workshops on labour market issues, job seeking techniques, guidance for entrepreneurial activity, gaining additional competences etc.). Besides that, individual career guidance services are offered with psychodiagnostic testing, vocational selection for vacant jobs on employers’ demand).

³²⁸ from February 18, 2016 N 148

³²⁹ approved by the Order of Administration of the Fund of Compulsory State Social Insurance against Unemployment from 07.09.2017 N 145

³³⁰ https://www.dcz.gov.ua/sites/default/files/imce/postanova_no_145.pdf

³³¹ SES. Career guidance services. Available at: <https://www.dcz.gov.ua/storinka/poslugy-z-proforyentaciyi>

³³² <https://zakon.rada.gov.ua/rada/show/v0145568-17>

³³³ <http://profi.dcz.gov.ua/>

³³⁴ <https://myprofession.com.ua/>

³³⁵ These Platforms gave a remote opportunity to make own career guidance, to understand what occupation they need, to test their skills and to make a career counselling appointment for Employment Centre expert.

³³⁶ According to SES

³³⁷ GSE schools conducted 13.7 thousand lessons on career guidance; 366.7 thousand students took part; 2.6 thousand informative events for over 65 thousand parents; 3.8 thousand guidance and informative events for 56.4 thousand teachers. 68 thousand students had individual career counselling with career guidance testing.

³³⁸ in particular, 2.9 thousand job specification tours to market-forming companies for 70 thousand young people; 762 presentations of VET and HE institutions for 2.17 thousand students; 910 career fairs for over 190 thousand young people; over one thousand events in facilities for children for over 100 thousand children; over 3.3 thousand competition and motivating intellectual events for over 173 thousand people and other events.

On March 4, 2019 the Federation of Employers of Ukraine and MoES of Ukraine organised round-table “Cooperation of business and VET institutions”. The discussion resulted in the recommendations to support career guidance testing for 9-grade pupils of GSE schools, to conduct career days at schools inviting employers and VET representatives, and also to carry out events promoting VET to eliminate the imbalance between the number of GSE and VET learners.

Also, to raise the awareness of young people in perspectives of obtaining VET, skills competitions were held. They showed what vocational competences were demanded by employers, gave opportunity to provide information on latest news on occupations and get access to internationally recognized vocational standards. Within the MoES activities, in 2019, five All-Ukrainian Competitions of Professional Skills were conducted, for VET learners, in the professions of a “cook,” “electric fitter for repairs and maintenance of electric equipment,” “house painter,” “tractor operator in agricultural production,” and a “waiter.” Over 700 persons ran for the competitions. The 30 winners were awarded with the scholarships from the President of Ukraine. In 2016-2018 the “Worldskills Ukraine” (All-Ukrainian competition of professional skills) was held in line with the international rules engaging representatives from 25 regions of Ukraine. It was adopted the Provisions on the All-Ukrainian Competition of Professional Skills “Worldskills Ukraine” (Decree of the MoES dated July, 16, 2019, No. 984).³³⁹

In 2019 the new Board of the *Vocational Career Guidance Council for population* – counselling and consulting body at the CMU was approved^{340,341}. On June 3, 2019 the first meeting of renewed Council was held where the Memorandum on Cooperation between the Ministry of Youth and Sports, MoES, MoSP, SES³⁴² was signed. The document sets out more possibilities for *career guidance testing*³⁴³ as well as *creation of career centres in VET schools and HE institutions*. In these centres students will receive consultations how they can continue their further career, what subjects they should select to follow their goals.

Best practices: launch of Professional Career Centres (PCCs) at VETIs

³³⁹ <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-polozhennya-pro-vseukrayinskij-konkurs-profesijnovi-majsternosti-worldskills-ukraine>

³⁴⁰ The Council was created to coordinate the ministries’ and departments’ work and preparing propositions to improve vocational career guidance for population.

³⁴¹ The Council includes state officials, employers and community members. The employers are represented by 9 people, 2 of them, were elected the deputies of the head.

³⁴² MoES. Career guidance for young people: more work with schoolchildren, career days in HE and VET, developing guidance materials – MoES, MoSP, Ministry of Youth and Sports and SES. Available at: <https://mon.gov.ua/ua/news/proforientaciyamolodi-bilshe-roboti-zi-shkolyarami-centri-karyeri-u-vishah-ta-proftehah-rozrobka-metodmaterialiv-mon-minsoc-minmolodsport-ta-dsz-pidpisali-memorandum>

³⁴³ <http://profi.dcz.gov.ua/>

Volyn region is a leader in developing career competences of the VET students. To implement the MoES Order N 806 as of June 8, 2017 "On all-Ukrainian experiment on the basis of Kolkivskiy Higher Vocational School", the VET Institute of the National Academy of Educational Sciences of Ukraine conducts an experiment on topic "Organisational and educational conditions of launch and functioning of the **Professional Career Centre in a VET institution**". The experiment is conducted in 2017- 2019 and is aimed at verification of the organisational and educational conditions creation and functioning of the PCC for school youth in a VET institution. It included a series of career information seminars for students ("Contemporary tools for employment search", "Self-confidence and creation of positive image", "First steps to get employed", "Keys to successful interview with your employer", "How to introduce yourself efficiently", "Program your success", "Essential rules for success in life"), as well as trainings ("My chance", "My professional development", "How to win the favour of the employer", "Development of employment opportunities for youth", "Step by step to success", "Creativity as a key to professional development") and activities to define the level of VET students' career competence.³⁴⁴ The regional Employment Service is actively involved in creation of PCCs and their activities. The methodological support is provided by Volyn Region VET Education and Methodology Centre³⁴⁵. The main objective of the Professional Career Centre is to help VET students and graduates to find employment, to shape their career competences and provide information and consultation support for those starting their own businesses. 100% of the region's PCCs were created on the basis of VETIs. In autumn 2018 a competition was launched to define the best Professional Career Centre webpage³⁴⁶. Almost 42% of VETIs (11 institutions) have demonstrated their results as 2 webpages, 8 sections in the menu of VET institution website and one website. Besides that, Volyn region has a career guidance terminal of the VET Education and Methodology Centre³⁴⁷. In total, there is already more than 30 PCCs at VETIs in various regions of Ukraine.

Mykolaiv region: creation of communicative platforms. To promote VET, and create a powerful motivation to master working professions among young learners and the unemployed citizens, to develop life competencies of learners, to contribute to the development of PPP, with support of Mykolaiv regional state administration and entrepreneurs, it was launched a long-term project "Education. Profession. Career." The implementation period (duration) is from February, 2019, to December, 2020. According to the project it is planned to establish communicative platforms for representatives of certain industries and the specialised educational institutions training specialists in the respective areas of economic activities; to conduct master classes; to advance professional skills of learners; to discuss issues and achievements in professional careers in the section "Open Microphone", lottery for valuable presents (innovative equipment), exhibitions of innovative equipment and creative works by learners, participation in competitions of professional performance on regional and national levels, coverage of events with the help of media and Internet resources. For the moment, the working professions in "Public Catering" and "Service Industry" have been presented.

Zhytomyr region: The Training and Methodological Centres for VET in Zhytomyr region in cooperation with the Department of Education and Science, launched the regional project "Creation and maintenance of PCCs activities at VET schools" for 2018-2020. The objectives of the project: (1) to conduct joint activities (together with employers, SES centres, state and public organisations), aimed at creating the necessary conditions for the professional development of future skilled workers in VET schools and developing their further professional career; (2) performing the information and advisory support for students of different ages; (3) PCCs creating and functioning at VET schools; (4) increasing the positive image of VET; (5) dissemination of developed publications related to career planning. In March 2018, the methodological council for career guidance was created including a wide range of participants. Its activities are aimed at implementing the socio-economic policies in the region and searching for introducing new forms of career guidance organisation. As on June 2019, 22 PCCs were launched at VET schools. In addition, an "Interactive map of Professional Career Centres in VET schools of Zhytomyr region" and the website "Career guidance terminal of VET schools in Zhytomyr region" were created.

Planned policies: Key planned state policies which are relevant to career guidance are outlined in B.1.6. Besides that, according to the Action plan of the Concept of state system of career guidance for the population in 2018 -2023, the work launched in 2018 should be continued to create career centres in educational institutions, to develop modern scientific and guidance materials, programmes and trainings on vocational development issues, to improve teaching staff competences in career guidance work in educational institutions, to create and to update regional administration databases of career guidance recommendations on official web-sites and to promote VET in mass media etc³⁴⁸.

It is planned to hold the All-Ukrainian Competition of Professional Skills "WorldSkills Ukraine" with the following stages: Stage I – selection (on the regional level) – in October and November 2019; and Stage II – final – in April-May, 2020.

In a joint effort, MoES, MoSP, the Ministry of Youth and Sports, and the State Employment Service of Ukraine are developing a plan of actions under the memorandum on cooperation in professional orientation.

³⁴⁴ <https://ivet.edu.ua/component/k2/author/609-kolkivskykevpu>

³⁴⁵ <http://nmc-ptv.volyn.ua>

³⁴⁶ http://nmc-ptv.volyn.ua/images/lists2018/nakaz_uon_648.pdf

³⁴⁷ <http://www.profterminal.volyn.ua/main/1>

³⁴⁸ <https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-planu-zahodiv-z-realizaciyi-koncepciyi-derzhavnoyi-sistemi-profesijnoyi-oriyentaciyi-naseleennyv>

II. 'Open floor'

III. Summary and analytical conclusions

The social environment analysis under the individual demand for VETs in Ukraine proves the sustainable tendency for decreasing students enrolment in VET among all other population categories. The less-than-adequate quality of educational services in VETs and the lack of a holistic adult education system actually make it impossible to implement the lifelong learning concept and downgrade the VET's image for majority of population as a reliable investment in personal and professional growth. As a result, the low attractiveness for acquirement working professions and weak motivation of the population to obtaining professional qualifications has become one of scarcity factor for blue-collar workers shortage at national and regional labour markets.

Challenges on low demand for VET (low attractiveness and prestige of VET). **Factors:** lack of necessary investments in VET modernisation; low accessibility level of HE; mismatch between training quality and labour market requirements for professional qualifications; imperfection of career guidance and counselling system for the youth and adults. **Implemented policies and progress achieved:** a study of VET students' opinions concerning motivation for obtaining a professional education in online form, all-Ukrainian and regional competitions of professional skill among VET students, as well as the All-Ukrainian WorldSkills contest, career guidance events in schools, the use of DL technology, online courses and trainings, study centres creation and performance. **Planned policies:** one of the main priorities according to the Concept for implementation of the state policy in the area of VET approved in June 2019, which should be implemented by 2027, is popularisation of VET among the citizens. **Recommendations:** adoption and implementation of a large-scale state targeted program, including, inter alia, preventive measures for increasing the share of young people with technical and professional skills.

Challenges on modernisation of the educational environment for assuring VET equality and accessibility. A key problem is the lack of proper facilities for people with disabilities. In particular, these are technical problems (lack of special exterior and interior elevators, wheelchair lifts, toilets, mobile handrails and other equipment), as well as lack of specially trained staff needed to organize the proper learning process for these groups of people. The situation in other sectors of education, in particular, in GSE and HE institutions, looks relatively better, given the financing differences for these sectors. **Factors:** lack of funding and inefficient funding schemes for VETs, incompleteness of education management system reforms at all levels, low attractiveness and prestige of VET, low salary and social status of VET pedagogical staff, lack of activity from social partners, employers, civil society. **Implemented policies and progress achieved:** The adoption of the Law on Education (2017) and the Law on Amendments to Certain Laws of Ukraine on the Access of Persons with Special Educational Needs to Educational Services (2018), Procedures for Organisation of Inclusive Education in VET institutions (2019) have been the remarkable progress since the last round of Torino Process. In 2018 the IRC implementation was launched. It allows the use of alternative forms of training and individual development program. The budget provides the educational subsidy for inclusive education (UAH 25 million per VET sector in 2019); the rates of teaching assistants in inclusive classes are enlarged from 0.5 to 1. **Planned policies:** provision of modern equipment for educational institutions, in accordance with their educational needs; the development of various learning forms and methods (such as distance form), barrier-free access to buildings and facilities of the educational institution for people with disabilities; engagement of the respective teaching staff (sign language interpreter, visual impairment specialist, special education teacher, speech therapist, occupational therapist, practicing psychologist); providing an assistant for people with special educational needs during their stay in the educational institution; career advice. **Recommendations:** an important step will be in the implementation of activities stipulated by the abovementioned legislation, in particular, the procedure of organisation of inclusive education for people with special educational needs in VETs.

Challenges on insufficient flexibility of training process to assure more participation in VET for the youth and adults. **Factors:** lack of financing, slow implementation steps of already approved legislation. **Implemented policies and progress achieved:** the basis for VET system flexibility and connection with all levels of education (the adoption of the Law "On education") has been stipulated. The students have the possibility to learn separated training modules in accordance with approved standards, obtain partial qualification at short-term courses with appropriate certification. **Planned policies:** it foresees the right to select form of VET, its iterations, change of learning trajectory, and continuation of lifelong

learning to obtain vocational qualifications of higher NQF level. Time schedule for students will be planned according to their personal needs, learning conditions based on the contract. **Recommendations:** The planned policies should be implemented based on interconnecting of all education levels, beginning from GSE up to adults education and occupational competences recognition gained via informal and non-formal education.

*The employment ability of VET graduates is high. In the same time there is a number of **challenges related to problems on employment and transition to work: lack of employers' interest to employ VET institutions graduates. Factors:** lack of previous experience of graduates, mismatch between adapting the graduates' level and employers' demands, problems with in-service traineeship managing for students and teachers to better VET quality. **Another challenge** – lack of VET graduates' motivation for employment at already existed working places. **Factors:** insufficient compliance of wages proposed by employers to VET graduates in most sectors of economic activity, working conditions complexity, a significant level of youth employment in the informal economy; low youth awareness on labour rights; exceeding the normal working hours for young workers etc.; insufficient level of career guidance. **Implemented policies and progress achieved:** introducing modern job-searching tools, enlarging the career guidance complex of State employment service in accordance with the updated Concept of state system of career guidance for the population (2018). At first, the Professional Career Centres were launched at VETIs. The career guidance testing was started at the Internet platforms; psychodiagnostic counselling was provided, meetings with employers, creating the banks of graduates' CVs for the young people of VET. There is the number of business fora, contests, meetings, round tables, seminars, trainings, consultations on entrepreneurship activity popularization for the youth. **Planned policies:** providing innovative career guidance services to citizens, more complex coverage of citizens with career guidance services. The already launched activities in 2018 on Professional Career Centres creation at VETIs will be continued. Developing modern scientific and guidance materials, programmes and trainings on vocational development issues, to improve teaching staff competences in career guidance work in educational institutions, to create and to update regional administration databases of career guidance recommendations on official web-sites and to promote VET in mass media etc. will be supported. **Recommendations:** To overcome the mentioned challenges, the planned activities should be implemented in conjunction with other activities within the framework of state policy in this area. The priority is given to improving the quality of jobs, encouraging young people to enter the labour market earlier, providing employers with a more competitive level of remuneration, minimizing regulatory admission barriers for VET graduates to work and occupy positions.*

Building block D: Internal efficiency and operation of the VET system

I. Thematic questions

D.1: Teaching and learning environment

Identification of issues

D.1.1 Teaching and learning methods, including work-based learning

According to “Provision on organisation of educational and work-based learning process in vocational institutions” forms and methods of teaching a group of learners are defined directly by the teacher (trainer, master of WBL)³⁴⁹. Learning special subjects includes traditional lessons, lectures, practical work, individual assignments (research papers, thematic competency tests), educational tours, laboratory and practical classes etc. Complex theoretical topics require *self-studying, individual task, simulation assignment, individual training, certain situation analysis, playing design* etc. There are non-traditional lessons on the II-III year of study: in particular: group contest and game (competition, tournament, quiz etc.), public speaking, lessons based on imagination and combined with other forms of learning (consulting-lesson, case-study lesson etc.), based on innovations of pupils (reciprocal learning, cooperative learning, self-rule learning etc.), and also integrated and binary lessons³⁵⁰.

Vocational training in VET institutions incorporates *work-based learning, pre-graduation internship*. It is conducted in workshops, testing grounds, exercise machines and also on work places in the following *formats*: lessons of work-based learning in workshops; traineeship; in-company pre-graduation internship etc.

VETIs use the following *methods of work-based learning*:

- according to knowledge source (verbal³⁵¹, graphic³⁵², practical³⁵³);
- according to the character of cognitive activity (reproductive, partial search, research, problem-based etc.).

Peculiarity of work-based learning methods is that they have training and production, labour enhancing character. In the beginning of WBL masters use: *explanatory and illustrative methods* – learners listen to explanations and watch the master of WBL; *reproductive* – learners follow the master’s operations and techniques; learners shadow master’s operations and techniques in compliance with the flowchart; the process control and results of the work are evaluated under the master’s guidance. In the further training with more complex types of work the *productive methods* are used: partial search – doing tasks following the process list without instructions; making optimum decisions working in unfamiliar conditions; finding causal relationships; research – learners undertake actions to understand technology and processing mode individually; plan and do individual assignments and qualification works or research and diploma papers. When conducting *work-based learning in companies*, if learners have certain experience the master can use a problem *based learning methods*: monologue problem based education; dialogue problem based education.

In modern VETIs various *types of lessons* are used relevant to main didactic purpose. *Lessons forming initial skills* envisage perception and initial awareness of new educational information; demonstration of new labour techniques and operations; forming initial skills to perform certain techniques correctly following safety rules³⁵⁴. *Lessons to form more complex skills* are used in order to train more complex

³⁴⁹ <https://zakon.rada.gov.ua/laws/show/z0711-06>

³⁵⁰ According to SSI Institute of Education Content Modernisation (exhibition materials Innovations in modern education – 2019, Modern educational institutions – 2018).

³⁵¹ instruction, conversation, explanation, story, work with printed medium (on giving induction on WBL lessons). They allow passing a lot of information for short period of time.

³⁵² graphic is used on induction and following instructions, showing pictures using information and technical devices in particular, etc.

³⁵³ exercises, learning by doing work, solving in-work and technical tasks, self-study work of pupils.

³⁵⁴ instructing; tour; cinema; exercise; training.

topics of work-based learning programme³⁵⁵. When complex works on separate topics are performed *the lessons of skills forming and improvement are used. Lessons of comprehensive use of skills to perform practical tasks are used to summarize several interconnected topics*³⁵⁶.

Teaching staff has right to select methods of teaching, use own programmes, define succession and time for educational material³⁵⁷. The key institutions in Ukraine which give methodological support for teachers are Institute of Education Content Modernisation of MoES of Ukraine³⁵⁸, VET Institute of the NAES of Ukraine³⁵⁹, Teaching and Learning Centres (offices) of VET in every region of Ukraine.

The issue of **WBL** is regulated by the laws of Ukraine "On Professional (vocational) education", "Provisions on vocational in-company training of employees"³⁶⁰. According to the Federation of Employers of Ukraine in Mining, Metallurgical and Energy Companies there are around 200 thousand of employment training cases involving over 80 thousand people. Employment training is licensed by MoES and to graduate you need to validate qualification. The individual training and coaching system are used most. In MMC there are 10 companies licensed in accordance with 155 groups of professions. *WBL uses only module-based* approach. The main focus is made on entry test which gives basis for an individual training programme. The training is result-based and every company has its own assessment standards based on vocational standard and/or state educational standard.

Main barriers for WBL are formalised and bureaucratic procedures, especially in terms of licensing, attestation and classifier of professions. According to licensing WBL is the separate type of VET³⁶¹. In this connection there are *problems with licensing procedure*: requirement to have teaching staff in place and to register information with USEED. In terms of USEED there are the following disadvantages: (1) requirement to provide documents on education for every employee, who has WBL (every month several thousand people can have WBL on different curricula); (2) for WBL the group of professions is licensed instead of a single profession, but USEED requires reflecting the licensed volume; (3) technical disadvantages and failures. Another problem is the *inconformity of legal regulations*. Provision on attestation of VET contradicts to license to implement educational activity and cannot be applied for WBL. One of the examples is in order to issue the document certifying education (certificate or diploma certifying relevant category) the institution has to attest every profession or at least 75% of their professions (occupations) although according to license to implement educational activity the institution can obtain the licence to a group of relevant professions. Besides that, *the classifier of professions* is outdated and gives no opportunity to award higher categories for employees and raise their wages (see B.1.2).

D.1.2 Teaching and learning environment

Teaching and learning environment: Educational environment of VET institutions according to the Order of the CMU "On approval of license conditions for education" from December 30, 2015 N 1187 sets out mandatory requirements for:

- *teaching staff* (the number of workshop trainers with relevant education (100%), teachers with the first and higher qualification category (25%); relevant vocational education of teaching staff (100%));
- *material and technical resources for education* (hostels, workshops, offices, laboratories, machine grounds, equipment, computer workstations, libraries, gyms and stadiums, in-school medical services and school-feeding);

³⁵⁵ revision and development of performing skills, certain moves and operations providing quality results; forming skills to unite several operations using time rationally while doing the exercise; training; self-study.

³⁵⁶ development of thinking and individual work; comprehensive use of obtained knowledge; doing individual tasks; designing.

³⁵⁷ <https://zakon.rada.gov.ua/laws/show/z0711-06>

³⁵⁸ <http://www.imzo.gov.ua/>

³⁵⁹ <http://ivet-ua.science/>

³⁶⁰ approved by joint Order of the MoSP of Ukraine, MoES of Ukraine from 26.03.2001 N 127/151

³⁶¹ Approved by the CMU Order from 30.12.2015 N 1187 reads as CMU Order from 10.05.2018 N 347.

- *educational and methodological capacity for training* (availability of professional standards, curricula for theoretical and practical trainings, teaching and learning sets for every subject, internship programmes, didactic materials for individual study, teaching and learning materials for every subject, assessment criteria for knowledge and skills; workshop and lab work plans etc.);

- *provision of information for study* (text-books and e-books for learners, official web-sites of educational institutions, reading rooms in the libraries etc.);

Key issues: According to the VET sector's needs assessment "Formulating EU assistance in reforming the system of professional (vocational) education in Ukraine" most of the VET schools, regardless of region, have a very high level of depreciation of their infrastructure (60-100%)³⁶². The equipment is outdated, while the buildings have not been renovated for 30-40 years. The support from the budget to improve infrastructure is insufficient and PPP is poorly developed. The regions need investments for major renovation and energy saving technologies as well as procurement of modern equipment and technical re-equipment. Another key problem of VET sector is lack of facilities for the people with special educational needs. Most of the VET schools remain non-accessible to them (lack of special exterior and interior lifts, wheelchair lifts, portable rails and other facilities).

The main problems of the "soft" component (teaching and learning environment and teaching staff) are the following:

- shortage of up-to-date textbooks on specialisation, which publication is funded neither from state, nor from the regional budgets.
- problem with the provision of general education textbooks (for obtaining secondary education). Schools have to purchase such textbooks by themselves;
- a desperate need to produce e-books and replenish the library collection;
- the duration of work-based learning is rather short;
- low motivated teachers due to low remuneration and absence of opportunities for professional development; part of VET teachers is not ready to obtain new, up-to-date, innovative teaching methods which are in line with modern education principals.

In its turn, the low motivated VET teachers is one of the negative factors for workforce shortages increase in the labour market of Ukraine and low motivation of VET students. It also increases a number of young people who want to obtain HE, including HE abroad.

Factors affecting teaching and learning environment: (1) inefficient financing of VET institutions, inefficient funding schemes for educational institutions, lack of mid-term-budget planning; (2) lack of effective governance at all VET levels; poor understanding of VET system value and its role in the development of the country and regions; (3) shortage of qualified teaching staff (especially trainers for WBL); (4) lacking autonomy of VETIs; (5) absence of reliable medium-term labour market forecasting system both on the state and regional levels; (6) insufficient motivation of stakeholders in the VET development process; (7) low attractiveness of VET.

According to MoES under decentralisation the local budgets can cover only near 60% of VET financial needs in the regions. VETIs located outside the cities with the regional status and the region centres find themselves in a worse situation since only 45% of their needs are covered)³⁶³.

³⁶² https://www.auc.org.ua/sites/default/files/sectors/u-137/zvit_yevo.pdf

³⁶³ Current status of VET financing in Ukraine. Office of financial and economic analysis of Verkhovna Rada of Ukraine, 2019. Available at: <https://feao.org.ua/products/proftehosvita/>

Analysis of the teaching and learning environment: survey on the ICT use for learning process

Odesa region: During 2018, the specialists of Odessa Training-methodological centre for VET investigated the current state and conditions for creating modern learning environment and introducing ICT in VET schools of the region. 95% of teachers confirmed that VET schools administration encourages them to use ICT in the learning process. Near 78% of respondents (teachers) are involved in developing and implementing of ICT in VET schools. 67% of teachers post copyrighted materials on Web resources, but only 17% of them have their own Web sites. Two-thirds of teachers do not have their own pages (blogs, sites) in the Internet. 56% use electronic teaching aids occasionally; 16% – systematically; 12% – develop and improve forms and methods of working with students based on these tools; 16% – do not use them for various reasons. The monitoring allowed to analyse what prevents teachers from using ICT tools during class. Among the key reasons are: lack of access to a computer class in their lessons (7.8%); insufficient electronic content and resources (7.5%); 5.4% do not have sufficient skills. 53% of teachers willingly use ICT tools.

95.7% of surveyed students like classes using ICT tools (computers, touchscreens, projectors, the Internet, etc.). Near 85.2% of students believe that the learning process has become more interesting thanks to using such tools, 63% – had better understanding of the material, 70.4% like offered presentations, and 51.9% tend to make presentations on their own.

Description of policies

D.1.3 Policies to improve training/teaching and learning methods in VET

Implemented policies: Since the last TRP round the number of measures of providers, government authorities and donors has been taken on the level of the schools themselves to improve teaching and learning methods in VET system. In 2018-2019 the innovative educational environment has been introduced in VETIs, with element of *modern educational technologies and methods with the emphasis on ICT* (electronic means for education, distance learning etc.). In particular, this trend was demonstrated on exhibitions (expos) “Innovations in modern education – 2019”, “Modern educational institutions – 2018” (see D.1.4) and is based on the use of cloud technologies (Web-applications; on-line school records; on-line services for education, communication, testing; system of distance learning, multimedia library; file repository, shared services; video conferences, etc.)³⁶⁴.

Using ICT in education supports development and application of e-courses and on-line courses as different forms of unified, high quality, modern education (see B.1.4.)³⁶⁵. The Academy of Innovative Development and Education at IECM introduced training course for teaching staff to develop on-line courses “Methodology of distance courses development”³⁶⁶. Broader access to e-text-books on MoES and IECM official web-sites also gave a positive impact³⁶⁷. In general these measures are in line with the state policy according to 2018 – 2020 Roadmap for Developing Society and the Digital Economy³⁶⁸.

Improvement of teaching and learning methods in VET system on the institution level is manifested in more active application of such modern forms and methods of learning as project-method; trainings; case-technologies; group-work; simulation; technologies aimed at development of creative, entrepreneurial and business skills. Other modern methods of learning include problem-based class, visualisation-class, dispute-seminar, brain-storming, problem-based method, portfolio method. Taking into account the fact that the main focus of learning today is on individual learning, the use of project method is an acute issue³⁶⁹.

Improvement of teaching and learning methods in VET system is supported by **the following projects of donors:**

³⁶⁴ According to SSI Institute of Education Content Modernisation (exhibition materials Innovations in modern education – 2019, Modern educational institutions – 2018).

³⁶⁵ E-course means adapted text content of a quality text-book with possible multimedia: video clips, video assignments, coloured illustrations and other, hypertext: glossaries, external links etc.

³⁶⁶ <http://www.airo.com.ua/metodika-rozrobki-distantsiy-nih-kursiv/>

<http://www.airo.com.ua/distantsiy-niy-kurs-google-classroom/>

³⁶⁷ <https://imzo.gov.ua/pidruchniki/elektronni-versiyi-pidruchnikiv/>

<https://mon.gov.ua/ua/osvita/zagalna-serednya-osvita/pidruchniki/elektronni-pidruchniki>

³⁶⁸ “2018 – 2020 roadmap for developing society and the digital economy” from January 17, 2018. N 67- p.

³⁶⁹ way of achieving didactic goal through detailed explanation of a problem (technology), which has to be turned into actual duly formalised result.

- *Promoting development of VET in agriculture colleges of Ukraine* (German Federal Ministry of Food and Agriculture (BMEL)).³⁷⁰ Objective – to improve methods and content of VET in agricultural colleges of Ukraine, which are oriented on practical activities (creation of a unified information and methodological platform, including development of electronic manuals, textbooks, open online courses, educational videos);
- *Sharing Estonian experience to support Ukrainian VET reforms* (Estonian Ministry of Foreign Affairs (INNOVE))³⁷¹. One of the project goals – conducting training and internship for school administrations and teachers, conducting master-classes on *modern teaching methodologies*.

The approval of the MoES Order “On implementing dual form of education in vocational training of skilled workers” (2017)³⁷², the CMU decree “On approval of the Concept of training on dual form of education” (2018)³⁷³, and also “Action plan on the concept on training on dual form of education”(2019)³⁷⁴ can be considered as the remarkable progress in *WBL* improvement in VET system.

Introduction of the dual VET elements started in 2015, as an experiment on a nationwide scale.

2015 – 3 VET schools, 3 working professions, 97 learners, 25 employers;

2017 – 46 VET schools, 54 working professions, 3,000 learners, 300 employers;

2018 – 198 VET schools, 114 working professions, ab. 7,000 learners, 800 employers;

2019 (plan) – 254 VET schools, 160 working professions, 10,000 learners, 1,000 employers.

It has been developed draft Provisions on Dual Form of VET, with a template Contract for Applying for dual form of VET in an Appendix.

Planned policies. According to the *Action plan of the Concept of dual training* in 2019-2023 it is planned to take measures to inform different categories of population on positive experience of dual training, in-company internship of VET teachers using global experience of dual training. That will give the opportunity to improve professional skills and *apply new methods of teaching*.

Ukraine anticipates progressive changes in this sector during 2018-2020 when the EU project “EU4Skills: Best skills for modern Ukraine” is completed as well as after donors’ support (see A.3.5).

Approval of the *Provisions on Dual Form of VET* and its consistent implementation will enable mutual coordination of provisions from legal acts regulating relations in VET area, labour, fiscal regulation, and shaping the basis for efficient interaction and setting liability for learning outcomes for VET learners in a VET school and for employers; raise the level of professional skill of teachers in VET schools; enhance motivation for the development of cooperation with companies; increase the prestige of VET schools; provide compliance of competencies of VET graduates with the labour market demand, the needs of specific employers, and the growth of economy.

³⁷⁰ <http://agrarausbildung-ukraine.net/projekt/?lang=uk>

³⁷¹ <https://www.innove.ee/en/international-cooperation/sharing-estonian-experience-support-ukrainian-vocational-education-reforms/>

³⁷² from 23.06.2017 N 916

³⁷³ from 19.09.2018 N 660-p.

³⁷⁴ https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-planu-zahodiv-z-realizaciyi-koncepciyi-pidgotovki-fahivciv-za-dualnoyu-formoyu-zdobuttya-osviti?fbclid=IwAR3djB1TqA3hYBt5q4gMQYWYm_Qda8F7aPW0zpY3FMRQKdlwSMq9mDZ4zH8

Best practices: implementation of the DVT elements

Chernihiv region: In February 2019, an agreement between Chernihiv Higher Vocational School of Personal Care and Service Occupations and «Sivertek » company gave a start to a special section at the enterprise. It has 15 workplaces with modern sewing equipment (the total value exceeds UAH 1.5 bn.). Chernihiv-based «Sivertek » is one of the leading companies of light and chemical industry in Ukraine. According to the agreement, 30 VET students which obtained theoretical knowledge will continue practical training there as tailors, seamstresses and designers-technologists. In addition, the company signed contracts with the students according to which they shall work for the company for at least 2 years after graduation. The company, for its part, shall provide them additional UAH 1 thousand of monthly scholarship for the period of their studies, pay 50% of the salary for the useful products they create when studying, to cover expenses for monthly fare card and provide accommodation in a dormitory.

Volyn region: Within German-Ukrainian project “Partnership in the field of VET in Ukraine”, since the 1st of September 2017 the DVT elements have been introduced in Kovel VET Centre for professions “Electro-gas welder” (the ordering enterprise is “Volyn-Kalvis”) and Lutsk Higher Vocational School for profession “Multiskilled Layout Designer” (the ordering enterprises are PJSC “SKF Ukraine” and Common Ukrainian-Polish Company LLC “Modern-Expo”). The sides have developed educational curricula, signed trilateral agreements (between company, VET institution and students), and created mechanism to motivate students for efficient work and employment. The teaching staff underwent the required training in Germany in the respective scientific and practical centres. One more positive example is the cooperation between Volodymyr-Volynskyi Higher Vocational School and Common Ukrainian-Polish Company LLC “Gerbor-Holding” for occupation “Operator of automatic and semi-automatic lines in wood processing”, which continues until nowadays. This work resulted in a successful employment of graduates during the last 3 years: 21 graduates in 2016 (100%), 14 in 2017 (93.3%); 12 in 2018 (100%) and 22 in 2019 (100%). As of 1st of September 2019, the elements of DVT are introduced in newly enrolled groups on 9 VETIs of the region for 11 professions (occupations).

Donetsk region: Since September 1, 2017, VET schools of the Donetsk region joined the experiment on DVT implementation. Kramatorsk Higher Vocational School has begun introducing the elements of dual vocational training for the occupation of “Machine operator”, Kramatorsk Centre for VET - for the occupation of “Electric and Gas Welder” and Mariupol Higher Vocational School for Metallurgy - for the occupation of “Locksmith-repairman; Sling fastener; Cold management post operator; Hot rolling mill control room operator”. VET schools and partner companies reached agreements to determine responsibilities of the parties, payment of wages to students for producing real industry products and VET school's shares. In September 2018, 9 VET schools joined the experiment in various areas of training. Since 2019, another five VET schools in the Donetsk region have been negotiating with partner enterprises and plan to join the experiment. The significant part consists of engineering and mining professions (occupations). Monitoring the quality of students' professional training in a dual form showed the increase in learning quality compared to the traditional one by 10-12%.

D.1.4 Improving the training and learning environment

Between 2016 and 2019 the Education and Practical Centres (EPCs) were created using the State budget funds to train skilled workers on the following occupations:

- **in 2016:** “seamstress, tailor, pattern cutter.” – 14 EPCs, “tractor driver/machine operator in agricultural production” – 2 EPCs, “installer of sanitary technical systems and equipment” – 9 EPCs;

- **in 2017:** “seamstress, tailor, pattern cutter.” - 13 EPCs, “tractor driver/machine operator in agricultural production” - 2 EPCs, “fitter of sanitary and technical systems and equipment” - 10 EPCs;

- **in 2018:** “turner, turning machine operator. Milling machine operator. Grinder. Driller” – 9 EPCs, “Electric manual welder. Electric welder operator of automatic and semi-automatic machines. Welder.” – 25 EPCs, “Fitter in repairs and maintenance of electric equipment. Wireman on on power grids and lighting equipment” – 15 EPCs, “tractor driver/machine operator in agricultural production” – 1 EPC.

- **in 2019:** – it is planned to have 45 EPCs more, such as: “turner. turning machine operator. Milling machine operator. Grinder. Driller” – 2 EPCs, “Fitter in repairs and maintenance of electric equipment. Wireman on power grids and lighting equipment” – 10 EPCs, “tractor driver/machine operator in agricultural production” – 2 EPCs, “Fitter of insulation systems for buildings” – 4 EPCs, “Wood processing machines operator” – 5 EPCs, “Fitter in engine repairs. Fitter of mechanic installation works. Fitter in repairs of road construction machines and tractors. Fitter in repairs of wheeled vehicles. Fitter in repairs of agricultural machines and equipment” – 22 EPCs.

Since 2016, on the basis of VET schools, 26 EPCs have been created engaging investment from social partners (“Snezhka Ukraine LLC – 11, “Geberit International Seitz AG” – 6, “FOMALGAUT-POLIMIN” LLC – 4, “Siniat” LLC – 2, “Knauf Hips Kyiv LLC – 1, “Vidaron TM” – 1, “Triora TM” – 1).

In 2018-2019 VETIs continue to create innovative, educational environment, which has the priorities in updating the material base, improving teachers’ competence, implementing modern educational technologies. The distinctive feature is the introduction of ICT in the following areas³⁷⁵:

- cloud technologies: web-applications; on-line school records and on-line diaries; on-line services for education, communication, testing; system of distance learning, multimedia library; file repository, shared services; video conferences, e-mail on educational institution domains;
- learningApps a kit to develop interactive assignments;
- services to make and publish presentations: Empress, Google Docs, Prezi, ZohoShow, SlideShare, VCASMO, Knoodle;
- “Master-test” – on-line tests compiler;
- making e-text-books.

The major focus was made on preparation of e-text-books which are up-to-date and for a new generation. In particular, since the last TRP round the number of on-line educational sites to form teaching and learning VET environment grew to 75 (metal work, heavy engineering and tool making; mining industry; agriculture; construction; transport and communication; commerce and services; IT).

New education standards are based, in particular, on “Recommendations of the European Parliament and Council of Europe on key competences for lifelong learning”. One of them is information and digital competence (see B.1.4). It envisions the use of ICT for searching, processing, exchanging information in work, public space and private communication purposes. At present near 80% of VETIs have multimedia devices installed and they are used for general and vocational education. In 88 % of VET hostels there are workplaces with Internet connection. 98% of VETIs have official web-sites.

Best practices: developing e-manuals

Zakarpattia region: The Institute of vocational education and training of the NAES of Ukraine and the Training-methodological centre for VET of Zakarpattia region reached an agreement on cooperation and implementation the research results “Projecting the information-analytic environment of a VET school”. As a result, during 2015-2017 two e-manuals “Merchandising of Non-Food Products” were developed for the following occupations: “Non-food products shop-assistant” (qualification of 3, 4 categories) and “Fundamentals of Radio Electronics” – Regulator of electronic equipment and devices (qualifications of 3 category). They were approved for use in VET schools of Ukraine by relevant scientific and methodological commissions. In the academic year of 2018/2019, e-manuals “Fundamentals of sanitation and hygiene in the service sector” were developed for the occupations of a hairdresser (hairdresser-fashion designer), manicurist, pedicure, and “Technology for manufacturing men's trousers” – a seamstress, tailor. The package of documents was sent to the Commission of the Scientific and Methodological Council of the MoES of Ukraine.

³⁷⁵ According to SSI Institute of Education Content Modernisation (exhibition materials Innovations in modern education – 2019, Modern educational institutions – 2018).

Best practices: modernising facilities and resources and updating the content of VET

Kharkiv region: in the framework of cooperation with international social partners, a trilateral agreement was signed between the Regional Centre of Vocational Education for Construction Technologies, the Eberhard-Schöck Foundation and the Department of Science and Education of Kharkiv RSA. The agreement is based on Memorandum to the Pilot project in the field of VET for modernisation and adaptation of the defined professions” (2014). The project duration is 3 years, is aimed to attract German investments for modernisation of the facilities and resources, as well as the content of vocational training. As of 1st of June 2019, there were the following achievements: (1) approval of a draft curriculum for IVET for occupations “Painter. Restorer of artistic and decorative paintings”; (2) development of curricula in compliance with VET standards (VETSS) for occupations and the needs of regional labour market; (3) the teaching staff underwent training in Lviv according to German technologies; (4) two training rooms for special technologies, two education and two production workshops equipped with modern construction materials and tools from TM CAPAROL; (5) in September 2018, a group of 28 students started their studies for occupations “Painter. Restorer of artistic and decorative paintings”.

Poltava region: In 2018 according to the order of Poltava Regional Council several regional VETIs received educational equipment packages “Innovative classrooms of science, mathematics, general technical, theoretic and practical occupational training” and “Classrooms with interactive tools for STEM”. The equipment was introduced in Kremenchuk High Vocational School No.7, Poltava VET Centre, Kremenchuk Regional VET Centre No.1, Hadyach Higher Vocational Agricultural School and Borovensky Reshetyliv Vocational Agricultural School. To introduce STEM education, the Kremenchuk High Vocational School No.7 received a labouratorium with digital metering computer complex EINSTEIN and MultiLab laboratories with guidelines for practical tasks in physics, chemistry and biology.

Vinnitsia region: For implementation of the CMU Order No.372-r as of 23rd of May 2018 “On investment programs and regional development projects which can be implemented in 2018 for funds of the State Fund of Regional Development “, UAH 2800 thousand were granted for the project “New agricultural equipment as a component of providing high qualified workers to the labour market by Komarhorod High Vocational School in Komarhorod village, Tomashpil district”, and modern agricultural equipment was procured.

Ivano-Frankivsk region: There are 5 EPCs which operate at the Higher Vocational School No 7 in Kalush (Ivano-Frankivsk region). 2 EPCs of them were created at the expense of budget funding: (1) “Cooking Professions” - in 2016 and (2) “Manual Welding Electric Welding Machine. Electric welder for automatic and semi-automatic welding machines. Welder” - in 2018 .Three other EPCs were established at the expense of social partners (LLC “Henkel Bautechnik (Ukraine)”; LLC “Knauf Gypsum Kyiv”; LLC «Sniezka Ukraine»). The established EPCs provide training for students and retraining of the unemployed using up-to-date programs and technologies. Areas of joint activities between business and state VETIs are updating of material and technical base; participation in standards development; provision of textbooks; consulting work; conducting seminars, workshops and conferences; use of production technologies, materials and tools.

Rivne region: A model of modern educational institution has been developed and implemented in Rivne region. It reflects best practices accumulated during the participation in international grant projects. The VET content has been modernised in VET institution of Rivne region thanks to: (1) modernisation of the material and technical base of educational workshops; (2) creation of 14 modern EPCs for occupations which are in demand on the labor market of the region; (3) development and implementation of electronic educational tools for 5 occupations, which received the MOES’ approval; (4) improving the methodology for teaching of “Sectorial Economics” in VET institutions through training with teachers and developing a collection of methodological recommendations for the development of entrepreneurship.

Lviv region. The innovation project: Creating the EPC for welding. Starting date: 2018. Engaged participants: Interregional Higher Vocational School of automobile transport and building (Lviv), Educational centre for Bavaria economy (bbw), Joint Ukrainian-German enterprise Ltd. “Electrotrans”. Description of the project: Since October 3, 2016, the VET institution has participated in a German-Ukrainian project “Partnership in the sector of vocational education and training” aimed at improving cooperation between the enterprise and the VET school, implementing elements of DVT, upgrading the curriculum for professional training of workers on the occupation “Manual welder”, enlarging employment possibilities for the youth at regional labour market and reducing the number of motivation factors for migration of young specialists. Three study tours to Germany were organised; 35 workshops and trainings were conducted with participation of German and local referents, VET school teachers and representatives from enterprises – social partners; master-class by German specialists of manual welding was provided to the VET school masters (trainers); a cooperation of new quality grade was launched with Joint Ukrainian-German enterprise Ltd. “Electrotrans” that allowed to implement elements of DVT. The gained experience was used while creating the Training-practical centre for welding. Project outcomes: updating the content of education and training technologies, orientation of the curricula to implementing the competence-based approach.

Chernivtsi region. In order to introduce new production technologies using modern equipment for educational process during 2016-2019, five EPCs have been established at VET schools of the region. In particular, in 2017, at state and regional budgets expense, the EPC for the profession “Installer of sanitary-technical systems and equipment” was opened at Chernivtsi VET lyceum for railway transport as well as the EPC for modern sewing technologies and design on “Seamstress, tailor and cutter” occupation at Chernivtsi Higher Vocational School No 3. In 2018, at state budget expense, the Training-practical centre for welding technologies was created at Chernivtsi Professional Lyceum of Automotive Service. In fulfilment of the MoES order No. 266 as of February 26, 2019 the EPCs were launched for occupations of “Electrical installer for lighting and lighting networks” and “Locksmith repairman” at Chernivtsi Higher Professional Lyceum of Radio Electronics and Glybotskyi Professional Lyceum. Using modern equipment in the learning process enable VET graduates of these VET institutions to compete with students from partner educational institutions.

Planned policies: In addition, to solve the problem mentioned in D.1.2 (shortage of text-books for VET) it is planned to use the State budget funds in 2019-2020 to publish 15 books for VETIs with “Recommended by the MoES of Ukraine” form heading, which will improve education and upbringing process in VETIs. Total print is 200 thousand copies.

As a part of EU project “EU4Skills: Better Skills for Better Jobs in Modern Ukraine in 2020-2021 the procurement of equipment and creating of centres of excellence, revision of educational content, training of teaching staff, development of new professional, educational standards, and standards for qualifications evaluation are planned (project total amount - EUR 58.0 m)³⁷⁶. Besides, further implementation of policies according to “2018 – 2020 roadmap for developing society and the digital economy” will impact positively on updating information and communication technologies (ICT)³⁷⁷.

D.2: Teachers and trainers

Identification of issues

D.2.1 Composition of the workforce of VET teachers and trainers

Composition of pedagogical (teaching) staff. As of September 1, 2018, the number of teaching staff was 33,900 people, out of which 2% were senior trainers (senior masters); 41.7% — trainers (masters); 36.3% — teachers (in particular, 20.8% — teachers of general educational disciplines, and 15,5% — of VET). The rest are administrative staff, educators, practising psychologists, social educators, and other categories.

The share of women makes up 62.9% (in particular, 55.2% among senior trainers and trainers, and 69.4% among teachers). Thus, the gender imbalance (in terms of female gender) is more typical of teachers. The composition of teaching staff of VET system is presented in Table 5.

The majority of trainers (90.3%) have higher education. These figures for teachers are 99.7% (with the higher education) and 73.7% (with higher pedagogical education), respectively.

The majority of pedagogical staff has a considerable tenure in VET system for more than ten years. In particular, the share of those with a tenure of up to 5 years — 16.8%; 6–10 years — 16.7%; 11–20 years — 25.9%; 21–30 years old — 21.1%; over 30 years — 19.4%. At the same time, the share of people with a short tenure (up to 5 years) among trainers is higher (20.6%) compared to teachers (13.7%). This is partly due to a higher turn-over rate among masters and due to low wages and social protection (no social benefits and guarantees for medical treatment, rehabilitation).

During the school year, 25.1% of teachers had run continuous training (in particular, 24.8% were trainers and 29.6% were teachers). About 26% of pedagogical staff has two or more occupational qualifications³⁷⁸.

³⁷⁶ http://search.ligazakon.ua/l_doc2.nsf/link1/MU18097.html

³⁷⁷ <https://zakon.rada.gov.ua/laws/show/67-2018-%D1%80>

³⁷⁸ According to administrative data of MoES

Table 5

The qualitative composition of teaching staff of VET institutions (MoES), as of September 1, 2018

Category of teaching staff		Teaching staffs (total)	Including							
			Administrative staff	Senior masters	Masters of industrial training	Teachers			Other teaching staff*	
						Total	General educational disciplines	VET training		
number	By staff roster	39013	3200,5	714	17202	13703	7551,1	6151,55	4194.3	
	In fact	33908	3018	678	14136	12319	7057	5262	3757	
	Incl. women	21329	2013	292	7879	8545	5354	3191	2600	
	Vacancies	3547,3	160	29	2219	833,25	301,02	532,23	306	
age	Up to 30 years	4586	102	20	2292	1566	1101	465	606	
	31-40 years	7758	569	102	3101	3097	1931	1166	889	
	41-50 years	7584	848	177	2862	2860	1582	1278	837	
	51-55 years	4575	445	120	1981	1538	784	754	491	
	56-60 years	4370	480	122	1928	1424	716	708	416	
	Senior 60 years	5035	574	137	1972	1834	943	891	518	
Those who have HE	I-II level of acc.	Total	7484	159	155	5808	662	342	320	700
		Including pedagogical education	2474	96	58	1588	421	299	122	311
	III-IV level of acc.	Total	24877	2858	509	6966	11623	6694	4929	2921
		Including pedagogical education	16017	2030	210	2819	8652	6303	2349	2306
Those who do not have HE		1547	1	14	1362	34	21	13	136	
Out of them who study at HEI		627	4	8	494	70	43	27	51	
Tenure	1-5 years	5707	236	52	2909	1683	1043	640	827	
	6-10 years	5658	280	82	2666	2002	1169	833	628	
	11-20 years	8799	778	203	3591	3329	1831	1498	898	
	21-30 years	7152	807	159	2738	2723	1499	1224	725	
	More than 30 years	6592	917	182	2232	2582	1515	1067	679	
Continuous training		8502	666	136	3511	3645	2105	1540	544	

* "other pedagogical staff" includes educators, practising psychologists, social educators, physical education teachers, other categories

Source: MoES

During the last three years, the total number of teaching staff has decreased by 14.1% (see Table 6). There were no more than 3.5 thousand vacancies occupied (9.1% of staff roster). At the same time, there is the greatest lack of trainers (12.9% of staff roster), due to the lower wages in VET, than in the industry. The key factors of reduction of the number of teaching staff is the reduction of the total contingent of VET learners, the decrease of the number of institutions due to optimization of the network

of VETIs, low wages and low social protection of this category of staff. The comparatively low salaries of VET sector teaching staff make their profession less prestigious.

Table 6

Number of pedagogical teaching staff in VET institutions (MoES), in persons

	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
Total number of teaching staff	43316	39472	37892	37483	33908

Source: MoES

According to the Law of Ukraine "On Education" No. 2145-VIII as of 09.05.2017 (Article 54), pedagogical staff members are subject to certification, the results of which determine their correspondence to position, the level of qualification, qualification categories and pedagogical ranks that are assigned. The frequency of mandatory attestation and the procedure is stipulated by Typical Provisions on attestation of the teaching staff approved by the Decree of the MoES dated October, 06, 2010 No.930.³⁷⁹

The procedures for advancement of qualification of the teaching staff of VET institutions are approved by the Decree of the MoES dated April, 30, 2014 No. 535.³⁸⁰

The attestation takes place on the basis of the template of Regulation on certification of pedagogical staff, which was adopted in 2010. The attestation is performed by the attestation commission, which analyses: (1) the level of occupational training and pedagogical skills of a teacher (including erudition, work on self-improvement, self-education); (2) the quality of preparation for lessons; (3) the quality of teaching of the teaching material³⁸¹; (4) principles, methods and means of education and upbringing; (5) system for verification and assessment of learners' achievements; (6) the level of academic achievements and parenting. (7) Ethics of conduction of lessons, humanization of educational process; (8) educational work with learners; (9) the level of ICT use in teaching.

Phases of career path of teachers: qualification categories "specialist", "specialist of the second category", "specialist of the first category", "specialist of the highest category"; pedagogical rank "senior teacher", "teacher-methodologist".

Phases of career path of trainers: according to the results of certification, they can receive an increased tariff rate and pedagogical ranks "trainer of the second category", "trainer of the first category".

An opportunity to obtain a qualification category of a higher level provides an opportunity for further career. The attestation of the teaching staff is directly related to the remuneration of their labour.

In general, due to the reasons mentioned above, the occupation of a teacher remains unattractive for young people. As a consequence, there are problems of unfilled job vacancies as well as trends in the aging of teaching staff, low professional mobility of teachers and lack of motivation to master the latest pedagogical and industrial technologies. There are specialists in the industry who are unmotivated to work in VET system due to low wages in the VET sector.

D.2.2 Entering the teaching profession in VET

According to the Law of Ukraine "On Professional (Vocational) Education" (1998), the teaching staff of VET institutions may include individuals having proper professional education and pedagogical education, moral traits and physical status, which enable them to perform the duties of a teacher. Other normative acts in this area are the Law of Ukraine "On Education", "On the Professional Development of Employees", the CMU Resolution "On Approval of Licensing Conditions for Conduction of Educational Activity" (2015)³⁸².

Requirements to a pedagogical worker are determined by the qualification characteristic approved by

³⁷⁹ <https://zakon4.rada.gov.ua/laws/show/z1255-10>

³⁸⁰ <https://zakon.rada.gov.ua/laws/show/z0840-14>

³⁸¹ Scientific character, accessibility, the use of educational opportunities, the development of learners, the implementation of internal subject and subject relations, connection with practice, reliance on life experience, etc.

³⁸² As of 30.12.2015 №1187

the MoSP according to the submission of the MoES³⁸³.

Requirements to teachers: In order to become a VET institution teacher, one needs to have a full higher education (master, specialist) majoring in "Vocational Education" or another complete higher education and psychological and pedagogical training (without requirements for tenure). He/she should know: the methodology of the organisation of education and educational process, the basics of pedagogy, psychology and age physiology, rules of internal labour regulations, requirements and rules on labour protection and fire safety.

Requirements to trainers: Trainer of VET institution needs to have a secondary special or HE in the specialty, the level of working qualification should not be lower than the established one by a curriculum for a graduate of VET institution of a relevant occupation concerned.

Teachers are hired by the way of conclusion of an employment agreement, including a contract, by a director of the VET school. They are obliged to constantly improve their professional level, pedagogical skills and the general culture; to ensure proper conditions for students to master their curricula; to promote the development of their abilities; and to adhere to pedagogical ethics.

The following requirements and procedures are sufficient to become a teacher in VET institution, yet it is not enough to provide the expected results. In practice, there are a number of problems. Pedagogical workers who did not have practical experience before employment, lack the knowledge in methodology, pedagogy, psychology and partly in VET. Pedagogical workers who have undergone the corresponding psychological and pedagogical training, lack special knowledge.

Instructors at companies are appointed among the qualified employees of the high qualification who do not always have the required pedagogical training.

D.2.3 Employment status of teachers in VET

Most of the teaching staff of VETIs engage in pedagogical activities on the basis of full employment (90–95% approximately). They can combine teaching with a public or civil service position, or with a contract job. Also, they can work part-time, and combine positions. In particular, in practice, **due to low wages, there are teachers who hold several positions simultaneously at one educational institution, and also work part-time in another one.**

According to the focus groups conducted by the MoES in May-June 2019 involving departments of education and science of regional state administrations, **the prevailing majority of teachers work on an indefinite employment contract** (about 75%), while others work on a contractual basis (25%).

There is a problem of employment of young teachers who have just finished HE institutions, because a significant share of jobs is occupied by individuals of retirement age (see point D.2.1).

VET schools face a challenge to fill the positions with workshop trainers. It can be explained by low salary levels. At production facilities, however, the payment levels are much higher. Besides, an employee at an enterprise does not have to keep so much documents.

It should be noted that in statistical reporting, centralized collection of information on employment status at the national or regional level is not performed (only at the level of institutions).

D.2.4 Quality of teachers and trainers in VET

The level of qualification of pedagogical staff is determined by the attestation commissions of the first, second and third levels. The commissions work in accordance with the template of the Regulation on Certification of Pedagogical Staff in Ukraine (2010)³⁸⁴. Attestation of teachers necessarily is preceded by the system of professional development.

Teachers and trainers **advance their qualifications on a regular basis, but not less than once every five years**, and it is mandatory for all teaching staff of VETIs. The content of the training is focused on the improvement of the professional competency of pedagogical staff, corresponds to the didactic

³⁸³ <https://zakon.rada.gov.ua/laws/show/5460-17?find=1&text=%EF%E5%E4%E0%E3%EE%E3#w11>

³⁸⁴ Adopted by the Decree of MoES of Ukraine as of 06.10.2010 №930.

principles of education. During these courses, the formation of methodological and theoretical competence, deepening of social and humanitarian and psycho-pedagogical knowledge, formation of skills of using the newest educational methods and ICT has been implemented.

According to the Law of Ukraine "On Education" (2017), teachers can improve their qualification in different forms, types and in different subjects of professional development. The pedagogue chooses concrete forms, types and subjects for occupational development taking into account self-assessment of their competencies and occupational needs.

In accordance with *the Procedure for Advance of the Qualification of Teachers of VET Institutions* (2014)³⁸⁵, pedagogical staff undergo postgraduate educational courses at the institutions of higher education, educational and methodological (research) centres (offices) of the MoES, at enterprises, at organisations, as well as on the basis of VET institutions; they are free in their choice of forms of study, programs and educational institutions. The improvement of qualification of pedagogical staff is performed according to the following types: long-term training (from 72 to 216 academic hours)³⁸⁶; short-term training (up to 72 hours)³⁸⁷; internship.

In particular, workshop trainers can take ***traineeships using WBL at enterprises in order to advance or to confirm the working class of their occupation***. According to the results, certificates of training or certificates of confirmation (advance) of the working qualification are issued. The training takes place on the basis of bilateral agreements between educational institutions and enterprises. At the same time, ***the issues of training for workshop trainers, organisation of their training at the enterprises with the purpose of mastering the latest production technologies remain as a problem***. Partially, this problem is resolved by passing of traineeships on the basis of regional training centres or by the way of creation of new education and practical centres.

Another problem is about insufficient funding for advancement of qualification of the teaching staff.

The material incentives for continuing occupational career are the increase of wages following the results of the certification of teachers. ***However, the small difference in remuneration between categories does not contribute in order to increase the motivation for advancing of training and category***³⁸⁸.

During the years 2018–2019, 8502 pedagogical workers (or 25.1% of the total number) advanced their qualification, including 3647 of senior trainers and trainers (or 24.6% of the total number of trainers), 3645 teachers (or 29.6% of the total number of teachers).

As for the non-governmental sector in VET system — instructors in the industry do not undergo psychological and pedagogical training on a regular basis, instead of that, they study according to the programs of advanced training and internships by the specialty at the enterprise. These programs include theoretical courses and particularly WBL.

Description of policies

D.2.5 Attracting and retaining teachers and trainers in VET

Since the last round of TRP, no significant changes have been made as to the conditions of employment of teaching staff, the minimum qualification requirements for this occupation, or the structure of teachers' and trainers' career path.

³⁸⁵ Adopted by the Decree of MoES of Ukraine as of 30.04.2014 № 535.

³⁸⁶ The advance of qualifications of teaching staff is completed with the issuance of a relevant document. The final control over the results of long-term continuous training is performed based on assessment of the level of professional competencies of the pedagogical staff acquired during the increase of qualifications under the relevant curricula and programs.

³⁸⁷ Seminars, master classes, seminars-workshops, seminars-trainings, author's schools, trainings, webinars, round tables, etc.

³⁸⁸ ETF (European Training Foundation), Torino Process 2016-17, ETF, Turino 2016. – Available at: www.etf.europa.eu/web.nsf/pages/Torino_Process_2016-17

Mainly, the changes were related to remuneration conditions, which currently is very relevant (see paragraphs D.2.1 and D.2.3). In particular, in order to increase the prestige of educators' work, the official salary was increased by 30% starting from September 1, 2018³⁸⁹.

Besides, in April 2019, some amendments were made to the resolution of the CMU "On Approval of the Procedure for Provision of Workplaces for Learners', VET Students' Work-Based Training and Work Practice" (1999)³⁹⁰ as to the promotion of trainers. In particular, from now on, 15% of the funds may be allocated to the awarding of trainers and VET teachers for the direct training of learners, for the quality of organisation and implementation of educational curricula on WBL and internships in accordance with personal contribution to the overall performance³⁹¹.

In addition, the practice of attraction of the necessary professionals to work part-time is used partially to resolve the problem of staff shortages.

At the same time, *the lack of pedagogical staff remains a problem*. As of September, 1, 2018, 3 547 vacancies of teachers and trainers were not occupied (9.1% of the staffing table). At the same time, there is the greatest lack of trainers and senior trainers (12.5% of the staffing table) due to lower wages in VETIs compared to real sector. The lack of teachers accounts near 6.1% of the total need.

D.2.6 Steering, motivating and supporting professional development

Implemented policies. Human resource reform of VET system remains one of the key areas of the state human resource policy of Ukraine. Its priorities are the stimulation of high-quality pedagogical work; improvement of housing conditions, provision of rural teachers with free of charge housing with heating and lighting, transportation to the work place, etc.³⁹²; providing conditions for a full-fledged reproduction of the efficiency of pedagogical staff (rest in departmental rehabilitation facilities)³⁹³.

Since the last round of TRP, one of the important steps in this area was the approval of the Law on Education (2017). According to the Law, the professional development of teaching staff involves **constant self-education, participation in higher education curricula and in any other types and forms of professional growth**. Education institutions, where teachers work, favour (facilitate) their professional development and continuous training.

There is a **possibility for teachers to complete mandatory continuous training courses (once every 5 years), which are funded by the State**. The new mechanism for advancement of qualification sets that the funds for this purpose are received by VET institutions, which distribute them according to the decision of the educational council of the institution. In addition, the upgrade teachers' vocational specialisms may be financed by the founder of the educational institution, by the teacher himself or herself, as well as by other individuals and legal entities. However, currently, the advancement of qualification is conducted under the old algorithm.

The training is completed in different forms (educational programs, traineeships, participation in certification programs, trainings, seminars, conferences, workshops, seminars-meetings, master classes, webinars, etc.) and in various types (institutional, dual, WBL (in the industry)). A good example is the launch of schools for IT competencies promotion in several regions — an educational project that envision the training of VETs staff how to use modern IT resources³⁹⁴. Additional opportunities for professional development of teachers in the context of digital transformation are overviewed in the clause B.1.4.

³⁸⁹ According to CMU Resolution as of March,23, 2011 №373 «On the establishment of allowances for teaching staff of institutions of pre-school, extra-curricular, general secondary, VET), higher education, other institutions and institutions irrespectively of their subordination", as amended in accordance with the CMU Resolution as of 11.01.2018 №23.

³⁹⁰ As of June 7, 1999, № 992.

³⁹¹ According to CMU Resolution as of April 3, 2019, № 281 (provision 18).

³⁹² Adopted by the order of MoSP, MoES, MoH of Ukraine dated 13.09.2006 № 341/651/619/769 "On adoption of Regulation for provision of employees of budget institutions (facilities) of free use of housing with heating". Available at: <https://zakon.rada.gov.ua/laws/show/z1193-06>

³⁹³ Including trough the preservation and development of the network of rehabilitation facilities of oblast after graduate institutes of pedagogical education.

³⁹⁴ Namely, on the basis of scientific-methodical centre in Sumy oblast.

At the same time, *the opportunities for professional development of teachers to improve their professional skills using work-based facilities (for example, teachers' visits to the companies, traineeships and work in industries, cooperation with industry mentors in companies) are currently limited* (see point D.2.4).

Incentives for professional development: According to the results (outcomes) of certification, teachers who have achieved high performance indicators in their work are awarded with pedagogical ranks and can expect increase of wages and salaries³⁹⁵.

The innovation of recent years has been the gradual introduction of *voluntary certification of a teacher* which takes place on a voluntary basis solely based on his/her initiative³⁹⁶. By the results of successful certification, a teacher receives a certificate that is valid for a period of three years. Successful certification is considered as attestation of a teacher and he / she gets an allowance that is set in the amount of 20%. This is an additional incentive for professional development. So far, the mechanism is in force only for the teaching staff of the GSE institutions.

In addition, there are **opportunities for teachers' career path** (stages of career path are given in paragraph D.2.1).

Planned policies. One of the goals of the Concept for the implementation of state policy in VET system "Modern professional (vocational) education" for the period up to 2027 is the introduction of incentive mechanisms for the promotion of teachers' professional activity and development.

At the first stage of the implementation of the strategy (years 2019–2021) it is envisaged:

- to improve the system of professional development of teachers in VET system with the involvement of highly qualified production workers and service providers in the educational process;
- to start certification of VET teachers.

Best education practice: introducing the system-based approach to professional development for VET teaching staff

Khmelnitskyi region: The Training-Methodological Centre for VET and upgrading engineering-pedagogical staff in Khmelnytskyi region (the Centre) – it is an innovative scientific-pedagogical complex for VET on regional level. It created the conditions for continuous professional growth of teaching staff, increasing their level of readiness to introduce innovative content, technologies, didactic support, and strengthening the image of VET. Since the last round of TRP, new professional and pedagogical profiles of VET schools managers and teaching staff have been developed. The possibilities for introducing various models and techniques for professional development of pedagogical staff based on diagnosing teachers' educational needs were created. It is a platform for exchanging the teachers' experience and implementation of innovative pedagogical practices in VET system. Over the past five years, nearly 3,500 VET schools teachers of Khmelnytskyi region and of other regions have expanded their methods and acquired new competencies at the Centre. The outcomes of the Centre's activity have been numerous represented at the international exhibitions "Modern educational institutions" and "Innovation in modern education".

D.2.7 Ensuring the quality of teachers in VET

In December 2017, a new central executive body for external education quality assurance was created, the State Service of Education Quality (SSEQ). The formation of its divisions is under way. Once the Service is fully functional, it will be able to perform a number of **functions related to the quality assurance of VET teacher training**. In particular, SSEQ must take part in certification of pedagogical staff and perform institutional audits of educational institutions; provide recommendations to educational institutions on the organisation and functioning of the internal system of quality assurance of education. Its main task is not to punish the guilty, *but to help teachers, institutions and management to improve the quality of their activities*.

Another system of quality assurance and evaluation of teachers' training is a **self-assessment system**. Namely, self-assessment procedures allow identifying the errors and problems, consider key process

³⁹⁵ Accordingly to the order of MoES № 102 dated 15.04.93 "On adoption of Instruction about the order of calculation of salaries of teachers".

³⁹⁶ Accordingly to the Art.51 of the Law of Ukraine "On education" № 2145-VIII dated 05.09.2017.

factors, and find the best ways to correct the situation. The teaching staff conduct effective self-assessment by comparing their own activities with the results of their colleagues from the same educational institution or a similar one.

In addition, there are certain norms concerning the educational qualification level of a *junior specialist*. In accordance with licensing conditions, in each institution there should be a **group of specialisation assurance**, which includes educators and researchers for whom the educational institution is the main work place and who are responsible for the implementation of educational curricula for individuals with educational qualification level of a junior specialist. The members of the group personally participate in educational process and meet the qualification requirements defined by these licensing terms.

At the same time, the above mentioned actions require significant improvement in order to ensure that the results are in line with the plan and expectations. It is expected that the full functioning of SSEQ shall make a contribution to this issue.

Apart from that, it is worth mentioning that the work on development of occupational standards for professions (occupations) “teacher of vocational training”, “workshop trainer (master)” and “methodologist of VET institution” has started. These occupational standards will define requirements to the competences of VET teaching staff and will become a basis for shaping their professional (occupational) qualifications.

D.3: Quality and quality assurance

Identification of issues

D.3.1 Quality and relevance of education and training content in VET

The employability of the graduates of VETs in Ukraine is rather high (see B.3.1). According to the data of the MoES, in the 2017/2018 academic year, 82.8% of the graduates of VET institutions were employed by occupation.

At the same time, there is the *problem of inadequate compliance with the content of VET and the teaching methods to the requirements of the modern labour market and the needs of an individual*. The content of VET can meet the current needs and be *relevant* only if it meets the *VET standards (educational and occupational)*. The content of VET is stipulated by the requirements to the level of qualification of the workforce at a certain stage of development of the society and it is determined by VET standards. Training content in Ukraine’s VET includes humanitarian training, natural-mathematical, general-technical, occupational-theoretical and occupational-practical one. The standard contains requirements to the content of VET, educational level of the applicants, qualification level of the graduates of VETs, as well as requirements on compulsory means of training³⁹⁷. Starting from 2015, VET standards were partially developed using competency-based approach. Starting from 2017, they have been elaborated exclusively using competency-based approach. Presently, more than 170 standards have been developed in close cooperation with the employers. In general, they are flexible, and to a great extent meet the requirements of the labour market³⁹⁸. The formation of VET content using competency-based approach according to the needs of the economy, occupational standards, and requirements of NQF, has been identified as one of the tasks for improving the quality of VET. This was enshrined in the Concept for implementation of state policy in VET education “Modern Occupational and Vocational Education for the Period up to 2027”³⁹⁹, approved by the Government on June 12, 2019. At the same time, there is a problem of outdated standards that have not been reviewed for 13 years. On the other hand, the emergence of new occupations on the labour market requires to attract additional funds for the creation of new standards and modernisation of the resource base.

³⁹⁷ <http://ukped.com/statti/profesiina-pedagogika/63-.html>

³⁹⁸ <https://mon.gov.ua/ua/osvita/profesiino-tehnichna-osvita/derzhavni-standarti-navchalni-plani-ta-programi/zatverdzeni-standarti-profesiinovi-osviti-2019>

³⁹⁹ http://search.ligazakon.ua/l_doc2.nsf/link1/NT4370.html

As a matter of fact, the employers prefer to “grow up” skilled workers in their own training centres, rather than in public VETIs. An important step for public institutions here is the training of specialists with the introduction of elements of dual education⁴⁰⁰⁴⁰¹ (for more details, see par. D.1.3). In particular, it is planned to introduce DS for 254 VETIs (160 working professions, 10,000 learners, 1,000 employees) in 2019.

According to the departments of education and science of oblast state administrations (based on the focus groups conducted by the MoES in May–June 2019), the share of employment of VET graduates, who study with elements of dual training, is higher compared to the other forms of education.

D.3.2 Defining the quality of learning outcomes

The Law of Ukraine "On Education" defines education quality as *"correspondence of training results with the requirements established by law, the appropriate education standard and/or an agreement on education services provision"*, and education activity quality as *"the level of organisation, provision and implementation of education process that ensures that persons acquire quality education and meets the requirements established by law and/or an agreement on education services provision"*.

There are no separate definitions of quality concepts between the IVET and CVET systems in the acting law.

Standards for ensuring education quality and learning outcomes are defined in the educational standards in line with respective occupational standard, qualification characteristic, and agreement. The Law of Ukraine "On Education" defines *an educational standard* as requirements for the obligatory competences and training results of an education seeker at an appropriate level, the general amount of education seekers' training load etc⁴⁰². The VET standards are approved *by the MoES in agreement with the Ministry of Social Policy, other executive bodies and the joint representative body of employers at the national level*⁴⁰³ (for the procedure for approving standards, see D.3.3).

According to the Law of Ukraine "On Vocational Education and Training" and "On Professional Development of Employees", a person's training results are evaluated by comparing actual training results data with the established requirements, in particular, those of occupational standards. In the process of evaluation, a person's capability to perform a specific professional activity is checked using various tools of assessing professional knowledge, abilities and skills necessary for granting professional qualification of a certain level.

VET institutions, education management bodies and founders organise and exercise routine, thematic, interim and final control of education seekers' knowledge, abilities and skills, and their qualification attestation. In particular, in accordance with Order of the MoES "On Introducing the 12-Score Scale of Evaluation of Vocational Training Achievements of Learners (Students) at Vocational Education and Training Institutions"⁴⁰⁴, *the quality of learners' training outcomes* is determined using the 12-score evaluation scale for (routine, interim, final) control of learners' (students') knowledge, abilities and skills and their qualification attestation. Knowledge is mostly checked using the traditional evaluation methods, and abilities are checked based on a level of mastery of practical skills. The peculiarity of evaluating training outcomes of future qualified employees is determination of the preparedness of VET institution learners to carry out on their own the activity under the profession chosen after training. VET standards provide for interim (stage-by-stage) qualification attestation after mastering each module which criteria are determined by a VET institution in cooperation with employers. Interim (stage-by-stage) qualification

⁴⁰⁰ CMU Order as of September, 19, 2018 # 660-r «On approval of Concept of training of specialists by dual form of education». Available at: <https://zakon.rada.gov.ua/laws/show/660-2018-%D1%80>

⁴⁰¹ CMU Order dated April 3, 2019, No. 214-r. "On approval of the Action Plan for implementation of Concept of training specialists by dual form of education". Available at: <https://zakon.rada.gov.ua/laws/show/214-2019-%D1%80>

⁴⁰² VET standards are developed in accordance with the Law of Ukraine "On Education", "On Vocational Education and Training", the CMU Order "On approving the National Qualification Framework", Orders of the MoES "On Approving the Government's Medium-Term Priority Action Plan for the Period to 2020", Orders of the MoES "On Approving the Methodology by the Cabinet of Ministers for Developing State Vocational Education and Training Standards for Specific Vocational Professions" and "On Approving the State Vocational Education and Training Standard"

⁴⁰³ The detailed procedure for development and approval is set out in Order of the MoES "On Approving the Methodology for Developing State Vocational Education and Training Standards for Specific Vocational Professions".

⁴⁰⁴ No. 459 of 14 June 2001.

attestation leads to the issue of a certificate stating a qualification category. Review of the qualification granting process is given in the next item (see D.3.3).

The signing of the Association Agreement between Ukraine and the EU tightened the requirements for VET quality assurance standards. It is important to speed up the introduction of the standards for evaluation of VET graduates professional (occupational) skills. Another problem that require urgent solution is insufficient quality of training of qualified personnel in view of its correspondence with the requirements of the modern labour market and those of a personality. This should be taken into account in the development of module- and competence-based education standards for specific vocational professions⁴⁰⁵. Current evaluation system of a learner's learning progress is sufficient, but it makes sense to transfer the function of state qualification attestation for objective evaluation of quality of training of the qualified staff to an independent commission. Also, there is a need to study the quality indicators of qualified employees' training. In this connection, a monitoring study of correspondence of the supply of qualified workforce with the requirements of Ukraine's labour market and determination of the level of VET quality is becoming increasingly vital.

D.3.3 Quality assurance processes in VET

Pursuant to the Law of Ukraine "On Education", the quality assurance system for education and VET in particular, in Ukraine includes the following three levels⁴⁰⁶:

- **internal** (implemented by the VET school itself, self-assessment);
- **external** (implemented by other authorities, such as the State Service of Education Quality in Ukraine);
- quality assurance systems **as regards to operations of institutions which provide external quality assurance in education** (external independent audit).

Internal and external procedures for quality assurance in education are not mutually exclusive; they function in parallel and are required, even despite the fact that the link between them is not always clearly defined. **Currently, none of the systems can be considered fully functional, either on national, or on institutional levels.**

Internal system for quality assurance in education on the level of the institution includes a general strategy and procedures for quality assurance in education; mechanisms to provide for academic integrity; criteria and rules for testing of learners, teachers, directors of schools; providing for the required resources to organize the education process and to administer the school; to create an inclusive educational environment; other procedures and activities. *Self-assessment* takes a bottom-up approach when the actors engaged manage the process itself. However, it may be subjective and requires a high level of mutual trust.

The tools and activities of the system of external quality assurance in education include standardisation; licensing of educational activities; accreditation of curricula; institutional accreditation; public accreditation of educational establishments; external independent testing of learning outcomes; institutional audit; quality monitoring for education; performance assessment of the teaching staff; certification of the teaching staff; civic control; other tools.

In December, 2017, it was established a new central executive authority for external quality assurance in education⁴⁰⁷ — the **State Service of Education Quality in Ukraine**. It is in charge of implementing national policy in the field of education, such as on providing for quality assurance in education, providing for quality in educational activities, state controls over educational establishments on legal conformity⁴⁰⁸. Currently, the process is still underway to establish branches of the SSEQ in every region

⁴⁰⁵ <https://mon.gov.ua/ua/osvita/profesijno-tehnicna-osvita/derzhavni-standarti-navchalni-plani-ta-programi>

⁴⁰⁶ All possible components of the three systems, such as the tools, procedures, and activities are stipulated in Article 41 of the Law of Ukraine "On Education". Peculiarities of functioning of quality assurance systems on each level of education are specified by special laws.

⁴⁰⁷ To substitute the State Inspectorate for Educational Establishments.

⁴⁰⁸ Pursuant to the resolution of the CMU dated December, 6, 2017, No 947 "On Establishment of the State Service for Quality in Education of Ukraine."

in Ukraine and in the city of Kyiv⁴⁰⁹. It is expected to have such structural units fully functional in all regions of Ukraine throughout 2019. Currently, the central administration of the SSEQ is under staffing process. The area of competence of the SSEQ covers establishments of *pre-school, out-of-school (extra-mural), GSE and VET*. The issues of the HE are covered by the National Agency for Quality Assurance in Higher Education established in 2014.

The new authority of the SSEQ is a conceptually new entity with more powers for more efficient quality control in education. The key task of the Service is not in punishing offenders, but providing *support to the school, to administration, and to teachers for higher quality of their activities and higher quality in learning outcomes for students*⁴¹⁰. The SSEQ and its territorial branches shall issue recommendations on organisation of internal quality assurance system in education, run institutional audit, approve curricula for schools on the basis of the expert evaluation findings (except for typical and the ones developed on the basis of the typical curricula), and actively engage in certification of the teaching staff. In addition, the SSEQ shall accredit civic expert associations and other legal entities administering independent quality assessment in education and educational activities of schools; conduct quality monitoring of educational activities and quality in education, exercise control, as commissioned by the MoES of Ukraine, over conformity with requirements in organising external independent testing, etc.

At the same time, *it is the MoES that is in charge of adopting procedures, types, and forms of quality monitoring in education*, as well as of accrediting procedures of curricula, other activities related to quality control in education. In addition, pursuant to the Law of Ukraine “On Professional (Vocational) Education”, and “On Education”, employers, their organisations, and associations shall be engaged into exercise of *civic quality control for VET*.

After the last TRP round, there was introduced a new tool for external assessment SSEQ such as the **institutional audit of schools**. It is a comprehensive external inspection and assessment of educational and managerial processes of an educational establishment, as well as of its internal system of quality assurance in education⁴¹¹. Currently, it is only provided for the area of GSE (1 in 10 years, as planned, starting from January, 1, 2020, and from January, 1, 2019 — pilot projects). *However, the ground is being prepared for running an institutional audit also for VET*. There are the following key differences between the institutional audit and performance assessment: (1) institutional audit is done by an authority independent from schools and their founders (SSEQ); (2) the goal of institutional audit is not to take record of available issues but support in identifying solutions thereto; (2) unlike performance assessment, the law provides for liability of the school director for breaking the law, as well as the need to determine specific timelines to eliminate shortcomings and violations; (3) unified requirements to educational establishments of all types of ownership; (3) recognition of findings of civic accreditation as the planned institutional audit.

Since learners can obtain complete secondary education in VET schools, activities of the *Ukrainian Centre for Educational Quality Assessment* (established in 2006) shall be mentioned, too. It is a subunit of the MoES of Ukraine dealing with the development and piloting of models for *external independent testing of educational achievements of learners from the general educational establishments* in order to provide for equal access to HE⁴¹².

Quality assurance for qualifications. Conceptual basis for qualification systems in Ukraine stipulated by the 2017 Law of Ukraine “On Education”. In Ukraine, there are two types of qualifications⁴¹³: educational⁴¹⁴ and professional⁴¹⁵ qualification. One of the NSQ goals is to provide for conformity between the educational and professional qualifications, as well as for their conformity with the needs of labour market, creation of efficient mechanisms for recognition of qualifications acquired by a person

⁴⁰⁹ The respective decision on establishing territorial authorities of the SSEQ was adopted by the CMU on November, 7, 2018.

⁴¹⁰ <https://mon.gov.ua/ua/news/uryad-utvoriv-teritorialni-organi-derzhavnyi-sluzhbi-yakosti-osviti-u-6-regionah-voni-zapracyuyut-v-kinci-sichnya-v-reshti-vprodovzh-2019-go>

⁴¹¹ https://mon.gov.ua/storage/app/media/news/%D0%9D%D0%BE%D0%B2%D0%B8%D0%BD%D0%B8/2019/04/16/auditnaka_z.pdf

⁴¹² <http://testportal.gov.ua/>

⁴¹³ Pursuant to Article 34 of the Law of Ukraine “On Education”.

⁴¹⁴ Education qualification — is a total of learning outcomes (competencies) set by the educational standard and acquired by a person recognized by an educational establishment or other authorized entity of educational activities, and certified by the respective document on education.

⁴¹⁵ Professional qualification — is a standardized total of competencies (learning outcomes) acquired by a person recognized by the qualification centre, educational entity, or other authorized entity and certified by the respective document, that entitle for performance of certain type of work or fulfill professional activities.

life-long.

The main collegiate body to enforce national policy in the field of qualifications is the **National Agency for Qualifications** established in December, 2018⁴¹⁶. *Until this time, Ukraine has not had any single institution that would implement national policy on qualifications. This task was dispersed among different agencies and social partners. Thus, it largely slows down and complicates decision making.* Currently, the work is underway to compose the membership. After the task is completed, the authority would be able to function full-fledged⁴¹⁷. In the first place, the agency will have to focus on establishing the NSQ, and clear links and correlation between the learning outcomes and the respective educational degrees, qualifications, and labour market (single clear approaches to degrees of education and qualifications in Ukraine). The tasks of having the NSQ include the creation of a mechanism to establish **qualification centres**^{418, 419}. The new institution will facilitate the development of the mechanism to recognize non-formal and informal education, and assignment, therefore, partial professional qualifications. The unified system would also allow for simplification of the process of mutual recognition of professional qualifications between Ukraine, EU, and other states without excessive bureaucracy (see also Section D.3.6).

The Labour Code of Ukraine (Article 96) and the Law of Ukraine “On Remuneration of Labour” (Article 6) stipulate that requirements to qualifying and special knowledge of the staff, their tasks, duties, and specialization shall be defined by **professional standards or job descriptions / qualification characteristics of the staff**. *Professional standards are an important tool to provide for quality of qualifications and efficient use of human resources.* Ukraine launched the efforts to develop professional standards. It was approved the Procedures for Development and Adoption of Professional Standards (resolution of the Cabinet of Ministers of Ukraine dated 31.05.2017 No 373) and Methods Guides for Development of Professional Standards (decree of the MoSP of Ukraine dated 22.01.2018 No 74). Professional standards contribute to better quality of qualifications in Ukraine and aligning the NSQ with EU requirements, improvement of educational standards, bringing into conformity the content for training the staff with the needs of employers, confirmation of outcomes of professional non-formal training, enhancing quality of the workforce. As of 01.05.2019, it was adopted 9 professional standards, while 117 applications from authors were submitted and posted on the website of the MoSP to draft the standards. *At the same time, the pace of adopting professional standards are still slow, mostly due to insufficient funding.*

VET standards include interim (stage by stage) **qualification attestation**, which criteria shall be determined by the VET school along with employers. Interim (stage by stage) qualification attestation implies issuing a certificate report stating the **qualification category**. Employers are engaged in thematic, output control of skills of learners and are directly taking part in qualification performance assessment. *At the same time, there is still insufficient distribution of responsibilities of different institutions.* While the NAQ has not yet fully started functioning, *the concept is lacking for institutional structure for independent testing of competencies and for testing the results of non-formal and informal education (training).* The list of qualification test works is developed by VET schools, by companies, establishments, and organisations in line with the requirements of curriculum and the standard of VET. An important role in the processes of **competency assessment** belongs to regional sectoral entities and institutions of employers and social partners that usually have different responsible functions in the processes of competency assessment. **Criteria for qualification performance assessment** of graduates are developed by regional sectoral organisations of employers jointly with the VET school, and are using a competency-based approach in line with the requirements of VET standard, and shall

⁴¹⁶ Pursuant to the CMU resolution dated December, 5, 2018 No 1029 “Some Aspects on the National Agency for Qualifications” that adopts the NAQ statute.

⁴¹⁷ <https://mon.gov.ua/ua/news/zatverdzheno-sklad-nacionalnogo-agentstva-kvalifikacij-sho-zosereditsya-na-stvorenni-yedinoyi-sistemi-kvalifikacij-ta-nablizhenni-osviti-do-potreb-rinku-praci>

⁴¹⁸ qualification centres — entities authorized to assess and recognize learning outcomes (such as those acquired through non-formal or informal education), to award and / or confirm respective professional qualifications (Art. 34 of the Law of Ukraine “On Education”).

⁴¹⁹ Establishment of such qualification centres is not a new initiative. In May 2013, the Cabinet of Ministers adopted the “Procedures for Confirming the Non-Formal Vocational Training Outcomes of Persons Within Working Professions” that also provided for operation of the “entities to confirm outcomes of non-formal professional learning of persons within working professions.” However, since the time of adopting such resolution only four such entities have been established (as of today, there are only three of them remaining); and it has been adopted only six working professions under which confirmation of non-formal professional learning outcomes is performed. The experience of institutionalization of learning outcome confirming entities shows that there has not been sufficient favorable conditions for the development of such institutions.

be agreed with regional education management authorities.

Best practices: independent qualification examination

Poltava region: An independent examination program for occupation “Welder” is successfully introduced in Kremenchuk Higher Vocational School No.7 on the basis of agreement between the institution and PJSC “Kriukivskiy car manufacturing plant”. The enterprise has the examination commission (Ukrainian Examination Committee of Welders - UECW) and organises theory exams and qualification tests for welders for its own needs. The examination has two stages: theory exam and qualification test. The questions for theory exam are harmonised, the database of question is kept in the UECW. At Commission's request, the examination card is formed by random choice from the examination matrix. Theory exams are organised by the Examination Commission, in compliance with the rules approved by UECW. In fact, the students of the Kremenchuk VET School No.7 pass the same exam as the workers at the enterprise. The theory exam for welders of all levels and specialisations is in a form of a test (60 questions for level 1, 90 questions for level 2, 120 questions for level 3). Each question offers 4 answers where one is correct. The timeslot for answering to one question is 1 minute. One correct answer gives 1 point. To pass the test, the candidate must obtain at least 60% of possible points. The qualification test (welding of reference samples) is organised in compliance with acting standards, providing a list of samples to dwell for a candidate for a certain level. According to the results of qualification test, the Examination Commission issues a protocol in a prescribed form and passes it to the VET School. As a result of qualification examination, graduates receive diplomas of qualified worker of their profession “Welder”, of a respective speciality and qualification level, and also, according to National Standards of Ukraine prescription 2944-94 a qualification certificate that defines the scope of professional qualification in compliance with Intersectoral Qualification Characteristics.

Kyiv city: Since 2017/2018 academic year, a pilot independent state qualification examination for professions (occupations) “Administrator. Director's Secretary (of an organisation, enterprise, institution)” and “Cook. Confectioner” was launched in 6 VETIs in order to define the real level of professional competences and improve skills quality of the VET graduates. The pilot project has shown positive results and was continued in 2018-2019, covering a larger number of VET institutions and professions (“Automotive Service Technician”, “Painter. Plasterer. Tile Setter”). In June 2019, the Monitoring Centre of public company “Education Agency” organised an online examination of VET graduates. This experiment is a positive innovation in education and will be continued and spread to all VETIs of Kyiv and all professions that they offer.

In the **assessment process**, the ability of a person to perform certain type of professional activities by using various testing tools of professional knowledge, skills, and abilities needed for the award of professional qualification of certain category, is tested. During the final testing, special features of each qualification, are taken into account (see section D.3.2)⁴²⁰.

While the NAQ has not yet fully started its activities, there are still unresolved **issues of NSQ development**. In particular, they include: international recognition of qualifications acquired in Ukraine; capacity building of the new institutions required for recognition of professional qualifications; low pace in drafting professional standards and insufficient role of professional associations in the development and assessment of qualifications, the lack of mechanisms for independent assessment of VET graduates professional competence, as well as lack of standards for this assessment. Upon the whole, the **problem of conformity and assessment of qualifications** is getting vital. This is due to the fact that under market conditions productivity of each entity and economy at large directly depend on the productivity of each employee. Therefore, jobs are distributed by expert levels, while the qualification conformity acquires even more importance.

Description of policies

D.3.4 Creating and updating VET content

VET programmes designing and updating process. Education programmes⁴²¹ are designed by VET institutions, scientific institutions and other educational entities, and are approved according to the Law “On Professional (Vocational) Education”. Today, typical education programmes are designed and approved as part of the VET standards. They contain requirements for persons eligible for a programme; list of education components and their logical order; general amount of training load and expected training results. Also, a programme provides optional education components for students.

Education and training programmes are designed basing on **VET standards (VETsS)**. The VETsS is one of the documents that govern the VET education activities of training qualified personnel. Designing of VETsS can be initiated by central and regional authorities, local self-government bodies, educational

⁴²⁰ For types of activities where the manufacturing of the product of activities is more important, practical skills assessment is considered dominant; while for types of activities where the process is more significant, test results for knowledge are considered dominant.

⁴²¹ VET education programme is a single set of education components (subjects to be learnt, disciplines, individual tasks, control measures etc.) that have been planned and arranged to achieve defined training results.

institutions, employers, scientific institutions, scientific methodology development institutions, civic organisations, natural and legal persons effecting educational activities, and other stakeholders.

*VETs are developed in the following order*⁴²²: (1) Employers, educational institutions, and other stakeholders submit to the MoES proposals on VETs designing for specific vocational professions (occupations). (2) The Vocational Education Directorate of the MoES, based on the aforesaid proposals, draws up a list of vocational occupations for which VETs are to be designed. (3) The Vocational Education Directorate of the MoES and the State Scientific Institution "Institute of Education Content Modernisation" of the MoES (hereinafter — IECM) determine the composition of working groups based on proposals put forward by departments (offices) responsible for education and science at regional state administrations and Kyiv city state administration, employers, and other stakeholders. (4) Organisation and coordination of working groups developing draft VETs, is assigned to the appropriate IECM division. (5) Development of draft VETs is effected using a competence-based approach, and modular content. (6) The draft VETs are presented on the IECM website for public discussion for two weeks. Then proposals and remarks are considered by the working groups. (7) The draft VETs are approved by the Director General of the VET Directorate of the MoES of Ukraine, deputy Minister of Education and Science of Ukraine, the joint representative body of employer unions at the national level, the MoSP of Ukraine. (8) Then VETs are approved by Decrees of the MoES of Ukraine providing for possible piloting of the VET over the next few years.

The VETs are to be **updated periodically**, taking account of changes in occupational standards, employers' proposals, technology changes in production or the service sector, use of new equipment or materials. A VET is updated by introducing appropriate changes in it, with initiators of introduction of the changes, justification for introducing the changes and date of introduction of the changes being stated. In case of substantial technology changes in production or the service sector or use of new equipment or materials, a new edition of VET is approved.

If a new standard is approved, a new education programme is developed. Training programmes for specific subjects can be developed and updated by teachers more often, in line with changes in technologies, curricular and education process scheduling. Today, training programmes and education programmes are developed in VET using a competence and module-based approach, so that students can acquire a qualification after learning a module. *Such development of programmes causes some inconsistencies and difficulties, since there's no single approach for designing programmes based on module structure.*

In designing programmes which contain modules and are learning-outcomes-based, the most significant complications occur while defining training results that meet the market requirements. If a VET is designed in line with the relevant occupational standard it ensures that training results meet the labour market requirements.

Implemented policies. According to the CMU Order "The Government's Priority Action Plan for 2018"⁴²³, the work has been carried out of updating the content and improving the quality of the VETs based on introduction in the education process of a new generation of standards established on competence-based approach (annually 15 VETs are approved of by MoES orders), improving the quality of vocational training of all qualified workers of all qualification levels and ensuring their mobility in the labour market.

Starting from 2015, VETs were designed partly using a competence-based approach, and starting from 2017 using a competence-based approach only. In fact, in 2017–2019, 170 VET standards were designed and approved⁴²⁴. These standards are designed in cooperation with employers, are flexible and better meet the requirements of the labour market and of VET students. At the same time, some

⁴²² VETs are developed in accordance with the Constitution of Ukraine, the Laws of Ukraine "On Education", "On Vocational Education and Training", "On Professional Development of Employees", "On Public Employment", "On Organisations of Employers, Their Unions, the Rights and Guarantees of Their Activity", Decree of the Cabinet of Ministers of Ukraine No. 1341 of 23 November 2011 "On Approving the National Qualifications Framework", Order of the Cabinet of Ministers of Ukraine No. 1077 of 14 December 2016 "On Approving the Action Plan for Implementing the National Qualifications Framework for 2016-2020", Order of the Cabinet of Ministers of Ukraine No. 275-r of 3 April 2017 "On Approving the Government's Medium-Term Priority Action Plan for the Period to 2020 and the Government's Priority Action Plan for 2017", the qualification characteristic requirements.

⁴²³ No. 244-r of 28 March 2018

⁴²⁴ <https://mon.gov.ua/ua/osvita/profesijno-tehnicna-osvita/derzhavni-standarti-navchalni-plani-ta-programi/zatverdzeni-standarti-profesijnovi-osviti-2019>

VETs were designed back in 2006 and haven't been revised for as many as 13 years (they require revision). There are just few such standards, but they are based on old methodologies and do not meet the present-day labour market requirements.

At the same time, 9 occupational standards have been approved and 117 more have been submitted for approval (see B.1.7).

Planned VET content modernisation policies. It is planned to approve the draft decree of the MoES on *Methodological recommendations on designing vocational education standards based on competence-based approach*. The Methodology was developed in order to set common approaches to standards' designing; to shape VETs content in line with training outcomes and education levels (shifting to learning-outcomes-based content). It was also aimed for recognising qualifications obtained in VET (confirmed by the relevant documents) and ensuring that VET graduates will be able to adapt to modern socioeconomic conditions. Besides, the draft *Methodology for designing VET programmes* has been developed. Also, VET institutions and VET students have been involving more in VET with elements of the dual education. Under the dual VET all educational programmes are designed in cooperation with employers, therefore, the content of VET is constantly updated in line with the requirements of the labour market and new technologies. Another area is the work on designing *the standard of vocational secondary education*, which should be implemented by 2027.

D.3.5 EU key competences

Today, the process of developing the new innovative NQF is going on with the assistance of the ETF and stakeholders. Also, competences in VET curricula are being transformed in order to facilitate professional career development and self-realisation, in line with the key competences of the EU.

A list and content of the key VET competences in Ukraine are formed:

- according to the Law of Ukraine "On Education". The Law identified the following key competences: fluency in the state language, ability to communicate in the native language (if different from the state one), as well as foreign ones; mathematical competence; competences in the area of natural sciences and technologies; innovativeness; environmental competence; information and communication competence; life-long learning; civic and social competences related to the ideas of democracy, justice, equality, human rights, well-being and healthy lifestyle, being aware of equal rights and opportunities; cultural competence; entrepreneurship and financial literacy;
- according to the Decree of the CMU No. 1341 of 23 November 2011 "On Approving the National Qualifications Framework";
- taking account of the EU reference framework on updated key competences approved on 21 May 2018 by the European Parliament and the Council of Europe that identifies the following key competences: literacy; language competence; science, technology, engineering and mathematical competence; digital competence; personal, social and learning competence; citizenship; entrepreneurship; cultural awareness and expression.

Example of forming a list of key competences in VET:

Literacy (definition of the competence). *Example* — ability to use the native language in your professional activity both verbally and in writing.

Language competence (definition of the competence). *Example* — ability to communicate in various languages.

Science, technology, engineering and mathematical competence (definition of the competence). *Example* — ability to preserve the environment; ability to use modern technological approaches in your professional activity.

Digital competence (definition of the competence). *Example* — ability to use information and communication technologies (ICT); ability to search for and process information from various sources.

Personal, social and learning competence (definition of the competence). *Example* — ability to identify, set and resolve problems; ability to act in a socially responsible and conscious way; ability to plan and manage time; ability to work both in a team and on your own; ability to assess your level of knowledge and obtain new knowledge throughout your lifetime.

Citizenship (definition of the competence). *Example* — ability to exercise your rights and freedoms as a citizen and member of the society.

Entrepreneurship (definition of the competence). *Example* — ability to think critically and analyse; ability to use your knowledge of the basics of economy in your professional activity and individually.

Cultural awareness and expression (definition of the competence). *Example* — ability to preserve and enrich cultural and historic values.

The aforementioned key competences of the EU are generally reflected in VET curricula. However, each curriculum contains key competences depending on profession (specialisation).

D.3.6 Policies to strengthen quality assurance

Implemented policies: One of the key steps taken since the last TRP round is the establishment of the SSEQ and the NAQ (see par. D.3.3).

SSEQ is a new central executive authority in charge of external quality assurance in education and educational activities, and exercising of state legal conformity control of educational institutions. Currently, regional branches of the SSEQ are being created.

As of today, the NAQ has been established⁴²⁵ and its membership approved⁴²⁶, the NAQ Head and his deputies were elected^{427,428,429}. Until now, Ukraine has not had any single institution to enforce state policy on qualifications. It will be a platform to coin the rules for developing and updating professional standards. Also, it will help the MoES to more dynamically adapt educational standards to labour market requirements. The NAQ consists of 12 persons, representatives of MoES, MoSP, MoEDT, employers, and trade unions. They are appointed for 3 years, with possible extension for 2 terms.

The MoES of Ukraine developed a draft Law “On National Qualifications Framework” that suggests to legally stipulate the establishment of qualification centres as subjects authorized to assess and recognize learning outcomes (such as those achieved in non-formal or informal education), award of and/or confirmation of respective professional qualifications of individuals.

Planned policies: It is expected that in 2019, SSEQ’s structural units shall become operational in all regions of Ukraine. Moreover, all necessary procedures in order to register the NAQ, establish its secretariat, working bodies, etc., will be implemented in the near future. It is planned that the secretariat will include about 60 persons who will provide for the agency’s operations. After these steps, NAQ operation can be launched full-scale. NAQ will become the main collegiate authority to implement national qualifications’ policy.

To eliminate any shortcomings stated in the answers to previous questions, NAQ will focus on the development of the NSQ. In particular, it will develop clear links, and correlation between the learning outcomes according to the respective education levels, qualifications, and labour market. Also, the

⁴²⁵ Pursuant to the CMU resolution dated December, 05, 2018, No 1029 on “Some Aspects on the National Agency for Qualifications”

⁴²⁶ Pursuant to the CMU resolution dated 03.04.2019 No 219-“[On Approving Members of the National Agency for Qualifications](#)”

⁴²⁷ CMU Order No 436-p as of June 19, 2019 “On the appointment of Kovtunets V.V. Deputy Head of the National Agency for Qualifications”. Available at: <https://zakon.rada.gov.ua/laws/show/436-2019-p>

⁴²⁸ CMU Order No 435-p as of June 19, 2019 “On the appointment of Akimova L.M. Deputy Head of the National Agency for Qualifications”. Available at: <https://zakon.rada.gov.ua/laws/show/435-2019-p>

⁴²⁹ CMU Order No 434-p as of June 19, 2019 “On the appointment of Balaniuk Yu.V. Head of the National Agency for Qualifications”. Available at: <https://zakon.rada.gov.ua/laws/show/434-2019-p>

mechanism for recognition of non-formal and informal education, and mutual recognition of professional qualifications between Ukraine and other countries, will be simplified. Activities of the NAQ will also **address the problem of monitoring and evaluation of the national qualifications policy's efficiency**; develop professional standards; develop legal framework for operations of qualification centres; and forecast the needs of labour market for qualifications. It is expected to foster the long-awaited adoption of the *draft Law of Ukraine "On National Qualifications Framework"*, provided the NAQ gets actively engaged.

It must be mentioned that certain provisions on **monitoring of VET quality** are included in the draft Law "On Professional (Vocational) Education" (Article 44)⁴³⁰. In case it is adopted, it would introduce a legal definition of the concept of "VET quality monitoring"⁴³¹, as well as an improved mechanism for its practical application.

II. 'Open floor'

Best practices: improving education quality through internship abroad

Ternopil region: Zboriv VET College at Puliui Ternopil National Technical University improves education quality introducing into its education process traineeships, internships and training by degrees, together with HEI. In particular, it participated in the International Polish-Ukrainian project "Professional activities without borders". One of its participants is the Foundation "You Can Know More", functioning at Langer Union of VET Schools in Cieszyn and in the abovementioned college. Moreover, Zboriv VET College has signed an agreement on cooperation with the High Security School in Poznan (Wyzsza Szkola Bezpieczenstwa), and an agreement on traineeship for students with the Polish company MEPROZET (based in Koscian). The College's students can improve their professional skills through training on MEPROZET facilities starting from 2019.

III. Summary and analytical conclusions

Challenges on the teaching and learning environment in the VET system: high level of depreciation of their infrastructure (60–100%), lack of proper conditions for people with disabilities, lack of textbooks, low motivation of teachers and insufficient level of readiness of some teachers of VET institutions to master modern teaching methods. **Challenges as to teaching and learning methods:** slow pace of implementing modern methods of teaching into the learning process. **Factors:** (1) insufficient funding of VET and low level of implementation of mid-term financial planning; (2) low efficiency of governance in VET system, at all levels; (3) lack of qualified teaching staff (especially of trainers of WBL); (4) low level of autonomy of VET institutions; (5) lack of reliable mid-term forecasts for the needs of labour market; (6) insufficient motivation of partners to join the process of VET developing; (7) low attractiveness of VET; (8) lack of understanding of the role of VET system for the development of the country and the regions. **Implemented policies and progress achieved:** In 2017-2019, 145 new EPCs were created under budget funds, 26 EPCs – at the cost of investors. Since the last TRP round, the number of e-learning tools has increased to 75, in 80% of VET institutions, multimedia training sets have been installed, in 88% of dormitories, there is Internet access, 98% of VET institutions have their official websites. The process is underway to create an innovative learning environment in VET institutions (the use of cloud technologies, constructors to develop interactive tasks, services to make and post presentations, compiling e-textbooks, etc.). Adoption of the concept and of the action plan on introduction of DVT was meant to improve the WBL in VET system. Methods of teaching and learning within the VET system were enhanced by projects of donor organisations, by implementation of modern teaching technologies with the focus on introduction of ICT, and on a broader access to e-versions of textbooks on official websites of MoES and IECM. **Planned activities:** in 2018-2020, it is planned to procure equipment, creation of EPCs, update of the education content, training of the teaching staff, development of new educational standards (as part of the EU project "EU4Skills"). In addition, in 2019–2020, it is planned to publish under the State budget funding, 15 titles of textbooks (200,000 copies), and also further digitisation of the sector, pursuant to the "Concept for the Development of Digital Economy and Society in Ukraine for 2018-2020". It is planned to have changes on improvement of methods of teaching in the VET system, due to approval of new law on DVT and arrangement of

⁴³⁰ <https://mon.gov.ua/ua/news/mon-proponuye-do-gromadskogo-obgovorennya-proekt-zakonu-ukrayini-pro-profesijno-profesijno-tehnicnu-osvitu>

⁴³¹ Monitoring of VET quality is a system of consistent and systematic measures taken in order to identify and trace any trends in the development of education quality in VET, to find correlation of factual outcomes of educational activities to the declared objectives, as well as to assess a degree, an area, and causes of deviations from objectives.

inclusive education in VET institutions. **Recommendations:** to focus public policy to increase attractiveness of VET, to develop new motivational mechanisms for bigger engagement of stakeholders into the process for developing VET, expansion of funding sources (mostly, due to SPP), raising efficiency of management in VET system on all levels.

Challenges on the teaching staff in VET system and availability of professional development opportunities: gradual decrease of the number of teaching staff and lack of vacancies, trends in the aging of teaching staff, low professional mobility and motivation for acquisition of innovative teaching and production technologies, high personnel turnover among masters, challenges in engaging experts from production and in having masters undergo internships in companies. **Factors:** a relatively low salary and insufficient social protection of teachers, reduction of the total enrolment of VET students, decrease in the number of institutions due to optimization of the VET institutions network. Relatively low salaries for teaching staff in VET sector makes their profession less prestigious. **Implemented policies and progress achieved:** It was created an opportunity for teachers to take professional advancement courses free of charge (1 time in 5 years), a wage premium of 30% of the basic fixed salary (since September, 1, 2018) and the possibilities for bonuses (15% since 2019). Another progress since the last TRP round has been a gradual introduction of the voluntary certification of teaching staff that enables getting a premium to the fixed salary in the amount of 20%. To partially solve the problem with lack of staff, practice of engaging the required professionals to work part-time were applied. The problem of organising and undergoing the internship by trainers (masters) in companies was often resolved by taking an internship on the facilities of an EPC. An important step in ensuring quality of training VET teachers is the establishment of SSEQ in December, 2017. **Planned activities.** In 2019–2021, it is planned to improve the system of professional advancement of qualifications of the teaching staff in VET by engaging into the teaching process the highly qualified employees, as well as to continue certification of the teaching staff in VET (pursuant to the Concept of public policy in VET up to 2027). **Recommendations:** The activities listed above need significant improvement to achieve results according to the plan and expectations. It is expected that it will be assisted by the full-fledged functioning of the SSEQ. It is highly required to have a deep review of the payment system for VET teachers, as well as an active public policy in raising the prestige of the profession.

Challenges on updating the content and strengthening quality assurance in VET: low quality of training the qualified staff in terms of their match (compliance) with the current labour market needs, and the needs of a personality, lack of mechanisms of independent evaluation of professional competence of VET graduates and the respective evaluation criteria. **Factors:** lack of funding, weak interaction between the labour market and the education system, imperfect identification and forecast of demand for professional skills on the labour market in Ukraine, dynamic growth of new professions in the labour market that requires broad engagement of additional funding to develop new standards and modernise the updated material and technical resources, internal and external procedures for quality assurance in education are under reform. **Implemented policies and progress achieved:** It was updated the content and improved the quality of CVET on the basis of introducing a new generation of competence-based standards into the education process (170 standards approved). It was approved 9 professional standards and submitted 117 more for consideration. In December, 2017, the SSEQ was established – a new central executive authority for external quality assurance of education. In December, 2018, the NAQ was created – a main collegial body for implementation of public policy on qualifications (until that time, there was no single institution in Ukraine to implement public policy in this area). In 2017-2018, experiments were introduced in VET institutions on conducting an independent state qualification attestation in certain professions. **Planned activities:** It is planned to approve the draft decree of the MoES on adopting the Methods Guides on Development of Competence-Based Standards for VET, and the draft Methodology to Develop Curricula in VET. It is also planned to increase the engagement of VET into the dual-based training format. Another area of activities includes efforts to develop a standard for vocational secondary education to be launched since 2027. **Recommendations:** The available system of assessment of learning progress of learners requires further improvement; it would be reasonable to transfer the functions of state qualification attestation for objective quality assessment of training qualified workers to an independent commission. A monitoring of compliance of the offer of the qualified workforce to the needs of the labour market in Ukraine is gaining increasingly more relevance, as well as VET quality assessment. There is a need to provide for the full-fledged functioning of NAQ and for implementation of the entrusted functions.

Building block E: Governance and financing of VET

II. Thematic areas

E.1: Institutional arrangements

Identification of issues

E.1.1 Effectiveness of institutional and governance arrangements

In the context of the implementation of reforms in VET system, a particular importance is given to the problem of the effectiveness of VET system through *the improvement of existing and the introduction of new institutional and governance arrangements*. After the last round of TRP, the process of decentralisation of VET is underway in the framework of the decentralisation of governmental reform that was launched in Ukraine in 2014. There has been a radical change in the governance arrangements of VET (the reconstructed governance's vertical is not only at the "centre-regions" level, but also within the region). The key areas of this process, within the framework of the division of powers, were ***the transfer of funding (see detail block E.3) and ownership of VET facilities*** from the state to the regional level (see E.1.3).

As for the first direction — in accordance with Article 27 of the Law of Ukraine "On the State Budget of Ukraine for 2016", ***from January 1, 2016, financing of expenditures for the training of labour personnel in VET institutions was transferred from the State Budget to the level of local budgets***⁴³². At the same time, the transfer of cities of regional significance to the responsibility for financing of VET institutions located in the territory of these cities, which was implemented in 2016, had deep negative consequences for the entire sector of VET in Ukraine. In small cities of oblast significance, the available financial resources did not cover the expenditures of the first necessity to finance VET institutions. In order to resolve the problematic issues of VET financing, the MoES undertook a number of actions mentioned in paragraph E.1.3. Currently, the funding at the oblast (region) level is performed from oblast budgets, budgets of cities of oblast significance -oblast centres and the budget of city of Kyiv. In this case, partial financing from the State Budget still remains (see detail block E.3).

Another important direction is complicated and long-term ***procedure for transfer of the property of institutions*** subordinated to the MoES, from state to communal ownership. Particular attention is paid to compliance with the requirements set forth in the Law of Ukraine "On Transfer of Objects Right of State and Communal Property". The conditions of the transfer are the obligation of the local self-government bodies to use them by the intended purpose and not to alienate the objects transferred to the private property. It also ensures the availability of educational institutions' documents on immovable property and cadastral numbers of land plots of educational institutions located in and owned by institutions with the right of their permanent use. As of 01.01.2019, the CMU made a decision on the transfer of 76 institutions into the communal property.

Currently, ***the regional and Kyiv city state administrations have been assigned the functions*** to arrange the activity of regional VET councils, operational management of property of educational institutions, conducting monitoring studies of the needs of the regional labour market, forming and placing of regional orders for training of skilled workers and junior specialists, and appointment to the position of directors of educational institutions, whose financing is done from oblast budgets and the budget of the city of Kyiv, by the results of competitions by concluding fixed-term employment agreement (contract). At the same time, ***the city councils of the oblast centres*** are being transferred with only separate functions on personnel issues⁴³³.

The evaluation of the effectiveness of institutional and governance arrangements of VET under decentralisation processes is not unambiguous, since it can be more objective in the long run — after

⁴³² In particular, it provided for the financing of educational institutions located in cities of oblast significance from budgets of cities of oblast significance, others from oblast budgets and the budget of city of Kyiv.

⁴³³ In accordance with the resolution of the CMU dated October 25, 2017, No. 831-r, which provides for the transfer of certain management functions. The resolution came into force on January 1, 2018.

the implementation of all stages of the reform. The greatest threat is the insufficient preparedness of the management staff at all levels of the hierarchy of governance, the lack of practical management experience in the new environment and the motivation to change. Today, the approach to decentralisation should be reviewed in general in the light of experience gained and, if necessary, to reflect the necessary changes in the draft law "On Professional (Vocational) Education".

Positive changes in the process of decentralisation. The mechanisms of decentralisation and autonomy in VET system contribute to the expansion of funding sources and more efficient use of resources for the maintenance of VET institutions. For the first time in many years, the regions began to invest into the development and modernisation of logistics of VET institutions. The establishment of educational and practical centres at the expense of local budgets has begun. The regions direct some of the remnants of the educational subvention to strengthen the logistics of VET institutions. In addition, decentralisation contributes to the formation of a contingent of learners of VET institutions the basis of not only quantitative but also qualitative indicators in accordance with the qualification requirements that are demanded by the personnel of the workforce taking into account regional peculiarities of production and state subsidising of general education. In particular, the opportunity was created to take into account the opinion of various stakeholders and focusing on the needs of the regional labour market, making changes to the volume of the regional order, etc.

Problematic issues. Despite the redistribution of functions that has been already taken place, a significant number of powers continue to be national, while responsibilities are assigned to oblast and local authorities. It does somewhat limit the autonomy and the ability to make effective and responsible decisions in VET sector locally. Despite the adoption of the framework law "On Education" (2017), the new law "On Professional (Vocational) Education" has not yet been adopted. Consequently, the governance arrangements of VET system are based on the old legislative framework.

The main problem at the regional level is *the financing of VET institutions located in the cities of oblast significance - oblast centres, from the city budgets*. This transfer of authority has led to the situation that the local authorities are not interested in financing the training of labour personnel for the whole region, and even more so for several regions or for the country as a whole. There are examples when city administrations are trying to restrict access to VET institutions for non-residents of their city, which causes problems in the area of social justice. In addition, cities of oblast significance - oblast centres do not always agree on management strategies for VET with the oblasts. Consequently, there is a lack of a holistic governance arrangement. The delegation of authority to the level of cities places in disadvantage all parts of the regional system that lie outside the city, including the numerous communities associated with these territories. *A more natural unit of optimisation of the totality of VET institutions is the regional network of educational institutions*⁴³⁴.

Also, in some areas there is a mismatch between regional economic development strategies and the development strategy of VET institutions of their region. There are also conflicting strategies for the development of specific sectors of education. Consequently, there is a lack of an integrated approach to the management process.

Assessment of the degree of autonomy of institutions. Autonomy of VET institutions allows us to adjust the educational process in accordance with the qualification requirements taking into account the needs of the regional labour market, as well as to ensure optimisation of human resource policy mechanism. The degree of autonomy of VET institutions can be assessed as satisfactory (as average), with the exception of such a component as funding and allocation of funds. In particular, there is insufficient independence of the institution regarding the financing and disposal of material and financial resources.

The process of compiling a training program at the level of the provider (educational institution) is determined by the Decree of the CMU dated December 30, 2015 № 1187 "On approval of licensing conditions for the educational activities of educational institutions" and the requirements of the State Standards of VET. State standards of VET for each individual occupation, level of qualification, determine the subjects and the number of hours of teaching. The provider (VET institution) has the right to make changes in the contents of the standard in the amount of up to 20% of the regional component. Certain autonomy is provided to VET institutions, when developing evaluation procedures, but the main parameters of the procedure are defined by the MoES guidance documents. The head of the VET institution has virtually a complete autonomy in the formation of the staff, although the appointment of

⁴³⁴ Green Book of the ETF "Decentralizing Vocational Education and Training in Ukraine. Momentum for Action", 2017.

deputies requires the approval of regional authorities, which often has a formal character and enables the leader to form his own team. At the same time, decision-making on funding and allocation of funds is regulated by the budget allocations. In addition, the use of special funds mobilised by VET institutions as a result of their activities (own revenues) can be used only after the procedure of approvals with senior governance structures.

Overall, the institutional and governance arrangements that ensure the functioning of VET system need further improvement for the implementation of the planned reforms. Implementation of institutional mechanisms envisions the involvement of all stakeholders in achieving positive results of the educational process in VET system. In Ukraine, the technological approach to social partnership prevails as a mechanism for achieving a relative balance of interests of VET institutions on the market of educational services, the key elements of which is the negotiation process between the partner parties.

An overview of actions aimed at the improvement of the institutional and governance arrangements of VET is provided in the clause E.1.3.

E.1.2 Accountability, leadership and control

The accountability, leadership and control mechanisms for VET are described in paragraph A.2.2. As a result of the decentralisation process, **responsibility and governance are distributed among different actors at the national, regional (or local) levels and at the institution's level.** At the sectoral level of governance, as such, it is not implemented, it refers to cooperation and advisory functions (sectoral professional associations of employers).

National level. The activities of the key Ministries involved in the governance of VET system at the national level (MoES, MoSP, MoF, MoEDT and other line Ministries) **are coordinated by the CMU.**

The CMU approves the strategy of VET development and ensures the implementation of state policy in the area of VET (state targeted programs of VET). It approves licensing conditions for conduction of educational activities; state priorities for staff training; a list of fields of knowledge and specialties for the training of VET specialists; list of positions of pedagogical workers. The CMU determines the procedure for the formation and allocation of educational subventions between the budgets and the procedure for the allocation of public funds for VET.

The MoES, as the main body in the area of the formation and implementation of state policy on VET, approves educational standards, the procedure for monitoring the quality of education and audit of institutions, licensing educational activities of institutions, approves the form of educational documents, standard admission requirements and typical curricula. VET functions falls within the competence of the

Directorate of Vocational Education

Directorate of Vocational Education is an independent structural unit of the MoES, established to design and implement public policy in VET. The Directorate is coordinated by the Minister of Education and Science. The Directorate was created as a result of the implementation of the 2016-2020 Strategy for Public Administration Reform in Ukraine.

Mandate:

1. designing of public policy on the basis of operative analysis of the VET sector, development of alternative solutions to current issues;
2. monitoring and assessment of outcomes of the implementation of public policy for VET, drafting proposals on its extension or adjustment (correction);
3. ensuring legal regulation in VET;
4. ensuring fulfilment of tasks related to the implementation of public policy for VET;
5. cooperating with local self-government bodies on the implementation of state policy in the sphere of VET, development and implementation of regional training programs for skilled workers and junior specialists;
6. participating in the strategic planning process, preparing proposals for the Government's priority action plans and MoES' plans for VET.

Composition: The Directorate includes two expert groups compiled to fulfil the tasks in certain areas of design of public policy for VET and the Central Office of Vocational Education which are in charge for enforcement of public policy in the area of VET. The Directorate is headed by the Director General.

Key areas of activities:

1. content and quality assurance of education;
2. governance and PPP.

Other bodies. The **MoSP** participates in the development of legislation for VET sector, develops the National Classifier of Ukraine DK 003:2010 „Classifier of Professions” and approves the occupational standards and qualification characteristics of professions (occupations).

State Employment Service (SES) is subordinated to the MoSP and provides a wide range of employment-targeted services to the population, including organisation of vocational training for unemployed. It is engaged also in the short-term labour market forecast implemented particularly through employers' surveys. In September 2017, the MoSP established a multi-stakeholder working group, which will be in charge of skills anticipation and labour market forecasting.

The **MoEDT** calculates the medium-term needs of the labour market in specialists and labour personnel by occupational groups. **MoF** is responsible for financing of VET institutions.

The newly created **State Service of Education Quality** of Ukraine is controlled by the CMU via the Minister of Education and Science. It implements state policy in the area of quality assurance of education, as well as makes suggestions on state policy in this area.

National Qualification Commission (NQC) is not clearly subordinated, it is a permanent collegiate body authorized to implement state policy in the area of qualifications⁴³⁵. This institution (after the formation of its staff), among other things, will coordinate the development of occupational and evaluation standards and will form the requirements for procedures for attribution of professional qualifications and recognising the results of non-formal and informal learning.

Regional level. The authority and responsibility for the VET at the regional level of governance are

⁴³⁵ The Agency is formed on parity conditions from representatives of the MoES, the MoSP, the MoEDT, the Joint Representative Body of the Employers at the national level and the Joint Representation Body of Representative All-Ukrainian Associations of Trade Unions.

assigned to the **Departments of Education and Science of RSA**, where in its structure there is a section, which implements the state policy in the area of VET. Despite the fact that these departments are the part of the structure of RSA, in practice, they have a double subordination: to the MoES and RSA. Their main functions include control of the activity of VET. Regardless of the forms of ownership and subordination to comply with the current legislation on VET, updating the content of education and management activities, compliance with the requirements of the State VET standards; the general governance of the activities of VET state-owned institutions; organisation of occupational development of workers; conduction of licensing and attestation expertise of VET institutions, control over the implementation by the heads of VET institutions in the area of their contractual duties. In addition, **the oblast, Kyiv city state administrations** are being assigned with the functions of arrangement of activities of regional VET councils, operational management of the property of educational institutions, the formation and placement of regional orders, as well as *appointment to the positions of directors of educational institutions*, whose funding is done from their budgets. At the same time, **the City Councils of the cities of oblast significance-oblast centres** have transferred only separate functions on human resource issues.

Today, **regional VET councils** are created in all regions. They are advisory and consultative bodies formed by regional state administrations for the formation and implementation of regional policy in the area of VET. The activities of the regional councils are directed, first of all, at the formation of proposals for the modification of VET institutions network, the amount of their funding, the directions and the scope of training, as well as the approval of the regional order. At the same time, the effectiveness of such councils is currently low.

Level of institution. State **VET institutions** are monitored by the Departments of Education and Science of RSA.

VET institutions' mandate includes the arrangement of educational process, the choice of forms and methods of teaching; educational and production and financial and economic activity; certification of pedagogical workers; development of working curricula and programs (based on typical ones); together with the Departments of Education and Science of RSA formation of the plans for admission of learners taking into account state⁴³⁶ and regional orders; provision of productive training of learners; quality assurance of education; definition of structure and staff, etc. In the conditions of decentralisation, competition between VET institutions is increasing. They need to prove their significance to the region and its development. VET institution is governed by its head (director). Pedagogical council is a key collegial governance body of the VET institution with an advisory role.

Director. According to Article 24 of the Law of Ukraine "On Professional (Vocational) Education", *governance of the VET institution is carried out by the head (director) of the VET institution. The Head is obliged to report on the annual basis to the general staff meeting of the institution.*

Mandate:

1. organises educational process, ensures conditions for training, retraining, and the advancement of qualifications of workers;
2. acts on behalf of the VET institution and is personally in charge of its performance;
3. enrolls to positions and dismisses from positions the staff of the institution, approves their job descriptions, composes the teaching staff;
4. approves the staff schedule and number of the staff; issues instructions, encourages employees and applies sanctions;
5. sets bonuses in addition to official fixed salary;
6. provides proper conditions for sustainable professional development of the teaching staff and learners;
7. provides for safe and uninjurious conditions for study, work, and education;

⁴³⁶ by occupations of national significance

8. along with employers, provides learners during their WBT in companies with the special outfits and personal protective equipment;
9. creates inclusive groups (on the grounds of a written request from a person with special educational needs, the persons' parents or lawful representatives).

Pedagogical council is a key collegial governance body of the VET institution with an advisory role. It is established according to Article 27 of the Law of Ukraine "On education". The Council identifies key areas and activities, specific forms of work for the teaching staff and makes decisions on key crucial aspects of VET institution operations. Decisions are made by means of voting (at least 2/3 of votes). Meetings of the Pedagogical council are to be held at least once in two months. Director is the head of the pedagogical council. The composition of the pedagogical council is approved by Director's order.

External control. The external control over the targeted and effective use of budget funds in the area of VET is done by the bodies conducting the external audit (**State Audit Service of Ukraine** and the **Accounting Chamber of Ukraine**). They can audit at all three levels mentioned above.

The external monitoring of the quality of education in VET institutions should be the obligation of **SSEQ** of Ukraine established in 2017, which is not yet fully operational (see D.3.3).

Problems: Lack of autonomy of VET institutions, which leads to the inability to fully timely respond to employers' and labour market demands. The current mechanism of accountability, leadership and control in VET system presently lacks systems for monitoring the effectiveness of management decisions and their impact on the quality of educational services at all levels. It is necessary to switch from operational to program-targeted management. Another problem is low efficiency of activity of regional VET councils.

Description of policies

E.1.3 Governance reforms

Implemented policies. Since the last round of the TRP, MoES has taken actions to optimise the network of VET institutions. The analysis was conducted taking into account financial and economic efficiency, improving the quality of training. At the same time, the vision of each region is taken into account in relation to the needs of the economy and the labour market, aspects of governance and financing in a context of decentralisation. During the years of 2017–2018, 50 VET institutions were reorganised by the way of joining them to ones that are more powerful. In addition, a decision was made to separate 7 VET institutions from the structure of the institutions of HE.

In order to resolve the issues of financing of VET institutions in the conditions of decentralisation described in the clause E.1.1, the MoES has undertaken a number of actions, according to which the CMU in 2016 allocated stabilisation grants in the amount of UAH 598 m. Also, to address this issue there was a change in financing at the regional level. In particular, since 2017, the funding at the oblast (region) level is performed from oblast budgets, budgets of cities of oblast significance -oblast centres (regional) centres and the budget of city of Kyiv.

Work is underway on transfer from the state to the communal ownership of state VET institutions subordinated to MoES, according to the Law of Ukraine "On Transfer of Facilities of State and Communal Property Rights". As of 01.01.2019, 76 institutions were agreed to be transferred from the state to the communal property, including 4 institutions in 2017 (only Kyiv oblast), 30 institutions in 2018 (3 — Zhytomyr oblast, 5 — Ivano-Frankivsk oblast, 8 in Kyiv, 3 in Kirovograd oblast, 3 in Lviv oblast and 6 in Transcarpathian oblast, 2 — Ternopil oblast), and 42 institutions in 2019 (1 – Kirovohrad oblast, 12 Lviv oblast, 3 – Chernihiv oblast, 2 – Odesa oblast, 1 – Kherson oblast, 13 – Dnipropetrovsk oblast, 3 – Chernivtsi oblast, 3 – Cherkasy oblast). In total, 660 institutions are to be transferred. Documents from 244 institutions have been received by MoES. Currently, packages of documents of 31 institutions have been received by to the MoEDT.

Taking into account a complicated and long-term procedure for the transfer of property of institutions, the CMU adopted an order dated October 25, 2017, No. 831-r "Issues of governance of state institutions of vocational education and training subordinated to the MoES", which envisions the transfer of certain functions to the governance of the oblast state administrations and city councils of cities of oblast significance (see detail clause E.1.2)⁴³⁷. The introduction of these changes allowed to improve the efficiency of the institutional and governance arrangements of VET system and to govern expeditiously the institutions at the oblast level and in regional centres. In particular, the regional level was assigned with functions for the formation and placement of a regional order for the training of skilled workers and junior specialists, operational management of property.

The MoES of Ukraine issued a Decree dated July, 17, 2019, No. 998 "On Approval of Procedures for Conducting the Competition for the Position of a director of the state institution of vocational education and training" registered at the Ministry of Justice of Ukraine as of August, 14, 2019, No. 922/33893. The Procedures regulate aspects related to the conduct of competition for a position of a director of the state VET institution.

In addition, in order to resolve the problems described in the previous two questions, at the end of 2017, the amendments to the Budget Code of Ukraine were introduced, which enabled to make expenditures on VET in terms of a regional order. Methodological Recommendations on the Formation of a Regional Order for the Training of Specialists and Workers was approved (2016)⁴³⁸.

Today, in all regions, *Regional VET Councils* were created and started their work in accordance with the above-mentioned CMU resolution. Their activities are assigned to oblast and Kyiv city state administration. The regional councils include representatives of local authorities and local self-government bodies, employers' organisations, including industry associations of employers and professional associations, educational institutions. Considering the low efficiency of such councils, as of April 2019, the MoES has elaborated a draft resolution of the CMU "On Approval of the Regulation on VET Regional Council"⁴³⁹⁴⁴⁰.

The draft law "On VET" envisions an increase in the autonomy of VET providers. It also envisaged autonomy, independence and responsibility of VET institutions in the decision-making on the development of academic freedoms, the organisation of educational process, the content of educational activities, internal governance, economic and other activities, self-recruitment and staffing. In addition, it is planned to create a modern educational environment that will be comfortable for people with special educational needs⁴⁴¹.

Planned policies. The key priority of the Concept for the implementation of state policy in the area of VET for the period up to 2027 (2019⁴⁴²) is the reformation of the governance of VET system and its structure. It envisions:

- Distribution of powers of governance and financing in the area of VET, in particular, the transfer of authority to oblast level in terms of the forecast of labour market needs in occupational qualifications, the formation of a regional training order on the basis of a regular analysis of the labour market;
- Implementation by 2024 of the final transition to the financing of VET institutions, which are located on the territory of cities of oblast significance — regional centres, from oblast budgets;
- Development and approval of the template of a Regulation for VET regional council;
- Expansion of the autonomy of VET institutions, in particular, the development and implementation of its own educational curricula, the acquisition of the status of a non-profit organisation with the preservation of tax benefits and obtaining financial autonomy;

⁴³⁷ Till the completion of the procedure of transfer of public institutions from the state to the communal property.

⁴³⁸ Order of the CMU dated December 14, 2016 No. 994-r.

⁴³⁹ <https://mon.gov.ua/ua/news/mon-proponuye-dlya-gromadskogo-obgovorennya-proekt-postanovi-kmu-pro-zatverdzhennya-tipovogo-polozhennya-pro-regionalnu-radu-profesijnoyi-osviti>

⁴⁴⁰ Adoption of the resolution should facilitate the coordination of activities of local executive bodies, local authorities, enterprises, institutions and public organizations for the development of VET and the formation of an effective policy in this area.

⁴⁴¹ <https://www.kmu.gov.ua/ua/news/mon-chekaye-na-propoziciji-robotodavciv-do-koncepciji-yaka-viznachatime-rozvitok-profesijnoyi-osviti-v-ukravini>

⁴⁴² approved by the CMU order dated June 12, 2019, No. 419-r

- Optimisation of the network of VET institutions by the way of creation of centres of excellence, taking into account the inclusive education.

E.2: Involvement of non-state actors

Identification of issues

E.2.1 Distribution of responsibilities between state and non-state actors in VET

The analysis of modern trends of the participation of non-state actors in VET governance and formation of relevant policy in this field showed the absence of an integral well-arranged system of collaboration, with clear division of functions and obligations. Though the dialogue with this sector has lasted long enough, there is neither integral system nor long-term model of development with precise and transparent implementation mechanism, which is still a key issue therein.

There is a formal social partnership (based on agreements, regional and specialized councils) and non-formal partnership (within certain projects). In particular, all regions have now created and launched regional VET councils, comprising representatives of local authorities, employer organisations, including sectorial associations of employers' organisations, professional associations, and educational institutions. They are aimed at submitting proposals to change the network of VET institutions, the amount of their funding, directions and volumes of workers training, and the approval of regional order.

The decentralisation of VET system governance and financing carried out in Ukraine has enhanced the development of official social partnership.

Before 2016, non-state actors participated in VET in a limited number of activities, in particular:

- WBL and in-company internship for VET students⁴⁴³;
- VET quality assurance by the participation in the approval of the amendments to VET standards⁴⁴⁴;
- participation in the formation of state order for the training workers⁴⁴⁵;
- preparation of law proposals, participation in specialised projects, promotion of reforms as regards to recognition of the results of formal and non-formal education, etc.

Since 2016, the implementation of the decentralisation policy of the VET system governance resulted in additional forms of participation of non-state actors, in particular:

- participation in VET quality assurance by developing professional standards⁴⁴⁶;
- participation of the non-state actors as representatives of employers and Trade Unions in the regional VET councils⁴⁴⁷ in order to form and place regional order for training specialists and qualified workers⁴⁴⁸;
- more active promotion of DVT implementation in VET.

Despite the documents on the cooperation between the parties (see E 2.2.) approved by now, the matter of liabilities for the obligations is still not solved due to the lack of precise and well-regulated collaboration procedure. In general, even provisions agreed upon still need to be implemented systematically.

Zaporizhzhia region: education-production clusters operating

Currently, the EPC State educational institution "Zaporizhzhia Higher Vocational School of Fashion and Style" is included in the education-production cluster of innovative sewing technologies in Zaporizhzhia region. Participants of this cluster are leading sewing enterprises in Zaporizhzhia and the region. The cluster's activity is aimed at: (1) improving VET content based on introducing innovative technologies; (2) monitoring, analysis and forecasting the need for qualified personnel in the labour market; (3) developing occupational and educational standards; (4) centralised use of the material and technical base for students and learners to complete practical training; (5) developing proposals for modernisation of the VET institutions network. Innovative technologies are widely used in the educational process of the EPCs (in particular, special curriculum design and 3D modelling programs have been developed using the ASSYST software package). The quality of professional

⁴⁴³ <https://zakon.rada.gov.ua/laws/show/992-99-n>

⁴⁴⁴ <https://zakon.rada.gov.ua/laws/show/495-2011-n>

⁴⁴⁵ <https://zakon.rada.gov.ua/laws/show/5499-17>

⁴⁴⁶ <https://zakon.rada.gov.ua/laws/show/373-2017-n>

⁴⁴⁷ <https://mon.gov.ua/storage/app/media/nrk/Analitichni-materialy/14-robochi-materiali-z-oglyadu-stvorennya-profesiynikh-rad.pdf>

⁴⁴⁸ <https://zakon.rada.gov.ua/laws/show/994-2016-p>

training of students is confirmed by the results of the All-Ukrainian contests “WORLDSKILLS UKRAINE, 2017” and “WORLDSKILLS UKRAINE, 2018”.

Description of policies

E.2.2 Policies in support of participation of non-state actors

So far, there is no policy of supporting the participation of non-state actors. There are just some ways of encouraging companies (in particular, to hire unemployed VET graduates, by providing compensation to the employers who hire citizens⁴⁴⁹).

Involving non-state actors in the development and implementation of VET state standards is an important component of their participation in VET development⁴⁵⁰. It is important to pay attention to the law “On Professional (Vocational) Education”, containing a great number of references to the participation of employers in different VET fields: ensuring the participation of employers in the work of regional VET councils (Article 1), ensuring practical training of VET learners at enterprises, institutions, and organisations (Article 10), encouraging practical guides for VET learners (Article 47)⁴⁵¹. The private sector (of employers) participating in professional training by dual form of education is an important step in this direction⁴⁵². At the same time, regardless of the fact that some individual steps have been taken in this field, it is obvious that there is no targeted state policy in this respect aimed at supporting the collaboration with non-state actors.

The PPP in education and science is implemented on the basis of agreements between public authorities and private partners concluded in accordance with the procedure set up by the CMU⁴⁵³. On 5th November, 2018 the Federation of Employers of Ukraine and the MoES of Ukraine signed the Memorandum on Cooperation with the purpose of consolidation of efforts in order to develop VET and provide highly skilled professionals for the labour market, and to develop the PPP. The tendency is to raise the government’s interest to deeper collaboration with employers in respect of creating more efficient system of VET popularisation through relevant changes of legislation⁴⁵⁴⁴⁵⁵.

Legal basis for the PPP in education and science is stated in the Constitution of Ukraine, the Civil Code of Ukraine, the Commercial Code of Ukraine, the Laws of Ukraine “On Private-Public Partnership” and “On Education”, other laws and international agreements of Ukraine. Today, the **legislation of Ukraine does not allow the PPP mechanism to be used actually and sufficiently for the VET development**. It is necessary that significant articles concerning VET are to be expanded in the relevant laws on education. According to the Law of Ukraine “On Education” the PPP in the field of education and science should include: joint financing of educational institutions, bases for practical training, innovation centres and business incubators (based on the existing education institutions); development of modern technologies of education; professional training; implementing joint programmes of financing professional training, etc.; policies of social protection of teachers and students. The actions require active participation of the both parties.

⁷ CMU Regulation No 33 dated 31st January, 2018. “On the approval of assessment criteria regarding the aid provided by the state to economic entities for the employment of certain categories of employees and creation of new jobs”. Available at: <https://zakon.rada.gov.ua/laws/show/33-2018-%D0%BF>

⁴⁵⁰ <https://zakon.rada.gov.ua/laws/show/1238-2011-%D0%BF>

⁴⁵¹ <https://mon.gov.ua/ua/news/mon-proponuye-do-gromadskogo-obgovorennya-proekt-zakonu-ukrayini-pro-profesijnu-profesijno-tehnicnu-osvitu>

⁴⁵² <https://zakon.rada.gov.ua/laws/show/660-2018-p>

⁴⁵³ According to the Articles 81 of the Law of Ukraine “On Education”. – Available at: <https://zakon.rada.gov.ua/laws/show/2145-19>

⁴⁵⁴ <https://mon.gov.ua/storage/app/media/pto/memorandumy/memorandum-pro-spivpratsyu-mizh-federatsieyu-robotodavtsiv-ukraini-ta-ministerstvom-osviti-i-nauki-ukraini.pdf>

⁴⁵⁵ <http://fru.ua/ua/events/fru-events/robotodavtsi-ta-osvitiiany-ob-iednuiti-zusyllia-dlia-rozvytku-ta-populyarizatsii-profosvity>

The PPP in the VET field and interconnection with the labour market was determined to be *one of the three main priorities, under the Concept of Implementation of National Policy in the Field of Vocational Education and Training “Modern Vocational Education and Training” until 2027 (2019)*⁴⁵⁶.

Cherkassy region: public-private partnership implementation

The PPP is under development in the region: (1) the Regional VET Council (with stakeholders' participation) has been created (2) five EPCs have been established at the expense of social partners: at Cherkasy Higher Professional School of Building Technologies (the Interregional educational institution, EPC of modern building technologies, EPC for occupations of "Installer of drywall constructions", EPC "TRIORA" and EPC "Sniezka"); at Cherkasy Professional Lyceum – the Training-practical centre for technology “HenkelBautechnik (Ukraine)”; (3) in cooperation with 6 enterprises a DVT for 5 professions, has been introduced.

However, the public-private partnership requires legislative regulation. Incentives for social partners are not provided by law. Therefore, non-state actors are not enough involved in VET processes, in particular, this refers to the development of the regional (state) order. Therefore, it is reasonable to adopt the new Law of Ukraine “On Vocational (Vocational and Technical) Education”, which will include conditions for creating and/or joint financing of VET schools, new platforms for vocational and practical training, innovative enterprises (innovation centres, technology parks, technopolises, innovative business-incubator) and others.

E.3: VET budget

Identification of issues

E.3.1 Expenditure planning, VET budget formation and execution

The modern system of VET funding reflects general process of decentralisation which began in 2014⁴⁵⁷. The VET budget system is formed according to the Law of Ukraine “On State Budget of Ukraine”, the Budget Code of Ukraine, Mid-term Budget Declaration (main directions of the budget policy for three years), regulations of the CMU, decisions of the regional councils, etc. The main source of the VET funding is local budgets (see p. D 3.2).

On the national level (State Budget) the MoES and the Ministry of Finance of Ukraine are involved to VET budget formation and execution.

On the sub-national (regional) level (regional budgets, budgets of cities of oblast significance - regional centres, budget of the city of Kyiv): Departments (offices) of education and science and Financial Department of the corresponding Regional and City State Administrations; VET institutions.

Apart from this, **each VET institution** has its own budget.

Since the last round of TRP the mid-term budget planning has been introduced in Ukraine. At present the budget process starts from drafting and approving a Budget Declaration, containing key macroeconomic forecast indicators and budget thresholds for three years. It is fundamental for drafting budgets (both State and local ones). The draft of the State Budget is approved by the Verkhovna Rada of Ukraine, the drafts of local budgets are approved by region and city councils. Both state and local budgets can be amended (corrected) during the budget year (the procedure set up by the Budget Code). After the budget year is over a report on the relevant budget execution is prepared.

State and local budgets contain VET expenditure items, which correspond to budget programmes. Budget planning is carried out using the programme-target method⁴⁵⁸. At each stage of the budget process the stakeholders evaluate the efficiency of budget programmes within their authorities, which means monitoring and control over the target and efficient use of budget funds. Monitoring is done by

⁴⁵⁶ <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciji-realizaciyi-derzhavnoyi-politiki-u-sferi-profesijnoyi-profesijno-tehnicnoyi-osviti-suchasna-profesijna-profesijno-tehnicna-osvita-na-period-do-2027-roku-i120619>

⁴⁵⁷ Fiscal Decentralisation and Local Government Finance Reform: 2014-2017, SKL/SIDA, September 2018. Available at: <http://sklinternational.org.ua/wp-content/uploads/2018/10/Policy-Brief-ENG.pdf>

⁴⁵⁸ The use of programme-target method (as the main method of budget planning) includes the development of targets and objectives of a budget programme, directions of its activities and indices of its performance. Budget funds distributors plan budget programmes, whose expenses are taken into account in the draft of the State Budget for the next year.

those who execute programmes (authorities mentioned above) as well as bodies who are in charge of external audit (State Audit Service of Ukraine and Accounting Chamber of Ukraine).

National level: Amount of transfers from the State Budget to local budgets for VET institutions is calculated by MoES with or without a request to the Department of Education and Science of the Region State Administration and is annually approved by the Law on State Budget of Ukraine (individually for each local budget, obtaining such a transfer from the State Budget).

Sub-national (regional level): Planned expenditures of regional budget are calculated based on minimal salary, salaries of employees and the tariff rank of the Unified tariff network, minimum subsistence level and corresponding inflation rate (co-efficient to which the utility services and electricity rates may increase).

Distribution of funds among VET institutions of the region is made based on the number of students and approved regional order (expenditures per 1 student).

At the same time, VET institutions annually prepare information on their budget needs for the next year (necessary expenditures) taking into account the subsistence level, minimal salary, employee's salaries, number of employees, area and sanitary state of premises, availability of workshops, equipment, type of institution, number of students and groups, time of work, prices for food, amount of scholarship, tariffs for utility services, social standards, needs for modernisation etc.

A shortcoming of the process is that capital expenditures are planned according to the available financial resources of local budgets, which does not allow to modernise properly facilities and appliances of a VET institution. There is also a general problem of under-funding. Local budgets (as the main source of funding) can cover only 60% of financial needs of VET institutions in the regions⁴⁵⁹. VET institutions located outside cities of oblast significance – oblast centres are found in a worse condition, since their available financial resources cover only the 45% of their needs.⁴⁶⁰

Description of policies

E.3.2 Policies to improve expenditure planning and budgeting in VET

Implemented policies: In the end of 2017 the Articles 89 and 90 of the Budget Code of Ukraine were amended. It enabled to spend funds on VET under conditions of regional order, which helped to *determine the strategies and tactics of regional VET systems development*.

In order to raise the efficiency of budget implementation and budget funds use, the *programme-target method was introduced*. Its objective is to set a link between the provision of budget funds and outcomes of their use. To evaluate budget programme effectiveness the reports on the implementation of budget programme passports are prepared. According to the results of such evaluation the budget funds distributors take measures to raise the efficiency of budget costs. Moreover, the results of evaluation can be used as a ground for approving budget amendments for the budget year and two more years following the budget year, including changes in the duration of the budget programme.

In the beginning of 2019, after the amendments to the Budget Code of Ukraine⁴⁶¹ were approved, the *mid-term budget planning was launched*⁴⁶². Its objective is to shift the focus from the control of spending to strategic and budget planning, implementation of a new three-year Budget Declaration. It is expected that the VET reform priorities which are currently implemented on the national level will be more synchronised with the priorities of regions in this field. *On the regional level it will enable regional mid-term programmes of economic and social development to be in line with VET budget programmes*.

Planned policies: One of the priorities of the Concept of VET National Policy implementation “Modern Vocational Educational and Training” for the period until 2027” is the reform of VET funding system⁴⁶³.

⁴⁵⁹ <https://feao.org.ua/wp-content/uploads/2019/01/profesijno-tehnicna-osvita.pdf>

⁴⁶⁰ Financial and Economic Analysis Office of the Verkhovna Rada of Ukraine (2019). Current status of funding for vocational education in Ukraine. Available at: <https://feao.org.ua/wp-content/uploads/2019/01/profesijno-tehnicna-osvita.pdf>

⁴⁶¹ Upon the approval of the Law of Ukraine No8044 “On Amendments to the Budget Code of Ukraine”.

⁴⁶² Official web-site of the Ministry of Finance of Ukraine. The Ministry of Finance of Ukraine began to implement the mid-term budget planning. Available at: <https://www.minfin.gov.ua/news/view/ministerstvo-finansiv-pochynaie-vtiliuvaty-serednostokove-budzhethne-planuvannia?category=bjudzhet>

⁴⁶³ <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciji-realizaciyi-derzhavnogo-politiki-u-sferi-profesijnogo-profesijno-tehnicnogo-osviti-suchasna-profesijna-profesijno-tehnicna-osvita-na-period-do-2027-roku-i120619>

In order to improve the process of expenditure planning, as well as formation and implementation of the budget it is planned to *fund VET on the basis of calculation of the costs for training highly qualified workers taking into account the complexity of occupation and qualification levels.*

E.4: Mobilisation of resources for VET

Identification of issues

E.4.1 Sources and mechanisms of funding for VET

Since 2016, as part of system the overall decentralisation process, the financing of the VET has been transferred from the national to the local level. In 2016, the financing of VET institutions located in cities of regional subordination (including cities — regional centres) was made from the budgets of these cities, and other VET institutions were financed from regional budgets and the budget of city of Kyiv. In 2017, due to significant underfunding the budgets of cities of oblast significance were excluded from the chain of VET financing⁴⁶⁴.

Since 2017 and up to the present, expenditures on VET are primarily covered from regional budgets, budgets of regional centres and the budget of the city of Kyiv⁴⁶⁵. Other sources are indicated below.

The main sources of VET funding:

- **State budget:** educational subvention for full completion of GSE by learners; funding per the state order for professions of national importance; subvention for the modernisation and upgrade of the material and technical base of VET; implementation of methodological and logistical support of educational institutions' activities (e.g., running the WORLDSKILLS UKRAINE contest, piloting career guidance testing for school students).
- **Local Budgets:** expenditures on maintenance of VET institutions, financing of regional order for training of workforce and young specialists.
- **Earnings from payments for the services provided by VET institutions: payment for services according to their main and auxiliary activity** (from individuals, legal entities, and also from Ministries, and other agencies⁴⁶⁶), property lease earnings; earnings from property sales (except immovable property).
- **Other sources:** charitable contributions, grants and gifts; funds of enterprises, organisations, individuals and budget institutions allocated for the implementation of target activities (namely, regional programs); earnings from interest rate on temporary deposits of uncommitted budget funds received from provision of paid services.

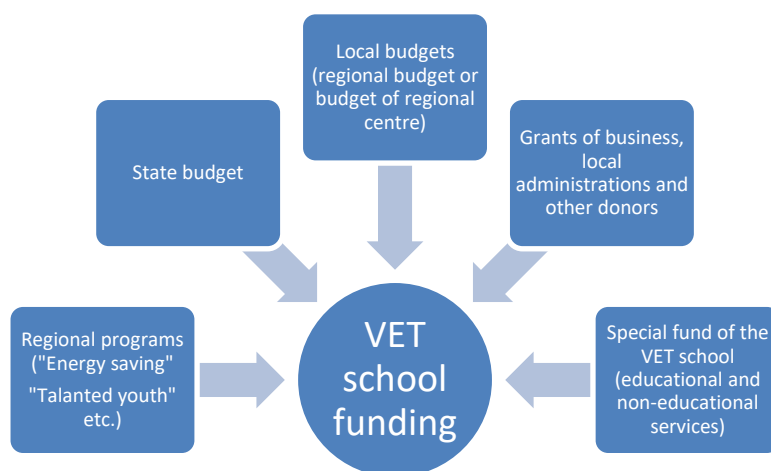
The latter two sources are attributed to **own earnings of VET institutions**. They account from 2% to 12% (out of total funding). Own earnings also include 50% from payroll for vocational training and internship of VET learners. According to the acting legislation, institutions independently determine the list of paid educational and other services. The main sources of VET funding at the level of VET institutions are presented in diagram 2.

⁴⁶⁴ There was a delay in wages and scholarships payments due to the failure or unwillingness of local authorities (primarily, of the cities of regional significance) to perform delegated functions. To solve this problem and close the budget holes, in 2016 the Government allocated stabilisation subsidies (600 million UAH and 1.4 billion UAH) and modified the VET financing system along with the adoption of the State Budget for 2017.

⁴⁶⁵ It relates to institutions of state or municipal form of property.

⁴⁶⁶ Namely, by the order of SES educational services may be rendered to the unemployed.

Diagram 2. Sources of funding of VET institutions (example, Vinnytsia region)



Privately owned VET institutions are maintained, at most, for the account of own funds of their founders.

According to the data of SSSU, the share of VET funding for the account of public sector in 2017 reached 91.3% (whereof 2.2% — from the State Budget, and 81.1% — from local budgets). The share of funding from private sector accounted for 8.7% (whereof 6.7% — from households, and 2.0% — from private companies and corporations)⁴⁶⁷. For comparison, in 2016, the figures for shares of the public and private sectors amounted to 87.6% and 12.4% respectively, and in 2015 — 86.4% and 13.6% respectively.

Dnipropetrovsk region: grant funding for projects

One of the priorities in the activity of the VET Training and Methodological Centres of Dnipropetrovsk region in 2018 was to evaluate grant funding possibilities for VET institutions. In 2018, the Training and Methodological Centres for VET in Dnipropetrovsk region implemented the training program “Grants as a Resource for a VET school Development” with 13 VET institutions engaged. As part of the introduction of **multi-channel financing** capabilities, 8 VET schools won 9 grant competitions: (1) VET school No. 17 – the project “Territory of a Healthy Lifestyle”; (2) West-Donbass Professional Lyceum – the project “The dormitory unites us, does not release heat from the window”; (3) West-Dnipro Centre for VET – the project “A Modern Facility for the New Generation”; (4) Kryvyi Rih Centre for training and retraining workers in the construction industry - the project “Reconstruction of old dormitory”; (5) Zelenodolsk Professional Lyceum – the project “Training workers for occupation of “ Locksmith for repairing the equipment for boiler houses and dust-preparation workshops”; (6) Sofiivka Professional Lyceum – the project “Creating a training centre for Cossack martial arts”; (7) Dnipropetrovsk Centre for VET (the project “Creating a laboratory for training, retraining and advanced training of machine operators with numerical control”; the project “Youth space for students of the post-graduate program in the city of Dnipro”); (8) Marhanets Professional Lyceum – project “Computer Class-Centre for Informatics”.

Problems: In practice, the abovementioned funding model for VET using several sources and recommended by the National Education Development Strategy as a combination of subsidies, loans and consumer contributions for training, turned out to be insufficient⁴⁶⁸. It does not guarantee sufficient funds to ensure the high quality of education, nor the necessary investment into upgrading of VET institutions. Own earnings of VET institutions remain underdeveloped, and averagely range from 2% to 12% of the total funding depending on the region⁴⁶⁹. Grants from business, local administrations, and

⁴⁶⁷ Statistical bulletin “National Accounts of Education in Ukraine”. State Statistics Service of Ukraine. Available at: <http://www.ukrstat.gov.ua/>

⁴⁶⁸ Formulation of EU Support to Reforms in Vocational Education and Training (VET) in Ukraine. Final Formulation Report (2017). AECOM. Available at: https://www.auc.org.ua/sites/default/files/sectors/u-137/zvit_yevo.pdf

⁴⁶⁹ According to the results of the focus groups conducted by the MoES within the framework of the TP in May-June 2019 at the regional level.

other donors are allocated only occasionally and selectively. The largest share comes from public funds (state and local budgets), and is almost entirely spent on current expenditures. According to the Ministry of Finance, during the last three years, the capital expenditures of VET sector in Ukraine, although increasing in absolute terms, were only from 1% to 2% of the total public spending. Another problem is the reluctance of the municipal authorities of cities of oblast significance and regional centres to finance VET institutions located in their territory, from their budgets (this is implemented through reduction of regional orders). VET institutions require more autonomy and opportunities to expand their own sources of revenues. Funding should be multi-channel, that is, from several sources, including subventions allocated from the State Budget of Ukraine, and a larger share of financing from private sources.

Description of policies

E.4.2 Diversification and mobilisation of funding for VET

Planned policies: During the second phase (in 2022–2024) of the implementation of the Concept for national VET policy implementation “Modern VET” for the period up to 2027 (hereinafter — Concept), it is planned **to transfer funding of VET institutions located in the regional centres from city budgets to regional budgets.**

Also, as part of reforming the system of VET financing, the Concept envisions the following:

- Submitting amendments to legislation as to *provision of discounts to employers who transfer equipment to VET institutions and allocate funding to workforce training;*
- *Creation of new opportunities for the expansion of public-private and social partnership on the basis of co-financing and joint management of VET institutions.*

E.5: Allocation and use of resources in VET

Identification of issues

E.5.1 Patterns of resource allocation

According to the MoES the state and local budget expenditures for VET are spent primarily on *current needs*, including wages (68.2 % of the total), food (3.5 %), utility services (11.8%), scholarship (13%), and other (3.5%). According to the Ministry of Finance over the past three years capital expenditures of the VET sector in Ukraine constituted only from 1% to 2% of the total public expenditures (general and special funds)⁴⁷⁰.

On the national level: Allocation of the State budget subventions for each region is approved annually in the State Budget Law⁴⁷¹. In particular, in 2018 the largest *subventions for modernisation* of material and technical base of VET institutions were transferred to Kyiv region (UAH 12.9 m), and to Vinnytsia, Dnipropetrovsk, Lviv, Mykolaiv, Kharkiv regions (UAH 5.4 m for every region). The level of use of these subventions in 2018 was lower than in 2016-2017 and the allocation between regions was uneven – from 31% to 100%. Distribution of the *education subvention* from the State budget to pay salaries to teaching staff (who teach subjects foreseen in the State standard of basic and complete GSE) is made proportionally to the number of GSE learners in such VET institutions.

On the regional level funds for VET are allocated according to the number of students and approved regional order. **On the institutional level:** payment for services (provided by VET institutions) and 50% of students' wages earned during their WBL and in-company internship are transferred on the VET institution's account. These funds can be further distributed for common needs, modernisation of education process and material base, social protection of students etc.

⁴⁷⁰ Formulation of EU Support to Reforms in Vocational Education and Training (VET) in Ukraine. Final Formulation Report (2017). AECOM. – Available at: https://www.auc.org.ua/sites/default/files/sectors/u-137/zvit_yevo.pdf

⁴⁷¹ <https://zakon.rada.gov.ua/laws/show/2696-19>

The shift of VET funding to the local level caused a problem of underfunding in many regions. The financial decentralisation gave increase of local resources, but according to the MoES these funds can cover only near 60% of VET financial needs in regions. For VET institutions located outside regional centres the funding is less (current funding covers only 45% of their needs)⁴⁷².

There is also a problem of inefficient use of budget funds. As of December 1, 2018 near UAH 12 bn were preserved on bank deposits. UAH 6 bn was the regional budget funds⁴⁷³. As of October 31, 2018 the least share of budget execution as to the expenditures on VET was in Donetsk (42%), Ivano-Frankivsk (48%), Odessa (64%), Lviv (65%) regions. Other regions and Kyiv city spent 69-79% of the planned expenditures on VET.

One more issue is that the VET institutions in cities of oblast significance-regional centres are funded from the city budgets and are not subordinated to the Departments of Education and Science of the regional administrations. The local authorities of regional centres allocate insufficient amount for VET development in their territory⁴⁷⁴.

Summing up, there is a problem of VET sector underfunding, which reduces possibility to modernize VET institutions in order to train working skills required today. Spending on VET should be increased to meet the needs of the sector. The budget funds should be used more efficiently.

Description of policies

E.5.2 Policies to ensure adequacy of resources for VET and equity in their allocation

Planned policies: Reforming of the VET funding system is a key priority of the Concept of State Policy in the Field of Professional (Vocational) Education “Modern Professional (Vocational) Education” until 2027. It foresees implementation of the **transparent mechanism of funds allocation** for VET institutions⁴⁷⁵.

On the second stage (2022—2024) funding of VET institutions located in regional centres will be transferred from city budgets to regional budgets. It will allow increasing financial resources and improving financial conditions of VET institutions located in the cities of oblast significance-regional centres. The VET institutions network optimisation should give positive effect as well.

New methods for calculation of skilled workforce training costs (based on occupation complexity and qualification criteria) are to be introduced in 2025-2027. It will support fairer distribution of VET financial resources.

“EU4Skills” European Union project envisages the VET infrastructure modernisation (purchase of equipment for some VET institutions), which will partly cover financial needs on the capital expenditures (see A.3.5).

II. ‘Open floor’

III. Summary and analytical conclusions

Challenges on the reform of institutional and governance arrangements in VET under decentralisation framework: a large number of powers still remains with the national level, while the responsibilities are laid upon regional and local authorities; insufficient autonomy of VET institutions causes inability to adequately respond to requests of employers and the labour market; lack of coordination between regional strategies for economic development and the VET development strategies in regions, nonconformity of development strategy for certain sectors of education; challenges related to delegation of powers to the level of regional centres (cities of regional significance). **Factors:**

Office of financial and economic analysis of Verkhovna Rada of Ukraine(2019). Current status of VET financing in Ukraine. – Available at: <https://feao.org.ua/wp-content/uploads/2019/01/profesiino-tehnichna-osvita.pdf>

⁴⁷³Office of financial and economic analysis of Verkhovna Rada of Ukraine. Amounts and performance of bank deposit funds balance of local budgets in 2016–2018. – Available at: <https://feao.org.ua/products/local-deposits-2016-18/?fbclid=IwAR0KhXwQBCG2Mml6QmOzQ2-AiAdypbKJidHrhR-Yx0OmGyMreyPGx3PptK4>

⁴⁷⁴ According to focus-groups with representatives of Education and Science Departments of regional administrations conducted by MoES in May-June 2019.

⁴⁷⁵ <https://zakon.rada.gov.ua/laws/show/419-2019-%D1%80?lang=en>

lack of comprehensive approach to the process of reforming VET governance system, lack of monitoring system for efficiency of managerial decisions and their impact on the quality of educational services on all levels. **Implemented policies and progress achieved:** There were measures to optimise the VET institutional network. In particular, in 2017–2018, 50 VET institutions were restructured by merging with larger ones, decisions were approved on separating out of the HEI structure of 7 VET institutions). As of January 1, 2019, 76 institutions have been transferred from state to communal ownership (additionally, 660 institutions have been prepared for the transfer). Functions to form and place a regional order to train qualified workers and junior specialists, and of current property governance were shifted to the regional level. Moreover, the procedure and timelines for appointing heads of institutions were simplified. Changes were introduced to the Budget Code of Ukraine, enabling expenditures for VET on regional order terms. Regional VET Councils were established and began functioning in all regions. **Planned activities:** It is planned to expand autonomy of VET institutions, such as to develop and implement their own curricula, achieving a status of non-profit organisation with retained tax preferences and financial autonomy; optimisation of VET institutions network by establishing centres of excellence with account for inclusive education; filing a regional order to train staff on the basis of regular analysis for labour market conditions; development and approval of typical provisions on Regional VET Council. **Recommendations:** current mechanism of accountability, governance and control in the VET system requires implementation of the system aimed at monitoring the efficiency of governance decisions and their impact of the quality of educational services on all levels. It is necessary to shift from operational to programme-targeted governance. It will be practical to grant VET institutions with more autonomy and enhance efficiency of performance of regional VET councils (shift from the 'recommendation' nature of decisions issued by the councils to the practical implementation).

Challenges on participation of non-state actors in VET: Lack of the unified consistent system for interaction between state and non-state actors in VET, with clear distribution of certain functions and obligations. **Factors:** underdeveloped mechanisms of PPP, lack of targeted state policy for systemic support and interaction with non-state actors, lack of motivation for more active participation of both parties. **Implemented policies and progress achieved:** expansion of participation of non-state actors due to their engagement into activities of regional VET councils, development and implementation of VET standards and professional standards, introduction of DVT elements, and ensuring investment activities (modernisation of institutions). **Planned activities:** PPP in VET and interrelation with the labour market have been defined as one of the three key priorities provided by the Concept for Implementation of Public Policy in VET “Modern Vocational Education and Training” for the period up to 2027 (2019). **Recommendations:** development of a single systemic and long-term model to engage non-state actors into development of VET, with clear transparent implementation mechanism; amending legislation by including additional provisions on PPP in specific education laws, implementation of motivation mechanisms to activate participation of non-state actors in this area.

Challenges on to the VET funding: current model for accumulation and distribution of financial resources for VET does not ensure sufficient amount of funds to provide high quality of education and the required investments into modernisation of VET institutions. As a result, there is underfunding of VET sector, especially for institutions located in cities of regional significance-regional centres, and thus funded from the budgets of these cities. **Factors:** lack of synchronisation in reform areas already under implementation on the national level, with priorities of the regions; lack of incentives on the part of city authorities of cities of regional significance-regional centres to fund from their budgets VET institutions located on their territory; low efficiency in the use of budget funds on the regional and local levels; prioritising in funding of VET for current needs (capital expenditures are, in average, up to 2% of the total expenditures). **Implemented policies and progress achieved:** Budget Code amendments enabled to spend funds on VET under conditions of regional order, which helped to determine the strategies and tactics of regional VET systems development. In order to raise the efficiency of budget implementation and budget funds use, the programme-target method was introduced. A process aimed at implementation of the mid-term budget planning was launched. **Planned activities:** by 2024, funding of VET institutions located in regional centres-cities of regional significance will be fully transferred from city budgets to regional budgets; changes to regulatory legal acts on granting preferences to employers who provide (transfer) equipment to VET institutions and cover the funding for training working staff will be introduced; new opportunities for the expansion of public-private and social partnership on the basis of co-financing and joint management of VET institutions will be created. New methods for calculation of skilled workforce training costs (based on occupation complexity and qualification criteria) are to be introduced in 2025-2027. It will add to more equitable distribution of financial resources of the VET sector. In part, the meeting of financial needs of the VET system related to the necessity to modernise

the infrastructure (procurement of equipment) is envisaged within the implementation of the EU project “EU4Skills”. **Recommendations:** There is an urgent need to make changes to the current system of VET funding, ensuring a multichannel funding of VET (from different sources, including more subventions from the state budget of Ukraine (with modified mechanism for their calculation) and a larger share of funding from private sources). A more natural unit of optimisation of the totality of VET institutions and corresponding funding is the regional network of educational institutions.

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ANNEXES

Annex 1. Quantitative and qualitative evidence (national and sub-national dimension)

Table 1. Network of institutions of vocational education and training of Ukraine, by types as of 01.09.

Region	Year	Higher vocational training schools	Centres of vocational technical education	Vocational lyceums	Vocational education and training schools	Vocational colleges	Educational institutions as structural units of HEIs	Educational institutions of other types	Training centres at closed type criminal penitentiary institutions, VET school for social rehabilitation, and VET schools in juvenile correctional facilities	Total, institutions
Vinnytsia	2016	12	6	10	3				4	35
	2017	12	5	11	3	-	-	-	4	35
	2018	12	6	10	2				4	34
Volyn	2016	6	1	6	4			3	2	22
	2017	6	1	6	4	-	-	3	2	22
	2018	5	3	5	2			3	2	20
Dnipropetrovsk	2016	6	15	22	10			2	5	60
	2017	6	16	22	9	-	-	2	5	60
	2018	6	16	22	9			2	5	60
Donetsk	2016	7	4	26	6		1		2	46
	2017	7	4	25	6	-	1	-	2	45
	2018	7	4	25	6				2	44
Zhytomyr	2016	6	1	15	4		1		1	28
	2017	7	1	15	4	-	-	-	1	28
	2018	5	2	14	3				1	25
Zakarpattia	2016	3	2	9	1		1			16
	2017	3	2	9	1	-	1	-	-	16
	2018	3	2	9	1		1			16
Zaporizhzhia	2016	8	5	26				1	5	45
	2017	7	7	21	-	-	-	1	5	41

Region	Year	Higher vocational training schools	Centres of vocational technical education	Vocational lyceums	Vocational education and training schools	Vocational colleges	Educational institutions as structural units of HEIs	Educational institutions of other types	Training centres at closed type criminal penitentiary institutions, VET school for social rehabilitation, and VET schools in juvenile correctional facilities	Total, institutions
	2018	7	7	20				1	5	40
Ivano-Frankivsk	2016	6	1	11	1			4	1	24
	2017	6	1	11	1	-	-	4	1	24
	2018	6	1	11	1			4	1	24
Kyiv	2016	5	4	10	2			2	4	27
	2017	5	4	10	2	-	-	2	4	27
	2018	5	4	10	2			2	3	26
Kirovograd	2016	2		9	11				3	25
	2017	2	1	8	10	-	-	-	3	24
	2018	2	2	10	7				3	24
Luhansk	2016	3		20			1	2		26
	2017	3	-	20	-	-	1	2	-	26
	2018	3		20			1	2		26
Lviv	2016	24	1	25	1	1	2	1	6	61
	2017	24	1	24	1	1	2	-	5	58
	2018	24	1	24	1	1	2		3	56
Mykolayiv	2016	4		21	3		2		2	32
	2017	4	-	21	2	-	2	-	2	31
	2018	4		21	2		2		2	31
Odesa	2016	3	2	17	7		6	1	3	39
	2017	3	2	17	7	-	6	1	3	39
	2018	4	2	18	6		4	1	3	38
Poltava	2016	5	2	15	15				5	42
	2017	5	4	14	14	-	-	-	5	42
	2018	5	4	12	13				5	39
Rivne	2016	10	1	8				2	4	25
	2017	10	1	8	-	-	-	2	4	25

Region	Year	Higher vocational training schools	Centres of vocational technical education	Vocational lyceums	Vocational education and training schools	Vocational colleges	Educational institutions as structural units of HEIs	Educational institutions of other types	Training centres at closed type criminal penitentiary institutions, VET school for social rehabilitation, and VET schools in juvenile correctional facilities	Total, institutions
	2018	10	1	8				2	4	25
Sumy	2016	11	6	9	2		1		4	33
	2017	11	6	9	2	-	1	-	4	33
	2018	11	6	9	2		1		2	31
Ternopil	2016	7	1	9	3	1		2	2	25
	2017	7	1	7	3	1	-	2	2	23
	2018	7	1	7	3	1		2	2	23
Kharkiv	2016	5	5	34	2		1	1	7	55
	2017	4	8	28	2	-	1	1	7	51
	2018	4	10	20	2			1	7	44
Kherson	2016	6		11	6		1		2	26
	2017	6	-	11	6	-	1	-	2	26
	2018	6		11	6		1		2	26
Khmelnyskyi	2016	6	3	19					4	32
	2017	6	4	17	-	-	-	-	4	31
	2018	6	6	13					4	29
Cherkasy	2016	4	3	13	0			1	2	23
	2017	4	3	13	-	-	-	1	2	23
	2018	4	3	12				1	2	22
Chernivtsi	2016	5	0	8	1		1		1	16
	2017	5	-	8	1	-	1	-	1	16
	2018	5		8	1		1		1	16
Chernihiv	2016	3	1	12	2				2	20
	2017	3	1	12	2	-	-	-	2	20
	2018	3	1	11	1				2	18
Kyiv city	2016	10	5	4		1	5	1		26
	2017	11	5	4	-	1	4	1	-	26

Region	Year	Higher vocational training schools	Centres of vocational technical education	Vocational lyceums	Vocational education and training schools	Vocational colleges	Educational institutions as structural units of HEIs	Educational institutions of other types	Training centres at closed type criminal penitentiary institutions, VET school for social rehabilitation, and VET schools in juvenile correctional facilities	Total, institutions
	2018	12	5	4		1	3	1		26
UKRAINE	2016	167	69	369	84	3	23	23	71	809
	2017	167	78	351	80	3	21	22	70	792
	2018	166	87	334	70	3	16	22	65	763

Source: Ministry of Education and Science of Ukraine

Table 2. Network of VET institutions of Ukraine, by sectors as of 01.09.

Region	Year	by sectors								total
		industry			construction	service provision			agriculture	
		industry	transportation	communications		service provision	trade and public catering	housing and utility services		
Vinnytsia	2016	8	2	1	7	3	1	0	13	35
	2017	8	2	1	6	3	2	-	13	35
	2018	8	2	1	7	3	1		12	34
Volyn	2016	8	0	1	5	0	1	0	7	22
	2017	8	-	1	5	-	1	-	7	22
	2018	9			4				7	20
Dnipropetrovsk	2016	30	1	0	11	0	4	0	14	60
	2017	30	1	-	11	-	4	-	14	60
	2018	30	1		11		4		14	60
Donetsk	2016	20	4	0	8	3	2	0	9	46
	2017	20	4	-	8	2	2	-	9	45
	2018	19	4		8	2	2		9	44
Zhytomyr	2016	6	0	0	8	4	1	0	9	28
	2017	6	-	-	8	4	1	-	9	28
	2018	9			5	2			9	25

Region	Year	by sectors								
		industry			construction	service provision			agriculture	total
		industry	transportation	communications		service provision	trade and public catering	housing and utility services		
Zakarpattia	2016	6	0	0	4	0	2	0	4	16
	2017	6	-	-	4	-	2	-	4	16
	2018	5			2	4	1		4	16
Zaporizhzhia	2016	16	3	0	6	1	3	3	13	45
	2017	20	3	-	4	-	2	-	12	41
	2018	17	3		4	2	2		12	40
Ivano-Frankivsk	2016	7	1	0	7	4	0	0	5	24
	2017	7	1	-	7	4	-	-	5	24
	2018	6	1		8	4			5	24
Kyiv	2016	11	0	0	5	2	1	0	8	27
	2017	11	-	-	5	2	1	-	8	27
	2018	10			5	2	1		8	26
Kirovograd	2016	5	2	1	4	2	2	0	9	25
	2017	5	2	1	4	2	2	-	8	24
	2018	5	2	1	3	2	2		9	24
Luhansk	2016	8	2	0	6	1	2	0	7	26
	2017	8	2	-	6	1	2	-	7	26
	2018	10	1		6		3		6	26
Lviv	2016	24	3	2	9	0	9	4	10	61
	2017	24	3	2	9	-	9	2	9	58
	2018	21	6	1	4	2	12		10	56
Mykolayiv	2016	10	2	0	4	1	2	0	13	32
	2017	10	2	-	4	1	2	-	12	31
	2018	10	2		2	1	4		12	31
Odesa	2016	6	4	0	3	8	0	0	18	39
	2017	6	4	-	3	8	-	-	18	39
	2018	6	4		3	8	1		16	38
Poltava	2016	11	1	0	6	7	2	0	15	42
	2017	11	1	-	6	7	2	-	15	42

Region	Year	by sectors								
		industry			construction	service provision			agriculture	total
		industry	transportation	communications		service provision	trade and public catering	housing and utility services		
	2018	13	1		4	6	1		14	39
Rivne	2016	4	1	0	9	5	1	0	5	25
	2017	4	1	-	9	5	1	-	5	25
	2018	10	1		4	2	1		7	25
Sumy	2016	10	2	0	7	2	1	1	10	33
	2017	10	2	-	7	2	1	1	10	33
	2018	5	2		3	5	2		14	30
Ternopil	2016	7	0	0	3	2	2	0	11	25
	2017	8	-	-	3	1	2	-	9	23
	2018	5	2		4	2	7		3	23
Kharkiv	2016	22	5	0	10	2	2	0	14	55
	2017	20	5	-	10	2	2	-	12	51
	2018	18	3		10	3	1		9	44
Kherson	2016	7	1	0	3	2	4	0	9	26
	2017	7	1	-	3	2	4	-	9	26
	2018	6	1	1	3	2	4		9	26
Khmelnyskyi	2016	16	0	0	3	1	1	0	11	32
	2017	17	-	-	1	1	1	-	11	31
	2018	16			1	1	1		10	29
Cherkasy	2016	6	1	0	3	0	0	3	10	23
	2017	6	1	-	3	-	1	2	10	23
	2018	6	1		2		1	2	10	22
Chernivtsi	2016	6	2	0	1	2	0	0	5	16
	2017	6	2	-	1	2	-	-	5	16
	2018	6	2		1	2			5	16
Chernihiv	2016	7	1	0	1	2	1	0	8	20
	2017	7	1	-	1	2	1	-	8	20
	2018	3	2		2	3	1		7	18
Kyiv city	2016	6	5	1	8	4	2			26

Region	Year	by sectors								
		industry			construction	service provision			agriculture	total
		industry	transportation	communications		service provision	trade and public catering	housing and utility services		
	2017	6	5	1	8	4	2	0	0	26
	2018	6	5	1	8	4	2	-	-	26
UKRAINE	2016	267	43	6	141	58	46	11	237	809
	2017	271	43	6	136	55	47	5	229	792
	2018	259	46	5	114	62	54	2	221	763

Source: Ministry of Education and Science of Ukraine

Table 3. Enrolment of students and learners in VET institutions in Ukraine as of 01.09.

Region	Year	Number of VET institutions	Total overall enrolment (students, learners)	Enrolments in secondary vocational education (students)								Total, GES graduates (students)	Vocational training for the working population (learners)								Total, (unemployed population and working population)
				On the basis of complete secondary education	% of the total enrolment	On the basis of the basic general secondary education				On the basis of incomplete basic general secondary education	% of the total enrolment		Initial vocational training	% of the total number	Retraining	% of the total number	Professional advancement	% of the total number	Total, unemployed population	% of the total number	
						With the degree of complete general secondary education	% of the total enrolment	Without the degree of complete general secondary education	% of the total enrolment												
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Vinnytsia	2016	35	14866	3697	24.9	10137	68.2	618	4.2	125	0.8	14577	231	1.6	0	0.0	22	0.1	253	1.7	289
	2017	35	13889	3124	22.5	9921	71.4	498	3.6	88	0.6	13631	215	1.6	0	0.0	15	0.1	230	1.7	258
	2018	34	12885	2818	21.87	9225	71.59	502	3.90	84	0.65	12629	194	1.51	5	0.04	40	0.31	239	1.85	256
Volyn	2016	22	9010	2661	29.5	5854	65.0	358	4.0	12	0.1	8885	70	0.8	3	0.0	0	0.0	73	0.8	125
	2017	22	8449	2325	27.6	5608	66.4	299	3.5	3	0.0	8235	60	0.7	0	0.0	0	0.0	60	0.7	214
	2018	20	7948	2143	26.96	5295	66.62	289	3.64	4	0.05	7731	41	0.52	91	1.14	0	0.00	132	1.66	217
Dnipropetrovsk	2016	60	22293	6433	28.9	14451	64.8	227	1.0	148	0.7	21259	569	2.6	291	1.3	6	0.0	866	3.9	1034
	2017	60	21747	5905	27.2	14338	65.9	330	1.5	93	0.4	20666	675	3.1	242	1.1	12	0.1	929	4.3	1081
	2018	60	21103	5510	26.11	14291	67.72	279	1.32	116	0.55	20196	552	2.62	293	1.39	2	0.01	847	4.01	907
Donetsk	2016	46	12628	3154	25.0	8311	65.8	414	3.3	21	0.2	11900	540	4.3	0	0.0	13	0.1	553	4.4	728
	2017	45	11190	2318	20.8	7725	69.0	440	3.9	0	0.0	10483	560	5.0	20	0.2	0	0.0	580	5.2	707
	2018	60	21103	5510	26.11	14291	67.72	279	1.32	116	0.55	20196	604	5.73	47	0.45	45	0.43	696	6.61	788
Zhytomyr	2016	28	8879	2465	27.8	5799	65.3	315	3.5	51	0.6	8630	22	0.2	224	2.5	0	0.0	246	2.8	249
	2017	28	8230	2031	24.7	5769	70.1	177	2.2	49	0.6	8026	180	2.2	9	0.1	11	0.1	200	2.4	204
	2018	25	7562	1641	21.70	5594	73.98	93	1.23	57	0.75	7385	144	1.90	31	0.41	1	0.01	176	2.33	177

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Zakarpatya	2016	16	6379	1516	23.8	460.1	72.1	234	3.7	0	0.0	6351	0	0.0	0	0.0	0	0.0	0	0.0	28
	2017	16	6148	1252	20.5	4550	74.0	305	5.0	0	0.0	6107	30	0.5	0	0.0	0	0.0	30	0.5	41
	2018	16	5700	1176	20.6 3	4189	73.49	335	5.88	0	0.00	5700	30	0.49	0	0.00	0	0.00	30	0.49	41
Zaporizhzhia	2016	45	15000	4483	29.9	8888	59.3	493	3.3	145	1.0	14009	950	6.3	9	0.1	0	0.0	959	6.4	991
	2017	41	13989	3797	27.2	8729	62.4	610	4.4	0	0.0	13136	761	5.4	56	0.4	10	0.1	827	5.9	853
	2018	40	13567	3392	25.0 0	8803	64.89	550	4.05	0	0.00	12745	0	0.00	0	0.00	0	0.00	0	0.00	0
Ivano-Frankivsk	2016	24	10080	2441	24.2	7237	71.8	197	2.0	51	0.5	9926	108	1.1	24	0.2	0	0.0	132	1.3	154
	2017	24	9787	2198	22.5	7162	73.2	311	3.2	0	0.0	9671	104	1.1	0	0.0	0	0.0	104	1.1	116
	2018	24	9182	2000	21.7 8	6770	73.73	307	3.34	0	0.00	9077	761	5.44	56	0.40	10	0.07	827	5.91	853
Kyiv	2016	27	8251	2209	26.8	5468	66.3	152	1.8	0	0.0	7829	329	4.0	92	1.1	1	0.0	422	5.1	422
	2017	27	7938	1858	23.4	5478	69.1	140	1.8	0	0.0	7476	317	4.0	117	1.5	0	0.0	434	5.5	462
	2018	26	7448	1567	21.0 4	5371	72.11	117	1.57	0	0.00	7055	714	5.26	71	0.52	0	0.00	785	5.79	822
Kirovograd	2016	25	7591	1803	23.8	5332	70.2	71	0.9	23	0.3	7229	340	4.5	0	0.0	0	0.0	340	4.5	362
	2017	24	7555	1505	19.9	5589	74.1	63	0.8	2	0.0	7159	340	4.5	0	0.0	0	0.0	340	4.5	396
	2018	24	7393	1463	19.7 9	5403	73.08	40	0.54	1	0.01	6907	475	6.42	0	0.00	0	0.00	475	6.42	486
Luhansk	2016	26	4742	1124	23.7	3383	71.3	64	1.9	119	2.5	4690	0	0.0	30	0.6	0	0.0	30	0.6	52
	2017	26	5815	1305	22.5	4147	71.3	111	1.9	94	1.6	5657	0	0.0	18	0.3	0	0.0	18	0.3	158
	2018	26	5184	1120	21.6 0	3987	76.91	24	0.46	10	0.19	5141	0	0.00	0	0.00	0	0.00	0	0.00	43
Lviv	2016	61	26437	7966	30.1	17490	66.2	203	0.8	0	0.0	25659	544	2.1	162	0.6	0	0.0	706	2.7	778
	2017	58	23999	6202	25.8	16804	70.0	173	0.7	22	0.1	23201	544	2.3	135	0.6	35	0.1	714	2.9	798
	2018	56	22018	5055	22.9 6	16291	73.99	80	0.36	42	0.19	21468	360	1.64	125	0.57	52	0.24	537	2.44	550
Mykolayiv	2016	32	10086	2653	26.3	5430	53.8	1661	17.0	0	0.0	9744	195	1.9	0	0.0	95	0.9	290	2.9	342
	2017	31	10082	2715	26.9	5426	53.8	1615	16.1	0	0.0	9756	195	1.9	0	0.0	0	0.0	195	1.9	326
	2018	31	9457	2406	25.4 4	5209	55.08	1579	16.70	0	0.00	9194	195	2.06	0	0.00	0	0.00	195	2.06	263
Odesa	2016	39	16447	4518	27.5	9940	60.4	1169	71	0	0.0	15627	535	3.3	194	1.2	54	0.3	783	4.8	820
	2017	39	14788	3446	23.3	9628	65.1	954	6.5	3	0.0	14031	555	3.8	129	0.8	53	0.4	737	5.0	757
	2018	38	14061	3195	22.7 2	9571	68.07	635	4.52	3	0.02	13404	555	3.95	74	0.53	0	0.00	629	4.47	657

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Poltava	2016	42	10510	3256	31.0	5990	57.0	585	5.6	149	1.4	9980	498	4.7	0	0.0	0	0.0	498	4.7	530
	2017	42	9826	2904	29.6	5802	59.1	538	5.5	106	1.1	9350	430	4.4	20	0.2	0	0.0	450	4.6	476
	2018	39	9597	2850	29.7 0	5598	58.33	553	5.76	67	0.70	9068	477	4.97	21	0.22	0	0.00	498	5.19	529
Rivne	2016	25	11516	4188	36.4	6882	59.8	121	1.1	0	0.0	11191	250	2.2	63	0.5	0	0.0	313	2.7	325
	2017	25	10998	3885	35.3	6811	61.9	48	0.4	0	0.0	10744	0	0.0	254	2.3	0	0.0	254	2.3	254
	2018	25	10407	3592	34.5 2	6624	63.65	10	0.10	0	0.00	10226	0	0.00	172	1.65	0	0.00	172	1.65	181
Sumy	2016	33	9825	3661	37.3	5724	58.3	103	1.0	3	0.0	9491	217	2.2	69	0.7	26	0.3	312	3.2	3344
	2017	33	9682	3421	35.3	5819	60.1	97	1.0	0	0.0	9337	210	2.2	75	0.8	31	0.3	316	3.3	345
	2018	31	8681	2740	31.5 6	5605	64.57	91	1.05	0	0.00	8436	169	1.95	30	0.35	18	0.21	217	2.50	245
Ternopil	2016	25	9422	1841	19.5	7363	78.1	0	0.0	0	0.0	9204	148	1.6	35	0.4	0	0.0	183	1.9	218
	2017	23	8560	1281	15.0	7065	82.5	0	0.0	0	0.0	8346	120	1.4H	72	0.8	0	0.0	192	2.2	214
	2018	23	7761	1042	13.4 3	6458	83.21	0	0.00	0	0.00	7500	140	1.80	116	1.49	0	0.00	256	3.30	261
Kharkiv	2016	55	14116	3964	28.1	8261	58.5	952	6.7	496	3.5	13673	375	2.7	57	0.4	0	0.0	432	3.1	443
	2017	51	13817	3651	26.4	8788	63.6	801	5.8	153	1.1	13393	355	2.6	23	0.1	0	0.0	378	2.7	424
	2018	44	13511	3401	25.1 7	9181	67.95	479	3.55	84	0.62	13145	310	2.29	47	0.35	0	0.00	357	2.64	366
Kherson	2016	26	8472	3313	39.1	4457	52.6	409	4.8	121	1.4	8300	170	2.0	0	0.0	0	0.0	170	2.0	172
	2017	26	8030	2876	35.8	4481	55.8	485	6.1	0	0.0	7842	170	2.1	0	0.0	0	0.0	170	2.1	188
	2018	26	7857	2629	33.4 6	4438	56.48	481	6.12	0	0.00	7548	288	3.67	0	0.00	0	0.00	288	3.67	309
Khmelnyskyi	2016	32	11034	3005	27.2	7316	66.3	198	1.8	0	0.0	10519	258	2.3	5	0.0	0	0.0	263	2.4	515
	2017	31	9863	2412	24.5	6867	69.6	138	1.4	0	0.0	9417	274	2.8	12	0.1	2	0.0	288	2.9	446
	2018	29	9025	2079	23.0 4	6372	70.60	244	2.70	0	0.00	8695	217	2.40	6	0.07	1	0.01	224	2.48	330
Cherkasy	2016	23	7868	2401	30.5	5136	65.3	95	1.2	0	0.0	7632	213	2.7	1	0.0	0	0.0	214	2.7	236
	2017	23	7421	1973	26.6	5043	68.0	105	1.4	0	0.0	7121	237	3.2	49	0.7	0	0.0	286	3.9	300
	2018	22	7038	1783	25.3 3	4900	69.62	110	1.56	0	0.00	6793	198	2.81	36	0.51	0	0.00	234	3.32	245
Chernivtsi	2016	16	6809	2597	38.1	4000	58.7	78	1.1	0	0.0	6675	95	1.4	30	0.4	5	0.1	130	1.9	134
	2017	16	6511	2209	33.9	4120	63.3	65	1.0	0	0.0	6394	81	1.2	30	0.5	4	0.1	115	1.8	117
	2018	16	6292	2135	33.9 3	3870	61.51	65	1.03	0	0.00	6070	128	2.03	69	1.10	15	0.24	212	3.37	222
Chernihiv	2016	20	5885	2629	44.7	3152	53.6	24	0.4	18	0.3	5823	39	0.7	19	0.3	0	0.0	58	1.0	62
	2017	20	5171	2121	41.0	2959	57.2	24	0.5	20	0.4	5124	10	0.2	35	0.7	0	0.0	45	0.9	47
	2018	18	4457	1624	36.4 4	2725	61.14	22	0.49	12	0.27	4383	10	0.22	58	1.30	0	0.00	68	1.53	74

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Kyiv city	2016	26	14603	4254	29.1	8350	37.2	926	6.3	795	5.4	14325	177	1.2	0	0.0	0	0.0	177	1.2	278
	2017	26	12738	2935	23.1	8895	69.8	334	2.6	409	3.2	12573	113	0.9	0	0.0	0	0.0	113	0.9	165
	2018	26	12532	2757	22.0 0	8896	70.99	166	1.32	570	4.55	12389	111	0.89	0	0.00	0	0.00	111	0.89	143
UKRAINE	2016	80	282749	82232	29.1	178952	63.3	9667	3.4	2277	0.8	273128	6873	2.4	1308	0.5	222	0.1	8403	3.0	9621
	2017	79	266223	69649	26.2	177524	66.7	8661	3.3	1042	0.4	256876	6536	2.5	1296	0.5	173	0.1	8005	3.0	9347
	2018	76	251200	62026	24.6	172039	68.49	7516	2.99	1050	0.42	242631	6224	2.48	1419	0.56	175	0.07	7818	3.11	8569

Source: Ministry of Education and Science of Ukraine

Table 4. Enrolment of learners at VET institutions in Ukraine by their social status as of 01.09.

Region	Year	Number of VET institutions	Enrolment of learners	Including			
				Orphaned children and children deprived of parental care	% of the enrolment of learners	Persons with disabilities	% of the enrolment of learners
A	1	2	3	4	5	6	7
Vinnytsia	2016	35	14866	498	3.3	101	0.7
	2017	35	13316	446	3.35	118	0.89
	2018	34	12295	406	3.30	106	0.86
Volyn	2016	22	9010	303	3.4	199	2.2
	2017	22	8046	244	3.03	175	2.17
	2018	20	7593	228	3.00	184	2.42
Dnipropetrovsk	2016	60	22293	1307	5.9	283	1.3
	2017	60	20489	1203	5.87	297	1.45
	2018	60	20083	1109	5.52	307	1.53
Donetsk	2016	46	12628	788	6.2	218	1.7
	2017	45	10422	667	6.40	273	2.62
	2018	44	9682	615	6.35	288	2.97
Zhytomyr	2016	28	8879	477	5.4	78	0.9
	2017	28	8015	460	5.74	42	0.52
	2018	25	7385	353	4.78	68	0.92
Zakarpattia	2016	16	6379	247	3.9	60	0.9
	2017	16	6090	229	3.76	52	0.85
	2018	16	5688	220	3.87	48	0.84
Zaporizhzhia	2016	45	15000	769	5.1	263	1.8
	2017	41	13063	705	5.40	217	1.66
	2018	40	12707	667	5.25	194	1.53
Ivano-Frankivsk	2016	24	10080	240	2.4	142	1.4
	2017	24	9381	224	2.39	127	1.35
	2018	24	8827	215	2.44	137	1.55
Kyiv	2016	27	8251	351	4.3	81	1
	2017	27	7299	333	4.56	76	1.04
	2018	26	6922	301	4.35	87	1.26
Kirovograd	2016	25	7591	490	6.5	164	2.2
	2017	24	7130	355	4.98	102	1.43
	2018	24	6907	335	4.85	69	1.00
Luhansk	2016	26	4742	228	4.8	21	0.4
	2017	26	5608	218	3.89	35	0.62
	2018	26	5107	215	4.21	47	0.92
Lviv	2016	61	26437	624	2.4	279	1.1
	2017	58	23082	598	2.59	324	1.40
	2018	56	21361	556	2.60	319	1.49
Mykolayiv	2016	32	10086	489	4.8	103	1
	2017	31	9637	504	5.23	96	1.00
	2018	31	9183	452	4.92	63	0.69
Odesa	2016	39	16447	1103	6.7	193	1.2
	2017	39	12768	1075	8.42	142	1.11
	2018	38	12464	898	7.20	134	1.08
Poltava	2016	39	16447	1103	6.7	193	1.2
	2017	42	9350	364	3.89	213	2.28
	2018	39	9068	324	3.57	182	2.01
Rivne	2016	25	11516	301	2.6	129	1.1
	2017	25	10744	288	2.68	106	0.99
	2018	25	10226	297	2.90	112	1.10
Sumy	2016	33	9825	419	4.3	202	2.1
	2017	33	9138	383	4.19	212	2.32
	2018	31	8294	310	3.74	165	1.99

Region	Year	Number of VET institutions	Enrolment of learners	Including			
				Orphaned children and children deprived of parental care	% of the enrolment of learners	Persons with disabilities	% of the enrolment of learners
A	1	2	3	4	5	6	7
Ternopil	2016	25	9422	198	2.1	120	1.3
	2017	23	8205	159	1.94	111	1.35
	2018	23	7415	159	2.14	110	1.48
Kharkiv	2016	55	14116	737	5.2	282	2
	2017	51	13300	690	5.19	269	2.02
	2018	44	13097	669	5.11	215	1.64
Kherson	2016	26	8472	519	6.1	47	0.6
	2017	26	7805	452	5.79	40	0.51
	2018	26	7516	416	5.53	57	0.76
Khmelnyskyi	2016	32	11034	434	3.9	134	1.2
	2017	31	9240	365	3.95	100	1.08
	2018	29	8525	317	3.72	103	1.21
Cherkasy	2016	23	7868	328	4.2	122	1.6
	2017	23	6953	277	3.98	139	2.00
	2018	22	6528	216	3.31	159	2.44
Chernivtsi	2016	16	6809	140	2.1	102	1.5
	2017	16	6362	135	2.12	89	1.40
	2018	16	5973	133	2.23	97	1.62
Chernihiv	2016	20	5885	327	5.6	59	1
	2017	20	5079	295	5.81	51	1.00
	2018	18	4337	232	5.35	45	1.04
Kyiv city	2016	26	14603	640	4.4	266	1.8
	2017	26	12436	544	4.37	229	1.84
	2018	26	12304	570	4.63	234	1.90
UKRAINE	2016	809	282749	12373	4.4	3890	1.4
	2017	792	252958	11213	4.43	3635	1.44
	2018	763	239487	10213	4.26	3530	1.47

Source: Ministry of Education and Science of Ukraine

Table 5. Enrolment of students and learners of VET institutions of Ukraine by gender as of 01.09.

Region	Year	Number of VET institutions	Enrolment of students and learners, total	Including			
				Men	% of the enrolment	Women	% of the enrolment
A	1	2	3	4	5	6	7
Vinnytsia	2016	35	14866	9088	61.1	5778	38.9
	2017	35	13889	8277	59.59	5612	40.41
	2018	34	12885	7806	60.58	5079	39.42
Volyn	2016	22	9010	5647	62.7	3363	37.3
	2017	22	8449	5331	63.10	3118	36.90
	2018	20	7948	4982	62.68	2966	37.32
Dnipropetrovsk	2016	60	22293	13018	58.4	9275	41.6
	2017	60	21747	12762	58.68	8985	41.32
	2018	60	21103	12095	57.31	9008	42.69
Donetsk	2016	46	12628	8012	63.4	4616	36.6
	2017	45	11190	7307	65.30	3883	34.70
	2018	44	10534	7015	66.59	3519	33.41
Zhytomyr	2016	28	8879	5442	61.3	3437	38.7
	2017	28	8230	5244	63.72	2986	36.28
	2018	25	7562	4921	65.08	2641	34.92
Zakarpattya	2016	16	6379	4281	67.1	2098	32.9
	2017	16	6148	4186	68.09	1962	31.91
	2018	16	5700	3869	67.88	1831	32.12
Zaporizhzhia	2016	45	15000	9050	60.3	5950	39.7

Region	Year	Number of VET institutions	Enrolment of students and learners, total	Including			
				Men	% of the enrolment	Women	% of the enrolment
A	1	2	3	4	5	6	7
	2017	41	13989	8432	60.28	5557	39.72
	2018	40	13567	8097	59.68	5470	40.32
Ivano-Frankivsk	2016	24	10080	6782	67.3	3298	32.7
	2017	24	9787	6577	67.20	3210	32.80
	2018	24	9182	6293	68.54	2889	31.46
Kyiv	2016	27	8251	5335	64.7	2916	35.3
	2017	27	7938	5165	65.07	2773	34.93
	2018	26	7448	4828	64.82	2620	35.18
Kirovograd	2016	25	7591	4417	58.2	3174	41.8
	2017	24	7555	4404	58.29	3151	41.71
	2018	24	7393	4223	57.12	3170	42.88
Luhansk	2016	26	4742	2523	53.2	2219	46.8
	2017	26	5815	3169	54.50	2646	45.50
	2018	26	5184	2843	54.84	2341	45.16
Lviv	2016	61	26437	16239	61.4	10198	38.6
	2017	58	23999	14677	61.16	9322	38.84
	2018	56	22018	13547	61.53	8471	38.47
Mykolayiv	2016	32	10086	5705	56.6	4381	43.4
	2017	31	10082	5714	56.68	4368	43.32
	2018	31	9457	5469	57.83	3988	42.17
Odesa	2016	39	16447	10180	61.9	6267	38.1
	2017	39	14788	9447	63.88	5341	36.12
	2018	38	14061	9052	64.38	5009	35.62
Poltava	2016	42	10510	6333	60.3	4177	39.7
	2017	42	9826	5791	58.94	4035	41.06
	2018	39	9597	5686	59.25	3911	40.75
Rivne	2016	25	11516	7595	66	3921	34
	2017	25	10998	7091	64.48	3907	35.52
	2018	25	10407	6681	64.20	3726	35.80
Sumy	2016	33	9825	5826	59.3	3999	40.7
	2017	33	9682	5541	57.23	4141	42.77
	2018	31	8681	5018	57.80	3663	42.20
Ternopil	2016	25	9422	5661	60.1	3761	39.9
	2017	23	8560	5273	61.60	3287	38.40
	2018	23	7761	4952	63.81	2809	36.19
Kharkiv	2016	55	14116	8512	60.3	5604	39.7
	2017	51	13817	8229	59.56	5588	40.44
	2018	44	13511	8058	59.64	5453	40.36
Kherson	2016	26	8472	5240	61.9	3232	38.1
	2017	26	8030	4941	61.53	3089	38.47
	2018	26	7857	4915	62.56	2942	37.44
Khmelnyskyi	2016	32	11034	6893	62.5	4141	37.5
	2017	31	9863	6237	63.24	3626	36.76
	2018	29	9025	5754	63.76	3271	36.24
Cherkasy	2016	23	7868	4747	60.3	3121	39.7
	2017	23	7421	4548	61.29	2873	38.71
	2018	22	7038	4495	63.87	2543	36.13
Chernivtsi	2016	16	6809	4226	62.1	2583	37.9
	2017	16	6511	3995	61.36	2516	38.64
	2018	16	6292	3897	61.94	2395	38.06
Chernihiv	2016	20	5885	3622	61.5	2263	38.5
	2017	20	5171	3244	62.73	1927	37.27
	2018	18	4457	2813	63.11	1644	36.89
Kyiv city	2016	26	14603	9399	64.4	5204	35.6
	2017	26	12738	8200	64.37	4538	35.63
	2018	26	12532	8145	64.99	4387	35.01
UKRAINE	2016	809	282749	173773	61.5	108976	38.5
	2017	792	266223	163782	61.52	102441	38.48
	2018	763	251200	155454	61.88	95746	38.12

Source: Ministry of Education and Science of Ukraine

Table 6. Graduates and employed students and learners among orphaned children and children deprived of parental care in the VET institutions of Ukraine as of 01.09

Region	Year	Enrolment of orphaned children and children deprived of parental care	Graduates	Employed			% of the graduates	Not employed
				total	By profession	Continue the studies		
A	1	2	3	4	5	6	7	8
Vinnytsia	2016	498	238	238	236	2	100	0
	2017	446	210	202	202	0	96.19	8
	2018	406	190	189	189	0	99.47	1
Volyn	2016	303	154	142	135	7	92.2	12
	2017	244	123	111	91	20	90.24	12
	2018	228	122	105	102	3	86.07	17
Dnipropetrovsk	2016	1307	527	492	434	58	93.4	35
	2017	1203	538	477	415	62	88.66	61
	2018	1109	499	455	423	32	91.18	44
Donetsk	2016	788	281	235	155	80	83.6	46
	2017	667	345	293	172	121	84.93	52
	2018	615	294	263	144	119	89.46	31
Zhytomyr	2016	477	246	219	183	36	89	27
	2017	460	216	193	172	21	89.35	23
	2018	353	208	180	159	21	86.54	28
Zakarpattia	2016	247	114	100	99	1	87.7	14
	2017	229	126	108	106	2	85.71	18
	2018	220	100	81	77	4	81.00	19
Zaporizhzhia	2016	769	317	292	238	54	92.1	25
	2017	705	365	336	304	32	92.05	29
	2018	667	242	227	221	6	93.80	15
Ivano-Frankivsk	2016	240	110	102	97	5	92.7	8
	2017	224	104	93	89	4	89.42	11
	2018	215	98	90	85	5	91.84	8
Kyiv	2016	351	147	145	139	6	98.6	2
	2017	333	145	142	116	26	97.93	3
	2018	301	127	125	124	1	98.43	2
Kirovograd	2016	490	234	233	192	41	99.6	1
	2017	354	209	207	185	22	99.04	2
	2018	334	172	172	159	13	100.00	0
Luhansk	2016	228	101	68	47	21	67.3	33
	2017	218	103	73	26	47	70.87	30
	2018	215	92	68	37	31	73.91	24
Lviv	2016	624	282	270	241	29	95.7	12
	2017	598	281	279	250	29	99.29	2
	2018	556	236	225	191	34	95.34	11
Mykolayiv	2016	489	299	268	225	43	89.6	31
	2017	504	228	177	174	3	77.63	51
	2018	452	253	215	146	69	84.98	38
Odesa	2016	1103	486	460	375	85	94.7	26
	2017	1075	438	422	387	35	96.35	16
	2018	898	371	371	371	0	100.00	0
Poltava	2016	416	237	184	149	35	77.6	53
	2017	364	196	160	131	29	81.63	36
	2018	324	164	144	111	33	87.80	20
Rivne	2016	301	117	114	94	20	97.4	3
	2017	286	122	119	97	22	97.54	3
	2018	297	88	88	78	10	100.00	0
Sumy	2016	419	195	178	98	80	91.3	17
	2017	383	160	128	101	27	80.00	32
	2018	310	151	136	92	44	90.07	15
Ternopil	2016	198	75	72	45	27	96	3
	2017	159	66	64	51	13	96.97	2
	2018	159	67	63	50	13	94.03	4
Kharkiv	2016	737	295	253	212	41	85.8	42
	2017	690	304	270	216	54	88.82	34
	2018	669	243	227	179	48	93.42	16
Kherson	2016	519	261	242	186	56	92.7	19
	2017	452	196	166	160	6	84.69	30
	2018	416	192	172	158	14	89.58	20
Khmelnitskyi	2016	434	182	168	168	0	92.3	14

Region	Year	Enrolment of orphaned children and children deprived of parental care	Graduates	Employed			% of the graduates	Not employed
				total	By profession	Continue the studies		
A	1	2	3	4	5	6	7	8
	2017	365	179	171	171	0	95.53	8
	2018	317	176	176	176	0	100.00	0
Cherkasy	2016	328	161	141	128	13	87.6	20
	2017	277	150	138	135	3	92.00	12
	2018	216	109	99	94	5	90.83	10
Chernivtsi	2016	140	87	87	67	20	100	0
	2017	135	66	66	66	0	100.00	0
	2018	133	59	59	40	19	100.00	0
Chernihiv	2016	327	143	113	112	1	79	30
	2017	295	151	128	118	10	84.77	23
	2018	232	160	128	90	38	80.00	32
Kyiv city	2016	640	230	209	190	19	90.9	21
	2017	544	246	225	181	44	91.46	21
	2018	570	213	201	175	26	94.37	12
UKRAINE	2016	12373	5519	5025	4245	780	91	494
	2017	11210	5267	4748	4116	632	90.15	519
	2018	10212	4626	4259	3671	588	92.07	367

Source: Ministry of Education and Science of Ukraine

Table 7. Graduates and employed students and learners among persons with disabilities in VET institutions of Ukraine as of 01.09.

Region	Year	Enrolment of people with disabilities	Graduates	Employed			% of the graduates	Not employed
				total	By profession	Continue the studies		
A	1	2	3	4	5	6	7	8
Vinnytsia	2016	101	31	31	29	2	100	0
	2017	118	41	41	38	3	100.00	0
	2018	106	21	21	18	3	100.00	0
Volyn	2016	199	86	73	68	5	84.9	13
	2017	175	86	69	60	9	80.23	17
	2018	184	91	69	64	5	75.82	22
Dnipropetrovsk	2016	283	165	154	121	33	93.3	11
	2017	297	154	151	121	30	98.05	3
	2018	307	129	117	100	17	90.70	12
Donetsk	2016	218	85	64	44	20	75.3	21
	2017	273	104	68	53	15	65.38	36
	2018	288	138	102	91	11	73.91	36
Zhytomyr	2016	78	31	23	13	10	74.2	8
	2018	42	35	31	14	17	88.57	4
	2018	68	20	18	5	13	90.00	2
Zakarpattia	2016	60	25	12	12	0	48	13
	2017	52	31	30	10	20	96.77	1
	2018	48	21	15	15	0	71.43	6
Zaporizhzhia	2016	263	155	149	87	62	96.1	6
	2017	217	155	147	65	82	94.84	8
	2018	203	94	74	70	4	78.72	20
Ivano-Frankivsk	2016	142	38	25	15	10	65.8	13
	2017	127	42	36	19	17	85.71	6
	2018	137	60	60	16	44	100.00	0
Kyiv	2016	81	27	26	26	0	96.3	1
	2017	76	28	27	27	0	96.43	1
	2018	87	30	30	26	4	100.00	0
Kirovograd	2016	164	42	42	31	11	100	0
	2017	102	63	63	53	10	100.00	0
	2018	69	35	32	28	4	91.43	3
Luhansk	2016	21	14	13	2	11	92.9	1
	2017	35	8	8	1	7	100.00	0

Region	Year	Enrolment of people with disabilities	Graduates	Employed			% of the graduates	Not employed
				total	By profession	Continue the studies		
A	1	2	3	4	5	6	7	8
	2018	47	8	7	0	7	87.50	1
Lviv	2016	279	128	116	77	39	90.6	12
	2017	324	124	112	57	55	90.32	12
	2018	319	133	130	71	59	97.74	3
Mykolayiv	2016	103	31	24	22	2	77.4	7
	2017	96	50	34	34	0	68.00	16
	2018	63	18	16	8	8	88.89	2
Odesa	2016	193	84	73	64	9	86.9	11
	2017	142	65	64	57	7	98.46	1
	2018	134	40	40	40	0	100.00	0
Poltava	2016	242	114	92	75	17	80.7	22
	2017	213	90	73	51	22	81.11	17
	2018	182	102	96	56	40	94.12	6
Rivne	2016	129	79	77	59	18	97.5	2
	2017	106	77	76	45	31	98.70	1
	2018	112	42	42	42	0	100.00	0
Sumy	2016	202	89	76	50	26	85.4	13
	2017	212	99	56	42	14	56.57	43
	2018	165	81	68	36	32	83.95	13
Ternopil	2016	120	32	30	5	25	93.8	2
	2017	111	52	52	30	22	100.00	0
	2018	110	54	54	30	24	100.00	0
Kharkiv	2016	282	145	125	100	25	86.2	20
	2017	269	157	138	118	20	87.90	19
	2018	215	98	91	64	27	92.86	7
Kherson	2016	47	26	25	21	4	96.2	1
	2017	40	39	36	35	1	92.31	3
	2018	57	14	12	12	0	85.71	2
Khmelnyskyi	2016	134	33	29	29	0	87.9	4
	2017	100	51	49	49	0	96.08	2
	2018	103	38	38	38	0	100.00	0
Cherkasy	2016	122	86	76	74	2	88.4	10
	2017	139	74	66	66	0	89.19	8
	2018	159	80	78	76	2	97.50	2
Chernivtsi	2016	102	49	49	25	24	100	0
	2017	89	34	34	34	0	100.00	0
	2018	97	30	30	21	9	100.00	0
Chernihiv	2016	59	48	40	36	4	83.3	8
	2017	51	40	38	33	5	95.00	2
	2018	45	36	36	22	14	100.00	0
Kyiv city	2016	266	121	107	88	19	88.4	14
	2017	229	112	93	67	26	83.04	19
	2018	240	80	66	49	17	82.50	14
UKRAINE	2016	3890	1764	1547	1173	378	87.9	213
	2017	3635	1811	1592	1179	413	87.91	219
	2018	3545	1493	1342	998	344	89.89	151

Source: Ministry of Education and Science of Ukraine

Table 8. Employment and continuation of studies among the graduates of VET institutions in Ukraine as of 01.09.

Region	Year	Graduates, total	Among the graduates						Self-employed	% of the total graduates
			Employed within the profession	% of the total graduates	Continue their studies in higher and other educational institutions	% of the total graduates	Called up for military service	% of the total graduates		
A	1	2	3	4	5	6	7	8	9	10
Vinnytsia	2016	7400	5972	80.7	608	8.2	106	1.4	714	9.6
	2017	6898	5492	79.62	562	8.15	80	1.16	764	11.08
	2018	6732	5447	80.91	502	7.46	55	0.82	728	10.81
Volyn	2016	5476	4444	81.2	402	7.3	10	0.2	620	11.3
	2017	5022	4039	80.43	366	7.29	10	0.20	607	12.09
	2018	4714	3739	79.32	351	7.45	6	0.13	618	13.11
Dnipropetrovsk	2016	15130	13892	91.8	474	3.1	57	0.4	707	4.7
	2017	14284	13224	92.58	414	2.90	51	0.36	595	4.17
	2018	12489	11704	93.71	334	2.67	54	0.43	397	3.18
Donetsk	2016	5996	4036	67.3	809	13.5	36	0.6	1115	18.6
	2017	5972	4189	70.14	678	11.35	16	0.27	1089	18.24
	2018	5973	4244	71.05	586	9.81	25	0.42	1118	18.72
Zhytomyr	2016	4527	3133	69.2	219	4.8	33	0.7	1142	25.2
	2017	4035	2867	71.05	190	4.71	41	1.02	937	23.22
	2018	3929	2973	75.67	184	4.68	39	0.99	733	18.66
Zakarpattia	2016	2922	2186	74.8	116	4.0	8	0.3	612	20.9
	2017	2582	1943	75.25	95	3.68	6	0.23	538	20.84
	2018	2701	2070	76.64	102	3.78	6	0.22	523	19.36
Zaporizhzhia	2016	7642	6568	85.9	437	5.7	116	1.5	521	6.8
	2017	6895	5835	84.63	393	5.70	96	1.39	571	8.28
	2018	6094	5249	86.13	318	5.22	88	1.44	439	7.20
Ivano-Frankivsk	2016	5026	3583	71.3	587	11.7	16	0.3	840	16.7
	2017	4369	3008	68.85	532	12.18	8	0.18	821	18.79
	2018	4367	3199	73.25	485	11.11	11	0.25	672	15.39
Kyiv	2016	5249	4692	89.4	423	8.1	1	0	133	2.5
	2017	4831	4320	89.42	329	6.81	5	0.10	177	3.66
	2018	4748	4277	90.08	335	7.06	12	0.25	124	2.61
Kirovograd	2016	3627	3413	94.1	83	2.3	56	1.5	75	2.1
	2017	2964	2778	93.72	81	2.73	48	1.62	57	1.92
	2018	2935	2773	94.48	69	2.35	50	1.70	43	1.47
Luhansk	2016	2425	1071	44.2	598	24.7	21	0.9	735	30.3
	2017	2418	991	40.98	683	28.25	31	1.28	713	29.49
	2018	2323	1227	52.82	565	24.32	21	0.90	510	21.95
Lviv	2016	14056	11158	79.4	1501	10.7	174	1.2	1223	8.7
	2017	12241	9864	80.58	1209	9.88	122	1.00	1046	8.55
	2018	10663	8698	81.57	1012	9.49	85	0.80	868	8.14
Mykolayiv	2016	6115	4139	67.7	739	12.1	84	1.4	1153	18.9
	2017	5453	3762	68.99	616	11.30	40	0.73	1035	18.98
	2018	5794	4315	74.47	538	9.29	54	0.93	887	15.31
Odesa	2016	9399	8584	91.3	448	4.8	65	0.7	302	3.2
	2017	7906	7351	92.98	319	4.03	35	0.44	201	2.54
	2018	8102	7561	93.32	340	4.20	41	0.51	160	1.97
Poltava	2016	5849	4260	72.8	663	11.3	117	2	809	13.8
	2017	5426	3996	73.65	511	9.42	49	0.90	870	16.03
	2018	5174	3985	77.02	491	9.49	70	1.35	628	12.14
Rivne	2016	5853	4850	82.9	362	6.2	44	0.8	597	10.2
	2017	5625	4621	82.15	375	6.67	31	0.55	598	10.63
	2018	5311	4482	84.39	255	4.80	14	0.26	560	10.54
Sumy	2016	5269	3652	69.3	216	4.1	37	0.7	1364	25.9
	2017	5187	3586	69.13	145	2.80	38	0.73	1418	27.34
	2018	5201	3709	71.31	171	3.29	27	0.52	1294	24.88
Ternopil	2016	4451	2997	67.3	723	16.2	49	1.1	682	15.3

Region	Year	Graduates, total	Among the graduates						Self-employed	% of the total graduates
			Employed within the profession	% of the total graduates	Continue their studies in higher and other educational institutions	% of the total graduates	Called up for military service	% of the total graduates		
A	1	2	3	4	5	6	7	8	9	10
	2017	4117	3002	72.92	503	12.22	40	0.97	572	13.89
	2018	3979	3043	76.48	469	11.79	35	0.88	432	10.86
	2016	7271	6249	85.9	582	8	46	0.6	394	5.4
Kharkiv	2017	6794	5774	84.99	620	9.13	37	0.54	363	5.34
	2018	6222	5296	85.12	596	9.58	22	0.35	308	4.95
Kherson	2016	4196	3328	79.3	265	6.3	74	1.8	529	12.6
	2017	4024	3314	82.36	221	5.49	69	1.71	420	10.44
	2018	3800	3191	83.97	223	5.87	85	2.24	301	7.92
Khmelnyskyi	2016	6316	5369	85	424	6.7	81	1.3	442	7
	2017	6250	5495	87.92	311	4.98	59	0.94	385	6.16
	2018	5937	5152	86.78	350	5.90	63	1.06	372	6.27
Cherkasy	2016	5366	5075	94.6	193	3.6	16	0.3	82	1.5
	2017	4376	4277	97.74	63	1.44	7	0.16	29	0.66
	2018	4514	4404	97.56	87	1.93	4	0.09	19	0.42
Chernivtsi	2016	3418	2851	83.4	235	6.9	51	1.5	281	8.2
	2017	3120	2619	83.94	189	6.06	32	1.03	280	8.97
	2018	2987	2536	84.90	156	5.22	14	0.47	281	9.41
Chernihiv	2016	3296	2454	74.5	368	11.2	21	0.6	453	13.7
	2017	3027	2317	76.54	312	10.31	31	1.02	367	12.12
	2018	2998	2289	76.35	265	8.84	32	1.07	412	13.74
Kyiv city	2016	6947	5916	85.2	930	13.4	14	0.2	87	1.3
	2017	6528	6017	92.17	415	6.36	8	0.12	88	1.35
	2018	4712	4015	85.21	531	11.27	17	0.36	149	3.16
UKRAINE	2016	153222	123872	80.8	12405	8.1	1333	0.9	15612	10.2
	2017	140344	114681	81.71	10132	7.22	990	0.71	14541	10.36
	2018	132399	109578	82.76	9315	7.04	930	0.70	12576	9.50

Source: Ministry of Education and Science of Ukraine

Table 9. Summary for the graduates of VET institutions in Ukraine as of 01.09.

Region	Year	Number of learners in the graduation year	Graduates	Of them				
				received the diploma	received the certificate	received the junior specialist diploma	obtained 2 and more professions	obtained class (category classes) below the levels set by the programme documents
A	1	2	3	4	5	6	7	8
Vinnytsia	2016	6554	6554	6071	483	105	4978	145
	2017	6135	6135	5719	416	110	4609	115
	2018	5809	5809	5394	415	104	4401	98
Volyn	2016	4153	4153	3909	244	171	2511	127
	2017	3920	3920	3666	254	198	2230	127
	2018	3776	3776	3594	182	121	2615	130
Dnipropetrovsk	2016	9455	9455	9041	414	310	6207	503
	2017	9160	9160	8657	503	386	5894	503
	2018	8721	8721	8176	545	246	6084	319
Donetsk	2016	4764	4764	4469	295	251	3092	170
	2017	4469	4469	4240	229	274	2923	106

Region	Year	Number of learners in the graduation year	Graduates	Of them				
				received the diploma	received the certificate	received the junior specialist diploma	obtained 2 and more professions	obtained class (category) below the levels set by the programme documents
A	1	2	3	4	5	6	7	8
	2018	4138	4138	3955	183	269	2768	74
Zhytomyr	2016	3768	3768	3605	163	43	3225	124
	2017	3501	3501	3294	207	31	2990	122
	2018	3303	3303	3143	160	33	2800	60
Zakarpattia	2016	2873	2873	2823	50	58	1579	16
	2017	2494	2494	2405	89	56	1597	17
	2018	2467	2467	2400	67	46	1940	32
Zaporizhzhia	2016	5672	5672	5306	366	128	3765	305
	2017	5219	5219	4901	318	140	3430	226
	2018	4611	4611	4051	560	165	3052	278
Ivano-Frankivsk	2016	4625	4625	4467	158	207	2786	147
	2017	4095	4095	3983	112	158	2595	145
	2018	4097	4097	3973	124	171	2642	103
Kyiv	2016	3597	3597	3479	118	61	2841	0
	2017	3180	3180	3074	106	117	2307	0
	2018	3090	3090	2985	105	101	2327	20
Kirovograd	2016	2982	2982	2837	145	42	1841	200
	2017	2562	2562	2407	155	45	1658	177
	2018	2571	2571	2414	157	0	1800	227
Luhansk	2016	2161	2161	2102	59	103	1151	3
	2017	2226	2226	2128	98	125	1388	1
	2018	1980	1980	1968	12	117	1210	0
Lviv	2016	11620	11620	11134	486	668	8852	344
	2017	10399	10399	9891	508	682	8326	260
	2018	9271	9271	8861	410	579	7411	278
Mykolayiv	2016	4666	4666	4248	418	169	2388	200
	2017	4211	4211	3837	374	147	2351	151
	2018	4100	4100	3663	437	158	2064	99
Odesa	2016	6921	6921	6433	488	256	3805	124
	2017	6192	6192	5874	318	241	3206	91
	2018	5714	5714	5457	257	184	3318	108
Poltava	2016	4729	4729	4571	158	157	3802	42
	2017	4315	4315	4113	202	158	3295	0
	2018	4027	4027	3878	149	146	3112	27
Rivne	2016	4679	4679	4550	129	131	3501	56
	2017	4534	4534	4421	113	122	3326	30
	2018	4175	4175	4105	70	93	3195	50
Sumy	2016	4000	4000	3667	333	92	2551	90
	2017	4013	4013	3657	356	64	2538	116
	2018	3981	3981	3554	427	65	2665	114
Ternopil	2016	3893	3893	3846	47	96	3295	81
	2017	3351	3351	3291	60	76	2937	44
	2018	3181	3181	3112	69	32	2571	103
Kharkiv	2016	5977	5977	5777	200	22	4446	146
	2017	5548	5548	5334	214	60	3834	141
	2018	5083	5083	4905	178	45	3541	55
Kherson	2016	3359	3359	3226	133	85	2102	51
	2017	3122	3122	3038	84	98	1789	46
	2018	2970	2970	2855	115	82	1554	41
Khmelnyskyi	2016	4812	4812	4386	426	140	3094	106
	2017	4290	4290	3978	312	141	3013	154
	2018	4003	4003	3797	206	133	2889	87
Cherkasy	2016	3759	3759	3612	147	58	3216	152
	2017	3084	3084	2967	117	49	2676	108
	2018	3042	3042	2964	78	45	2836	47
Chernivtsi	2016	3076	3076	2934	142	91	2119	42
	2017	2669	2669	2556	113	84	1803	25
	2018	2577	2577	2332	245	57	1740	118
Chernihiv	2016	2771	2771	2615	156	110	1945	65
	2017	2620	2620	2471	149	117	1836	76
	2018	2452	2452	2279	173	142	1810	73
Kyiv city	2016	6432	6432	6188	244	691	4209	41

Region	Year	Number of learners in the graduation year	Graduates	Of them				
				received the diploma	received the certificate	received the junior specialist diploma	obtained 2 and more professions	obtained class (category) below the levels set by programme documents
A	1	2	3	4	5	6	7	8
	2017	5992	5992	5810	182	697	3571	34
	2018	4511	4511	4330	181	371	2831	66
UKRAINE	2016	121298	121298	115296	6002	4245	83301	3280
	2017	111301	111301	105712	5589	4376	76122	2815
	2018	103650	103650	98145	5505	3505	73176	2607

Source: Ministry of Education and Science of Ukraine

Table 10. Loss of the enrolment of students, learners of VET institutions in Ukraine as of 01.09.

Region	Year	Number of institutions	Students			Learners			% students, learners of the total enrolment
			dropped	graduates	loss of the enrolment	dropped	graduates	loss of the enrolment	
A	1	2	3	4	5	6	7	8	9
Vinnytsia	2016	35	7227	6554	673	856	846	10	4.6
	2017	35	6809	6135	674	772	763	9	4.92
	2018	34	6471	5809	662	938	923	15	5.25
Volyn	2016	22	4514	4153	361	1379	1323	56	4.6
	2017	22	4331	3920	411	1118	1102	16	5.05
	2018	20	4149	3776	373	949	938	11	4.83
Dnipropetrovsk	2016	60	12034	9455	2579	5830	5675	155	12.3
	2017	60	11187	9160	2027	5254	5124	130	9.92
	2018	60	10723	8721	2002	3776	3768	8	9.52
Donetsk	2016	46	5896	4764	1132	1296	1232	64	9.5
	2017	45	5815	4469	1346	1601	1503	98	12.90
	2018	44	5136	4138	998	1891	1835	56	10.01
Zhytomyr	2016	28	4352	3768	584	768	759	9	6.7
	2018	28	4000	3501	499	536	534	2	6.09
	2018	25	4267	3303	964	631	626	5	12.81
Zakarpattia	2016	16	3181	2873	308	49	49	0	4.8
	2017	16	2792	2494	298	88	88	0	4.85
	2018	16	2713	2467	246	235	234	1	4.33
Zaporizhzhia	2016	45	6875	5672	1203	2013	1970	43	8.3
	2017	41	7728	5219	2509	1799	1676	123	18.81
	2018	40	5625	4611	1014	1490	1483	7	7.53
Ivano-Frankivsk	2016	24	5030	4625	405	420	401	19	4.2
	2017	24	4492	4095	397	291	274	17	4.23
	2018	24	4474	4097	377	290	270	20	4.32
Kyiv	2016	27	4042	3597	445	1758	1652	106	6.7
	2017	27	3536	3180	356	1682	1651	31	4.88
	2018	26	3385	3090	295	1689	1658	31	4.38
Kirovograd	2016	25	3767	2982	785	731	645	86	11.5
	2017	24	3461	2562	899	469	402	67	12.79
	2018	24	3345	2571	774	426	364	62	11.31
Luhansk	2016	26	3279	2161	1118	272	264	8	23.7
	2017	26	3415	2226	1189	212	192	20	20.79
	2018	26	2696	1980	716	369	343	26	14.31
Lviv	2016	61	12477	11620	857	2607	2436	171	3.9
	2017	58	11604	10399	1205	1876	1842	34	5.16
	2018	56	10099	9271	828	1466	1392	74	4.10
Mykolayiv	2016	32	5588	4666	922	1632	1449	183	11
	2017	31	5017	4211	806	1328	1242	86	8.85

Region	Year	Number of institutions	Students			Learners			% students, learners of the total enrolment
			dropped	graduates	loss of the enrolment	dropped	graduates	loss of the enrolment	
A	1	2	3	4	5	6	7	8	9
	2018	31	4872	4100	772	1792	1694	98	9.20
Odesa	2016	39	8012	6921	1091	2493	2478	15	6.7
	2017	39	7236	6192	1044	1714	1714	0	7.06
	2018	38	6405	5714	691	2388	2388	0	4.91
Poltava	2016	42	5488	4729	759	1170	1120	50	7.7
	2017	42	5649	4315	1334	1147	1111	36	13.94
	2018	39	4596	4027	569	1182	1147	35	6.29
Rivne	2016	25	5100	4679	421	1179	1174	5	3.7
	2017	25	5028	4534	494	1102	1091	11	4.59
	2018	25	4642	4175	467	1139	1136	3	4.52
Sumy	2016	33	4670	4000	670	1297	1269	28	7.1
	2017	33	4552	4013	539	1222	1174	48	6.06
	2018	31	4516	3981	535	1255	1220	35	6.57
Ternopil	2016	25	4839	3893	946	573	558	15	10.2
	2017	23	3788	3351	437	775	766	9	5.21
	2018	23	3566	3181	385	800	798	2	4.99
Kharkiv	2016	55	7139	5977	1162	1318	1294	24	8.4
	2017	51	7419	5548	1871	1274	1246	28	13.74
	2018	44	6555	5083	1472	1167	1139	28	11.10
Kherson	2016	26	4162	3359	803	857	837	20	9.7
	2017	26	3914	3122	792	921	902	19	10.10
	2018	26	3753	2970	783	843	830	13	10.13
Khmelnyskyi	2016	32	6229	4812	1417	1523	1504	19	13
	2017	31	5565	4290	1275	2023	1960	63	13.57
	2018	29	4588	4003	585	1989	1934	55	7.09
Cherkasy	2016	23	4327	3759	568	1627	1607	20	7.5
	2017	23	3380	3084	296	1314	1292	22	4.29
	2018	22	3261	3042	219	1482	1472	10	3.25
Chernivtsi	2016	16	3402	3076	326	347	342	5	4.9
	2017	16	2959	2669	290	454	451	3	4.50
	2018	16	2852	2577	275	413	410	3	4.42
Chernihiv	2016	20	3033	2771	262	539	525	14	4.7
	2017	20	2947	2620	327	414	407	7	6.46
	2018	18	2970	2452	518	572	546	26	12.21
Kyiv city	2016	26	7594	6432	1162	563	515	48	8.3
	2017	26	7038	5992	1046	581	536	45	8.56
	2018	26	5442	4511	931	220	201	19	7.58
UKRAINE	2016	809	142257	121298	20959	33097	31924	1173	7.8
	2017	792	133662	111301	22361	29967	29043	924	8.75
	2018	763	121101	103650	17451	29392	28749	643	7.20

Source: Ministry of Education and Science of Ukraine

Table 11. The share of expenditures on funding VET institutions by funding sources, %

Region	As of 01.09 of a corresponding year		The share of general expenditures on funding VET institutions by sources, %							
			state budget	local budgets	private sector	external donors	non-government organisations (voluntary contribution)	households (including tuition fees)	VET institution's own funds	other (specify source)
Vinnytsia	2016	region	0	82.51	0	0	0.03	1.55	15.91	0
		regional centre	0.31	91.45	0	2.28	0	1.51	4.45	0
	2017	region	0.13	84.55	0	0	0.04	1.68	13.6	0
		regional centre	0.2	93.24	0	0.53	0	1.66	4.36	0
	2018	region	2.3	89.8	0	0	0.02	1.38	6.49	0
		regional centre	2	89.2	0	2.86	0	1.19	4.76	0
Volyn	2016	region	0	91.53	0	0	0.12	0.8	7.22	0.33
		regional centre	0	91.63	0	0	0	2.29	5.37	0.71
	2017	region	0	91.15	0	0	0.07	0.71	7.54	0.53
		regional centre	0	92.18	0	0	0.02	1.63	5.52	0.64
	2018	region	0	88.75	0	0	0.08	0.5	6.14	4.53
		regional centre	0	91.59	0	0	0.01	1.19	6.61	0.6
Dnipropetrovsk	2016	region	0	86.17	0	0.53	0.13	1.48	11.55	0.13
		regional centre	0	90.99	0	0	0.85	0.39	7.07	0.7
	2017	region	11.84	78.87	0	0.24	0.11	1.37	7.4	0.17
		regional centre	7.67	84.37	0	0	0.72	0.37	6.35	0.52
	2018	region	9.02	80.44	0	0.12	0.11	1.69	8.31	0.31
		regional centre	7.09	81.57	0	0	0.98	0.86	8.89	0.61
Donetsk	2016	region	2	91.36	0	0	0	0	5.93	0.72
		regional centre	0	0	0	0	0	0	0	0
	2017	region	9.27	82.33	0	0	0	0	6.71	1.69
		regional centre	0	0	0	0	0	0	0	0
	2018	region	10.7	81.5	0	0	0	0	6.91	0.89
		regional centre	0	0	0	0	0	0	0	0
Zhytomyr	2016	region	0	95.5	0	0	0	0	4.47	0.03
		regional centre	0.26	93.31	0	0	0	0	6.42	0.01
	2017	region	0.12	95.73	0	0	0	0	4.06	0.09
		regional centre	9.24	83.53	0	0	0	0	7.22	0
	2018	region	0.89	92.44	0	0	0	0	4.46	2.21
		regional centre	9.58	78.3	0	0	0	0	12.12	0
Zakarpattia	2016	region	0	95.53	0	0	0	0	4.18	0.3
		regional centre	0	94.19	0	0	0	0	5.72	0.08
	2017	region	0	94.43	0	0	0	0	4.62	0.95
		regional centre	0	95.11	0	0	0	0	4.43	0.47
	2018	region	0	95.31	0	0	0	0	4.62	0.06
		regional centre	5.31	89.62	0	0	0	0	5.08	0

Region	As of 01.09 of a corresponding year		The share of general expenditures on funding VET institutions by sources, %							
			state budget	local budgets	private sector	external donors	non-government organisations (voluntary contribution)	households (including tuition fees)	VET institution's own funds	other (specify source)
Zaporizhzhia	2016	region	12.74	47.73	28.6	0	0.12	0	10.38	0.43
		regional centre	0	93.32	0	0	0.58	1.37	4.49	0.25
	2017	region	8.74	34.25	5.35	0	46.38	0	4.99	0.28
		regional centre	0	93.82	0	0	0.61	1.01	4.44	0.12
	2018	region	14.93	72.66	4.08	0	0.22	0	7.72	0.38
		regional centre	0	90.02	0	0	1.66	0.99	4.48	2.86
Ivano-Frankivsk	2016	region	0	94.83	0	0	0	0.13	4.65	0.4
		regional centre	8.71	87.23	0	0	0	0	3.54	0.52
	2017	region	0	96.27	0	0	0	0.11	3.31	0.32
		regional centre	0.1	95.27	0	0	0	0	3.93	0.7
	2018	region	0.23	96.13	0	0	0	0.12	3.29	0.23
		regional centre	0.94	94.33	0	0	0	0	4.07	0.67
Kyiv	2016	region	0.32	87.42	0	0	2.34	0	0	9.93
		regional centre	0	0	0	0	0	0	0	0
	2017	region	9.07	81.33	0	0	2.46	0	0	7.14
		regional centre	0	0	0	0	0	0	0	0
	2018	region	12.1	77.21	0	0	3.77	0	0	6.92
		regional centre	0	0	0	0	0	0	0	0
Kirovograd	2016	region	0	81.73	0	0	0	0	17.87	0.41
		regional centre	0	99.17	0	0	0	0	0.83	0
	2017	region	23.68	62.87	0	0	0	0	12.99	0.46
		regional centre	22.58	76.34	0	0	0	0	0.85	0.23
	2018	region	13.7	72.25	0	0	0	0	13.65	0.4
		regional centre	15.07	83.48	0	0	0	0	1.02	0.43
Luhansk	2016	region	0.45	94.7	0	0	0	0	4.84	0
		regional centre	0	0	0	0	0	0	0	0
	2017	region	0.25	94.62	0	0	0	0	5.13	0
		regional centre	0	0	0	0	0	0	0	0
	2018	region	1.42	93.96	0	0	0	0	4.62	0
		regional centre	0	0	0	0	0	0	0	0
Lviv	2016	region	0	94.33	0	0	0	0	5.29	0.38
		regional centre	0	91.13	0	0	0	0	8.87	0
	2017	region	11.81	83.06	0	0	0	0	4.92	0.2
		regional centre	8.69	82.12	0	0	0	0	9.19	0
	2018	region	11.46	73.21	0	0	0	0	5.04	10.29
		regional centre	7.86	80.75	0	0	0	0	10.7	0.69
Mykolayiv	2016	region	3.55	79.29	0	0	0	0	15.57	1.58
		regional centre	19.83	74.86	0	0	0	0	4.31	0.99
	2017	region	5.66	74.74	0	0	0	0	18.41	1.19

Region	As of 01.09 of a corresponding year	The share of general expenditures on funding VET institutions by sources, %									
		state budget	local budgets	private sector	external donors	non-government organisations (voluntary contribution)	households (including tuition fees)	VET institution's own funds	other (specify source)		
	2018	regional centre	14.78	80.53	0	0	0	0	3.81	0.88	
		region	7.31	75.96	0	0	0	0	15.6	1.14	
	2016	regional centre	0	95.22	0	0	0	0	3.37	1.42	
		region	0	93.1	0	0	0	0	6.9	0	
	Odesa	2017	regional centre	0	0	0	0	0	0	0	0
			region	0	92.05	0	0	0	0	7.95	0
2018		regional centre	0	0	0	0	0	0	0	0	
		region	0	88.07	0	0	0	0	11.93	0	
Poltava	2016	regional centre	4.77	86.69	0	0	0	1.39	7.15	0	
		region	0.47	91.88	0	0	0	0.59	7.06	0	
	2017	regional centre	10.34	81.98	0	0	0	1.16	6.51	0	
		region	34.56	37.42	0	0	0	4.34	23.67	0	
	2018	regional centre	12.82	79.25	0	0	0	1.85	6.05	0.03	
		region	9.66	82.13	0	0	0	1.73	6.47	0	
Rivne	2016	regional centre	0	93.38	0	0	0	0	6.62	0	
		region	0	91.41	0	0	0	0	8.59	0	
	2017	regional centre	1.35	92.55	0	0	0	0	6.1	0	
		region	3.11	89.01	0	0	0	0	7.89	0	
	2018	regional centre	1.43	93.53	0	0	0	0	5.04	0	
		region	3.56	88.89	0	0	0	0	7.56	0	
Sumy	2016	regional centre	0	92.89	0	0	0	0	7.11	0	
		region	0	93.14	0	0	0	0	6.86	0	
	2017	regional centre	0	92.85	0	0	0	0	7.15	0	
		region	0	93.6	0	0	0	0	6.4	0	
	2018	regional centre	0	93.79	0	0	0	0	6.21	0	
		region	0	93.75	0	0	0	0	6.25	0	
Ternopil	2016	regional centre	0	91.81	0	0	0	0	7.52	0.67	
		region	0	90.85	0	0	0	0	9.15	0	
	2017	regional centre	13.58	78.45	0	0	0	0	6.99	0.98	
		region	12.75	77.5	0	0	0	0	9.76	0	
	2018	regional centre	14.4	72.01	0	0	0	0	6.44	7.16	
		region	13.56	75.12	0	0	0	0	11.3	0.01	
Kharkiv	2016	regional centre	0	93.06	0	0	0	0	6.94	0	
		region	0	94.83	0	0	0	0	5.17	0	
	2017	regional centre	0	96.75	0	0	0	0	3.25	0	
		region	0	95.12	0	0	0	0	4.88	0	
	2018	regional centre	0	93.42	0	0	0	0	6.58	0	
		region	0	94.41	0	0	0	0	5.59	0	

Region	As of 01.09 of a corresponding year		The share of general expenditures on funding VET institutions by sources, %							
			state budget	local budgets	private sector	external donors	non-government organisations (voluntary contribution)	households (including tuition fees)	VET institution's own funds	other (specify source)
Kherson	2016	region	0	79.11	0	0	1.66	0	3.77	15.46
		regional centre	0	90.61	0	0	2.55	0.22	6.62	0
	2017	region	0	91.95	0	0	1.73	0.02	6.12	0.19
		regional centre	0	91.27	0	0	1.83	0.27	6.39	0.24
	2018	region	0	79.34	0	0	1.24	0.01	6.04	13.37
		regional centre	0	88.97	0	0	1.83	0.11	7.36	1.74
Khmelnyskiy	2016	region	0	87.91	0	0	0.52	0	11.57	0
		regional centre	0	91.34	0	0	0.41	0	8.25	0
	2017	region	37.64	52.87	0	0	0.39	0	9.1	0
		regional centre	7.49	83.41	0	0	0.47	0	8.63	0
	2018	region	55.33	37.47	0	0.07	0.46	0	6.67	0
		regional centre	11.73	77.06	0	0	0.68	0	10.52	0
Cherkasy	2016	region	50	0.88	43.6	0	1.09	0.99	3.44	0
		regional centre	0	0	0	0	0	0	0	0
	2017	region	50	4.59	40.64	0	0.69	1.03	3.06	0
		regional centre	0	0	0	0	0	0	0	0
	2018	region	50	10.58	34.91	0	0.74	1.38	2.4	0
		regional centre	0	0	0	0	0	0	0	0
Chernivtsi	2016	region	0	89.74	0	0	0	0	10.26	0
		regional centre	0.03	92.11	0	0	0	0	7.86	0
	2017	region	0	90.66	0	0	0	0	9.34	0
		regional centre	10.36	82.42	0	0	0	0	4.78	2.44
	2018	region	0	93.45	0	0	0	0	6.55	0
		regional centre	11.25	80.83	0	0	0	0	6.41	1.51
Chernihiv	2016	region	0	90.72	0	0	1.66	0	7.62	0
		regional centre	0	92.13	0	0	1.12	0	6.75	0
	2017	region	0	92.19	0	0	1.41	0	6.4	0
		regional centre	1.43	91.45	0	0	0.74	0	6.39	0
	2018	region	0.3	92.7	0	0	1.67	0	5.33	0
		regional centre	3.97	88.04	0	0	0.58	0	7.4	0
Kyiv city	2016	region	0	0	0	0	0	0	0	0
		regional centre	0	91.95	0	0	0	0	8.05	0
	2017	region	0	0	0	0	0	0	0	0
		regional centre	8.66	83.81	0	0	0	0	7.53	0
	2018	region	0	0	0	0	0	0	0	0
		regional centre	9.24	84.35	0	0	0	0	6.41	0

Source: Regional Departments of Education and Science

Table 12. Expenditures on funding VET institutions by category of expenditures, thousands UAH

Region	As of 01.09 of a corresponding year		General expenditures on funding VET institutions, thousands UAH	by category of expenditures		
				current	capital	
Vinnytsia	2014	region	167055	165413.2	1641.8	
		regional centre	95725	94018.7	1706.3	
	2015	region	196356	191568.8	4787.2	
		regional centre	118362.8	106861	11501.8	
	2016	region	210761.1	190488.1	20273	
		regional centre	108012.4	105692.8	2319.6	
	2017	region	255702.3	238648.3	17054	
		regional centre	134498.1	133136.7	1361.4	
	2018	region	308347.5	278155.4	30192.1	
		regional centre	157647.2	152795.4	4851.8	
	Volyn	2014	region	100853.67	100655.27	198.4
			regional centre	32573.57	32459.25	114.32
2015		region	113480.52	111000.16	2480.36	
		regional centre	36514.59	35783.19	731.4	
2016		region	105038.61	104816.31	222.3	
		regional centre	48224.72	47809.78	414.94	
2017		region	134777.91	133135.13	1642.78	
		regional centre	70931.63	70413.95	517.68	
2018		region	208267.82	191942.54	16325.28	
		regional centre	82610.04	81951.22	658.82	
Dnipropetrovsk		2014	region	231094.4	230561.9	532.5
			regional centre	111779.7	111238	541.7
	2015	region	376390.8	364518.5	11872.3	
		regional centre	131383.9	130935.7	448.2	
	2016	region	362299.4	346768.2	15531.2	
		regional centre	136540.9	136087.9	453	
	2017	region	456491.5	454542.9	1948.6	
		regional centre	198246.5	197559.8	686.7	
	2018	region	544379.9	539014.2	5365.7	
		regional centre	225689.9	222526.3	3163.6	
	the Donetsk	2014	region			
			regional centre			
2015		region	292534.9	281312.9	11222	
		regional centre				
2016		region	274300.1	267022.8	7277.3	
		regional centre				
2017		region	363022.9	361221.1	1801.8	
		regional centre				
2018		region	427842.2	421490	6352.2	
		regional centre				
Zhytomyr		2014	region	152341.4	151738.6	602.8
			regional centre	0		
	2015	region	191460.1	190916.7	543.4	
		regional centre	0			
	2016	region	74875.4	74775.2	100.2	
		regional centre	115320.8	114986.2	334.6	
	2017	region	152057.3	151807	250.3	
		regional centre	97122.9	97085.6	37.3	
	2018	region	178847.6	174442.6	4405	
		regional centre	104306.8	104306.8		
	Zakarpattia	2014	region	120590.8	117490	3100.8
			regional centre	0		
2015		region	142251.2	137651.4	4599.8	
		regional centre	0			
2016		region	56584.8	55851.2	733.6	
		regional centre	84959	83072.7	1886.3	
2017		region	154341.7	152152.5	2189.2	
		regional centre	36024.6	35801.5	223.1	
2018		region	191674.7	179686.8	11987.9	
		regional centre	43353.5	40956.4	2397.1	
Zaporizhzhia		2014	region	114955.39	95382.63	6272.33
			regional centre	79583.48	50171.85	416.97
	2015	region	132224.78	110210.4	7424.15	

Region	As of 01.09 of a corresponding year	General expenditures on funding VET institutions, thousands UAH	by category of expenditures			
			current	capital		
	2016	regional centre	77894.53	53177.54	322.3	
		region	151423.44	125024.62	13282.39	
	2017	regional centre	97341.11	60843.72	685.42	
		region	253253.44	181563.52	275700.17	
	2018	regional centre	143667.74	89233.74	1069.58	
		region	317315.42	223922.62	23841.2	
Ivano-Frankivsk	2014	regional centre	186859.82	110799.96	7950.57	
		region	87403.8	87331.5	72.3	
	2015	regional centre	66869.8	66831.6	38.2	
		region	128876.8	128109.3	767.5	
	2016	regional centre	66362.3	66346.8	15.5	
		region	86700.8	86309.1	391.7	
	2017	regional centre	98207.6	98141.7	65.9	
		region	147173.4	146874.6	298.8	
	2018	regional centre	101559.3	101243.3	316	
		region	187755.9	185201	2554.9	
	Kyiv	2014	regional centre	111454.4	111445.9	8.5
			region	144401.5	60 194.80	515
2015		regional centre	181990.1	76 967.20	808.6	
		region	103614.6	44 835.20	797.1	
2016		regional centre	305451.3	104 302.20	4 334.30	
		region	392844.4	141 266.40	24 626.90	
Kirovohrad		2014	regional centre	89028.94	88709.14	319.8
			region	42699.46	42587.36	112.1
		2015	regional centre	109453.43	108894.83	558.6
			region	50204.67	50135.97	68.7
		2016	regional centre	109872.1	106762.8	3109.3
			region	52480.88	52406.68	74.2
	2017	regional centre	165182.2	144131	21051.2	
		region	64961.71	64950.34	11.37	
	2018	regional centre	183191.8	168360.2	14831.6	
		region	71056.53	70971.91	84.62	
	the Luhanks	2014	regional centre	103343.41	103167.59	175.82
			region	124714.46	122812.66	1901.8
2015		regional centre	138437.1	137891	546.1	
		region	229465.03	221077.48	8387.55	
2016		regional centre	285257.75	266789.55	18468.2	
		region	401821.4	396642.1	5179.3	
Lviv		2014	regional centre	0	0	0
			region	515 770.70	492689.7	23081
		2015	regional centre	0	0	0
			region	173 559.80	172354.2	1205.6
		2016	regional centre	223 877.30	222 027.30	1 850.00
			region	375 640.50	375380.3	260.2
	2017	regional centre	288 883.50	287 298.70	1 679.40	
		region	482 094.00	430574.3	51519.7	
	2018	regional centre	331 173.70	326 621.90	4 551.80	
		region	165711	165711	0	
	Mykolaiv	2014	regional centre	204372.6	204372.6	0
			region	94801.8	94801.8	0
2015		regional centre	75669.9	74996.5	673.4	
		region	151846.5	151846.5	0	
2016		regional centre	57097.1	56880.2	216.9	
		region	173265.7	173265.7	0	
2017		regional centre	68533.2	65189.1	3344.1	
		region	127458.89	127 214.94	243.95	
2018		regional centre	0	0	0	
		region	0	0	0	
2019		regional centre	0	0	0	
		region	0	0	0	
Odesa	2014	regional centre	0	0	0	
		region	0	0	0	

Region	As of 01.09 of a corresponding year	General expenditures on funding VET institutions, thousands UAH	by category of expenditures			
			current	capital		
	2015	regional centre	35947.79	35 947.79	0	
		region	122361.22	121 536.81	824.41	
	2016	regional centre	192361.89	190 845.51	1 516.38	
		region	115961.43	115 614.29	347.14	
	2017	regional centre	0	0	0	
		region	225537.57	224 419.06	1 118.51	
	2018	regional centre				
		region	292484.53	279 554.82	12 929.71	
	Poltava	2014	regional centre	163632.53	161611.23	2021.3
			region	0	0	0
2015		regional centre	220711.94	219025.41	1686.53	
		region	0	0	0	
2016		regional centre	169362.99	168518.39	844.6	
		region	70353.36	69839.96	513.4	
2017		regional centre	246579.59	241260.01	5319.58	
		region	101882.22	101791.66	90.56	
2018		regional centre	341122.79	327166.36	13956.43	
		region	93895.4	93765.55	129.85	
Rivne	2014	regional centre	170 202.51	160 844.59	9 357.92	
		region	0	0	0	
	2015	regional centre	190 940.86	189 751.48	1 189.38	
		region	0	0	0	
	2016	regional centre	136 490.76	135 639.05	851.71	
		region	60552.3	59735.83	816.47	
	2017	regional centre	180 159.88	179 384.43	775.45	
		region	61798.93	61 122.45	676.48	
	2018	regional centre	249 438.91	220 259.72	29 179.19	
		region	72414.7	72 068.71	345.99	
Sumy	2014	regional centre	163421	160834.7	2586.3	
		region				
	2015	regional centre	216674.8	216038.1	636.7	
		region				
	2016	regional centre	148957.4	148296	661.4	
		region	58606.9	58412.9	194	
	2017	regional centre	206452.2	201153	5299.2	
		region	84986.2	84610.8	375.4	
	2018	regional centre	278550	265486.4	13063.6	
		region	104944.8	100282.3	4662.5	
Ternopil	2014	regional centre	105214	102579.7	2634.3	
		region	47793.1	44685.3	3107.8	
	2015	regional centre	125211.5	124165.9	1045.6	
		region	82307	81568.1	738.9	
	2016	regional centre	102963.5	101925.7	1027.8	
		region	87040.8	86609.2	431.6	
	2017	regional centre	152610.5	149733.8	2876.7	
		region	96286	95843.9	442.1	
	2018	regional centre	202824.3	187803.7	15090.6	
		region	110560.8	109911.9	648.9	
Kharkiv	2014	regional centre	429621.06	278913.8	408.06	
		region				
	2015	regional centre	448167.18	294 314.37	622.68	
		region	0			
	2016	regional centre	207493.05	136 001.65	2 946.15	
		region	273554.19	182 376.71	125.57	
	2017	regional centre	371320.82	223 430.26	20 444.83	
		region	321178.56	205 327.40	146.8	
	2018	regional centre	424035.13	259 673.78	7 876.63	
		region	358211.69	222 797.45	203.06	
Kherson	2014	regional centre	136062.6	55646.7	297.1	
		region	14974.7	5519	6	
	2015	regional centre	177547.7	103736.6	649	
		region				
	2016	regional centre	110024.8	29456.1	17353	
		region	84088.5	37444	289.5	
	2017	regional centre	123475.2	46518.5	493.2	
		region	120443	52488.3	627	
	2018	regional centre	176753.1	54153.9	24261.1	
		region				

Region	As of 01.09 of a corresponding year	General expenditures on funding VET institutions, thousands UAH	by category of expenditures			
			current	capital		
Khmelnyskyi	2014	regional centre	133912.6	43527.3	2911.5	
		region	161413.9	160684.6	729.3	
	2015	regional centre	0			
		region	223448.3	221515.3	1933	
	2016	regional centre	0			
		region	91240	89380.8	1859.2	
	2017	regional centre	92110.36	91634	476.36	
		region	175402.3	172915.6	2486.7	
	2018	regional centre	87901.56	87832.76	68.8	
		region	230508.1	209425.9	21082.2	
	Cherkasy	2014	regional centre	107314.4	106639.04	675.36
			region	110988.2	47512.4	482.5
2015		regional centre				
		region	177114.4	78425.4	1246.7	
2016		regional centre				
		region	67184.6	30055.4	1346	
2017		regional centre				
		region	154535.4	56201.3	3803.2	
2018		regional centre				
		region	209706.6	66820.5	32664.8	
Chernivtsi		2014	regional centre	35611.2	13843.9	220.1
			region	49839	18397.5	278.2
	2015	regional centre	40390.9	17228.5	537.6	
		region	86098.5	37446.4	728.3	
	2016	regional centre	40060.9	16832.5	285.7	
		region	89367.5	89367.5		
	2017	regional centre	54740.3	19758.7	336.4	
		region	123125.7	122116	1009.7	
	2018	regional centre	66949.1	20628.8	259.9	
		region	144762.9	141739.1	3023.8	
	Chernihiv	2014	regional centre	127846.8	127605.6	241.2
			region	0		
2015		regional centre	132747.5	132344.4	403.1	
		region	0			
2016		regional centre	71514.1	71172.6	341.5	
		region	62000.6	61679.9	320.7	
2017		regional centre	93946	93413.9	532.1	
		region	79194.2	79136.8	57.4	
2018		regional centre	120248.8	114553.9	5694.9	
		region	82554.8	82482.3	72.5	
city of Kyiv		2014	regional centre			
			region	180381.6	178921	1460.6
	2015	regional centre				
		region	330062.5	324932.5	5130	
	2016	regional centre				
		region	363170.6	353224.2	9946.4	
	2017	regional centre				
		region	468724.2	449872.3	18851.9	
	2018	regional centre				
		region	569498.3	538562.6	30935.7	

Source: Regional Departments of Education and Science

Table 13. Number of registered jobseekers (or unemployed), by sex, age and education, thousand persons

	2013	2014	2015	2016	2017	2018
Total	487.7	512.2	490.8	390.8	354.4	341.7
Male	230.8	236.8	214.0	194.2	164.9	157.7
Female	256.9	275.4	276.8	196.6	189.5	184.0
under 25 years	72.0	69.4	54.6	32.4	26.5	21.2
25 + years	415.7	442.8	436.2	358.4	327.9	320.5
Low	19.4	20.0	20.1	15.8	14.3	m
Medium	259.7	264.2	254.6	207.5	186.7	m
High	208.6	228.0	216.1	167.5	153.4	m

Source: State Employment Service of Ukraine

Table 14. Transition from unemployment to employment (%), by sex and age

Category	2013	2014	2015	2016	2017	2018
Total	35.2	33.7	31.0	32.2	35.0	35.5
Male	39.0	37.8	35.0	35.1	38.2	38.8
Female	31.6	29.8	27.7	29.6	32.0	32.5
under 35 years	33.5	31.6	28.4	29.5	32.2	32.9

Source: State Employment Service of Ukraine

Table 15. Participants in labour market services by sex and age, thousand persons

Indicator	2013	2014	2015	2016	2017	2018
Participants in carrier guidance services for registered unemployed	1414.2	1410.1	1362.6	1214.8	1096.0	1028.7
Including:						
Male	692.3	682.1	613.5	578.1	531.9	483.9
Female	721.9	728.0	749.1	636.7	564.1	544.8
under 35 years	638.0	636.7	588.1	489.3	410.2	360.6
35 + years	776.2	773.4	774.5	725.5	685.8	668.1
Participants in carrier guidance services (for all persons requiring assistance in the labour market)	3993.0	3558.6	3309.0	3000.0	3047.7	m

Source: State Employment Service of Ukraine

Note: carrier guidance services primarily include information assistance, counselling and professional selection

Table 16. Number of job vacancies by major occupational groups, thousands

Indicator	2013	2014	2015	2016	2017	2018
TOTAL	42.5	35.3	25.9	36.0	50.4	58.4
01 Legislators, senior officials and managers	3.8	2.7	1.9	2.7	3.3	3.4
02 Professionals	7.2	5.2	3.8	4.7	5.8	6.2
03 Technicians and associate professionals	4.8	4.0	2.9	3.9	4.9	6.2
04 Clerks	1.3	1.4	1.2	1.6	2.2	2.2
05 Service workers and shop and market sales workers	5.4	5.0	4.2	4.8	6.6	8.8
06 Skilled agricultural and fishery workers	0.4	0.4	0.3	0.4	0.5	0.6
07 Craft and related trades workers	8.3	6.4	5.2	8.0	11.9	13.9
08 Plant and machine operators and assemblers	5.5	5.2	3.8	5.8	8.9	9.8
09 Elementary occupations	5.8	5.0	2.7	4.2	6.5	7.4

Source: State Employment Service of Ukraine

Table 17. Number of job vacancies by economic activities, thousands

Category	2013	2014	2015	2016	2017	2018
TOTAL	42.5	35.3	25.9	36.0	50.4	58.4
A. AGRICULTURE, FORESTRY AND FISHING	1.9	1.6	1.2	1.5	2.2	2.5
B. MINING AND QUARRYING	0.7	0.5	0.2	0.6	0.6	0.9
C. MANUFACTURING	8.6	7.2	5.1	7.8	11.6	12.8
D. ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	0.9	0.9	0.7	0.8	1.5	2.3
E. WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES	0.7	0.5	0.5	0.8	1.4	1.5
F. CONSTRUCTION	2.2	1.3	1.0	1.8	2.2	2.4
G. WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	5.5	4.7	4.1	5.9	8.1	9.2
H. TRANSPORTATION AND STORAGE	3.8	3.8	2.8	3.8	5.4	6.3
I. ACCOMMODATION AND FOOD SERVICE ACTIVITIES	1.0	0.7	0.8	0.9	1.4	1.7
J. INFORMATION AND COMMUNICATION	0.4	0.4	0.3	0.4	0.4	0.6
K. FINANCIAL AND INSURANCE ACTIVITIES	0.7	0.6	0.2	0.5	0.5	0.6
L. REAL ESTATE ACTIVITIES	0.6	0.6	0.4	0.6	0.7	0.8
M. PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	1.1	0.8	0.6	0.8	1.1	1.2
N. ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	1.6	1.4	1.1	1.4	2.0	1.9
O. PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	6.4	4.9	2.7	2.9	4.2	4.2
P. EDUCATION	1.9	1.5	1.4	2.0	2.7	3.7
Q. HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	3.8	3.2	2.1	2.7	3.3	4.6
R. ARTS, ENTERTAINMENT AND RECREATION	0.4	0.4	0.3	0.4	0.5	0.6
S. OTHER SERVICE ACTIVITIES	0.5	0.4	0.4	0.4	0.5	0.6
T. ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE	m	m	m	m	m	m
U. ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES	m	m	m	m	m	m

Source: State Employment Service of Ukraine

Note: m-missing data

Table 18. Total population (number of persons)

Population	2014	2015	2016	2017	2018
Total	45245894	42759661	42590879	42414905	42216766
Male	20918288	19787826	19717881	19644580	19558180
Female	24327606	22971835	22872998	22770325	22658586

Source: State Statistics Service of Ukraine

Table 19. Relative size of youth population (%)

	2014	2015	2016	2017	2018
Total	15.9	15.3	14.6	13.7	13.2
Male	17.2	16.6	15.8	14.9	14.3
Female	14.7	14.2	13.6	12.7	12.2

Source: State Statistics Service of Ukraine

Note: working-age population aged 15–70 (denominator)

Table 20. Students in vocational programmes as a percentage of total upper secondary students (ISCED level 3), %

VET	2014	2015	2016	2017
Total	30.2	29.4	30.1	30.3
Male	36.1	35.1	35.2	35.4
Female	23.5	23.0	24.5	24.6

Source: Unesco Institute for Statistics

Table 21. Population by age

	2014	2015	2016	2017	2018
Total					
14 years	385427	362140	351549	365297	381926
15 years	409399	366788	362018	351424	365209
16 years	427112	390627	366728	361912	351393
17 years	462666	408118	390967	366734	362205
18 years	483504	443864	409303	391384	368336
19 years	505129	464199	445062	410177	393500
20 years	534986	483467	464844	445603	411514
Male					
14 years	197721	186143	180933	188298	196012
15 years	209022	188196	186068	180859	188228
16 years	218749	199463	188132	185990	180824
17 years	237163	209068	199667	188144	186186
18 years	248512	227882	209887	199959	189258
19 years	260300	238964	228717	210527	201471
20 years	275158	249362	239365	229118	211406
Female					
14 years	187706	175997	170616	176999	185914
15 years	200377	178592	175950	170565	176981
16 years	208363	191164	178596	175922	170569
17 years	225503	199050	191300	178590	176019
18 years	234992	215982	199416	191425	179078
19 years	244829	225235	216345	199650	192029
20 years	259828	234105	225479	216485	200108

Source: State Statistics Service of Ukraine

Table 22. Persons not in employment, education or training (% aged 15-24)

	2014	2015	2016	2017	2018
Total	19.8	17.6	18.3	16.5	14.5
Male	15.9	14.9	15.4	13.5	11.3
Female	23.9	20.5	21.3	19.7	17.8

Source: State Statistics Service of Ukraine

Table 23. Activity rate (%)

	2014	2015	2016	2017	2018
15-70					
Total					
Male	62.4	62.4	62.2	62.0	62.6
Female	69.3	69.2	69.1	69.0	69.0
15-24	56.1	56.2	55.9	55.7	56.8
Total					
Male	38.4	36.3	35.1	34.4	33.7
Female	44.0	40.6	38.9	38.6	30.0
25-49	32.5	31.8	31.0	30.0	37.2
Total					
Male	83.3	83.6	83.0	83.0	83.9
Female	89.1	89.1	89.1	89.6	90.1
50-64	77.6	78.1	77.0	76.5	77.8
Total					
Male	50.1	51.7	52.7	53.2	54.2
Female	57.1	59.7	60.3	59.7	59.6
20-64	44.7	45.5	46.8	48.2	50.0
Total					
Male	70.3	70.8	70.7	70.9	71.8
Female	77.5	77.8	77.8	78.0	78.3
15-70	63.6	64.3	64.1	64.3	65.8

Source: State Statistics Service of Ukraine

Table 24. Employment rate (%)

	2014	2015	2016	2017	2018
15-70					
Total	56.6	56.7	56.3	56.1	57.1
Male	61.8	62.2	61.6	61.4	62.1
Female	51.9	51.7	51.6	51.4	52.5
15-24					
Total	29.5	28.2	27.0	27.9	27.6
Male	33.6	31.3	29.6	30.7	30.9
Female	25.2	24.8	24.4	24.9	24.2
25-49					
Total	76.0	76.3	75.7	75.2	76.6
Male	80.1	80.7	80.2	79.8	80.8
Female	72.1	71.9	71.3	70.6	72.4
50-64					
Total	47.4	48.8	49.3	49.4	50.6
Male	53.2	55.5	55.3	54.4	55.3
Female	42.9	43.6	44.6	45.4	46.9
20-64					
Total	63.9	64.4	64.2	64.2	65.6
Male	69.3	70.2	69.5	69.4	70.5
Female	58.9	59.1	59.3	59.4	61.0

Source: State Statistics Service of Ukraine

Table 25. Employment rate by educational attainment (% aged 15-70)

	2014	2015	2016	2017	2018
Total					
LOW	17.0	16.7	16.9	16.7	15.5
MEDIUM	52.5	52.5	52.2	51.9	52.7
HIGH	67.2	67.5	66.6	66.1	67.3
VET	63.3	63.3	62.9	61.9	62.5
Male					
LOW	18.7	18.9	20.0	19.8	17.0
MEDIUM	60.0	60.0	59.1	58.9	59.7
HIGH	72.2	73.2	72.1	71.5	73.0
VET	68.9	69.5	68.3	66.6	67.1
Female					
LOW	15.5	14.7	14.0	13.8	14.0
MEDIUM	44.1	43.9	44.3	44.0	44.9
HIGH	63.8	63.5	62.7	62.3	63.4
VET	54.7	53.8	54.6	54.1	55.5

Source: State Statistics Service of Ukraine

Note: LOW: General basic, primary and lower; MEDIUM: General secondary, professional-technical; HIGH: incomplete tertiary, (basic and full) tertiary; VET: professional-technical

Table 26. Unemployment rate by educational attainment (% aged 15-70)

	2014	2015	2016	2017	2018
Total					
LOW	13.4	12.1	8.4	11.9	13.0
MEDIUM	10.4	10.0	10.7	10.7	9.9
HIGH	8.1	8.2	8.2	8.4	7.7
VET	10.5	10.4	10.6	11.1	9.9
Male					
LOW	18.5	15.2	10.6	12.5	14.3
MEDIUM	11.4	10.8	12	11.7	11.0
HIGH	9.8	8.9	9.5	10.3	9.9
VET	11.0	10.4	10.7	11.8	10.7
Female					
LOW	7.0	8.1	5.4	11.1	11.4
MEDIUM	8.9	8.8	8.8	9.2	8.3
HIGH	6.7	7.7	7.0	6.8	6.8
VET	9.5	10.5	10.4	10.0	8.4

Source: State Statistics Service of Ukraine

Note: LOW: General basic, primary and lower; MEDIUM: General secondary, professional-technical; HIGH: incomplete tertiary, (basic and full) tertiary; VET: professional-technical

Table 27. Youth unemployment ratio (% aged 15-24)

	2014	2015	2016	2017	2018
Total	8.9	8.1	8.1	6.5	6.0
Male	10.4	9.2	9.4	7.8	6.3
Female	7.3	6.9	6.7	5.1	5.8

Source: State Statistics Service of Ukraine

Table 28. Employment (aged 15-70) by broad economic sectors (%)

	2014	2015	2016	2017	2018
Total					
Agriculture	14.8	15.3	15.6	15.4	14.9
Industry	26.1	24.7	24.3	24.3	24.3
Services	59.1	60.0	60.1	60.3	60.8
Not classified	0.0	0.0	0.0	0.0	0.0
Male					
Agriculture	16.5	17.2	17.9	17.6	16.9
Industry	37.0	34.6	33.6	34.1	34.3
Services	46.6	48.2	48.5	48.3	48.8
Not classified	0.0	0.0	0.0	0.0	0.0
Female					
Agriculture	13.0	13.1	13.2	13.0	12.7
Industry	14.5	13.9	14.0	13.7	13.7
Services	72.5	73.0	72.8	73.3	73.6
Not classified	0.0	0.0	0.0	0.0	0.0

Source: State Statistics Service of Ukraine

Table 29. Long-term unemployment rate (% aged 15-70)

	2014	2015	2016	2017	2018
Total	1.2	2.1	2.3	2.5	1.9
Male	1.3	2.4	2.4	3.0	2.2
Female	1.0	1.8	2.2	1.9	1.5

Source: State Statistics Service of Ukraine

Table 30. Employment by status (% aged 15-70)

	2014	2015	2016	2017	2018
Total					
Employees	84.1	84.1	84.4	84.3	84.2
Employers	1.3	1.2	1.2	0.9	1.0
Self-employed	14.3	14.5	14.2	14.6	14.5
Contributing family workers	0.3	0.2	0.2	0.2	0.3
Male					
Employees	82.5	82.2	82.3	82.3	82.2
Employers	1.6	1.7	1.5	1.1	1.4
Self-employed	15.6	15.9	15.9	16.4	16.2
Contributing family workers	0.3	0.2	0.3	0.2	0.2
Female					
Employees	86.0	86.2	86.6	86.4	86.3
Employers	0.8	0.7	0.8	0.7	0.7
Self-employed	12.9	12.8	12.4	12.6	12.7
Contributing family workers	0.3	0.3	0.2	0.3	0.3

Source: State Statistics Service of Ukraine

Annex 3: Minutes of the TP 2018-2020 Launch event in Ukraine

TP 2018-2020 Launch event in Ukraine: overview

Venue:	Radisson Blu Hotel, Bratskaya Street, 17-19, Kyiv
Date:	the 21st and 22nd of March, 2019

1. Minutes of the Session 1: Welcome and Introduction of new cycle of Torino Process

Lilia Hrynevych (Minister, Ministry of Education and Science): Dear colleagues! Today we have a great opportunity to talk about an extremely important area of human capital development, namely, VET in Ukraine.

I would like to express my deep gratitude to the European Union and the European Regional Development Fund for their assistance in the development of human capital in Ukraine. It is done very sincerely and orientated to our needs. VET is one of the burning issues in Ukraine. When we look at trends in technical and vocational education and training, we see that today the level of this education does not meet the needs of the labour market. So it is not surprising that now there is a decline in the number of those graduates who are eager to enter VET schools. We face challenges and have to be aware of them. Only when we clearly understand the challenges we begin to adapt them to the analysis of data, needed to make decisions. The Torino Process provides an opportunity to receive relevant data that can further shape the policy. Therefore, I want to take a closer look at these issues. What are the challenges?

First of all, we have introduced a large-scale decentralisation reform in the country. Significant share of the management functions and funding of VET was transferred to the level of regions (oblasts), cities of regional significance and regional (oblast) centres. Our objective for the future (which is stated in the Draft Law of Ukraine "On Vocational Education") to leave only one level - regional. But so far, as cities and oblast centres have significantly higher revenues, they are responsible for VET schools located in their areas. And we have very negative trends. Such cities and oblast centres want to save their spending on VET and use contradictive approaches. Here is an example of such an approach.

Regional order for VET is formed by regional administrations and oblast centres. Cities, however, argue that they will order only those who will then work at their communal enterprises. Consequently, the level of orders has been reducing. At the same time, they do not believe that in other commercial enterprises of their city, there are also people who are graduates of VET institutions and pay taxes in this city, filling its budget. Thus, a priori, they apply the wrong approach.

What do we lack? We do not have enough statistical data to analyse regional labour markets (what education has been received by people who work on the regional market and how many of them are VET graduates, etc.). This information will help us to stop the practice of reducing regional orders and groundless closure of VET schools. Therefore, we need a deep analysis of the labour market.

Next very important issue is how to consolidate a network of VET institutions and choose the strongest. The depreciation of the equipment of VET institutions is approximately 60%. Over the last three years we invested in training centres and equipped them with some modern equipment. However, it is a 'drop in the sea' for the system of such a large country. That's why we are grateful to European Union for

launching of EU4Skills project in Ukraine, which can help to build Centres of Excellence (multidisciplinary centres). And it is very important for us, apart from those seven multidisciplinary centres, to have the opportunity to spread this assistance all over Ukraine. For example, part of these investments will help regions without large multidisciplinary centres to improve the base of VET schools for the different spectrum of occupations. We need to see how the data that we will receive at the new round of the Torino Process can support project's perspective and development, and help to assess its effectiveness later on.

Another very important problem is the mismatch between the content of education and labour market needs (as well as individuals' needs). We are currently working on new standards for VET and believe that European project will help us with this issue. But we still need expertise, we still need to understand how to improve Ukraine's capacity to build such standards and cooperate with employers. In other words, effective mechanisms of cooperation with employers are still a serious challenge for us.

The last problem I want to outline is the weak Career guidance of young people to working qualifications (qualifications of skilled workers). It is very important for us to analyse Ukraine's data which will be received during the Torino Process and put them to the framework of comparative analysis with other neighbouring countries. We need more money from the state budget for VET development. And it is very difficult for me to convince higher officials when they allocate the budget. Especially upon decentralisation we delegated functions on education system management to the regional level, where there are a lot of problems. Today, very often, regions (this does not apply to regional state administrations), for example, local councils, can ignore state policy. This is a feature of finding balances in the process of decentralisation. Therefore, we guide regional administrations on Career guidance and on how to raise awareness of the population (where after graduation of VET institution he or she will be able to work).

So, we have a lot of challenges. But I hope that last round of the Torino process (in 2016) was a training phase for the regions. Dear colleagues, it depends on us what this report will be like, because we provide data to this report. And if we are asked about the framework that we have to submit, then I hope that we can improve this framework in light of our needs. At the same time, our objective is to receive as much data as possible from our regions, which can be used for explanation to local politicians why regional orders cannot be reduced. Look at these data not as data that we want to provide our international partners. We need it for us to build a policy based on a real data analysis.

I hope that new round of the Torino process together with the project EU4Skills: Better Skills for Better Jobs in Modern Ukraine 2018 - 2020' (agreement was signed in Brussels on December 17, 2018) will give a new impetus to the development of modern VET system in Ukraine.

Stefan Schleuning (Head of Cooperation of the EU Delegation to Ukraine): Good morning! I am very happy to be here on this important seminar. In fact, for me these are the weeks of education. Last week we had the event dedicated to New School and today we focus on VET. I think education reform is really important for one reason – In Ukraine there will be Presidential and Parliamentary elections soon. National community is now goes back to the last four or five years and analyses what have been achieved since the Revolution of Dignity and Maydan. Many positive things have been achieved, however, there are areas where still much work has to be done. At the same time, for many people there is no disagreement that in the area of education reform we can see remarkable progress. And I think this is important as there are two reforms, which matter both for Ukrainian citizens, - education and health reforms. If some Ukrainians don't see changes at present (unscientific way to fill the pulse of the country is to ask opinion of taxi drivers) it doesn't mean that we will not achieve results in mid- and long-term perspective. I am always trying to convince them that it takes time and it is long-term process. I think for the future if you with our support manage to really put in place modern educational system for children (primary, secondary education, VET) and the modern health system, all Ukrainians in mid- and long-term perspective will believe that the chosen path is the right one. This event today on Torino

Process is an important framework for VET because we have the big project 'EU4Skills: Better Skills for Better Jobs in Modern Ukraine 2018 – 2020'. It is a financial commitment of EUR 30 million⁴⁷⁶. It is not only about advice and expertise, it is also about infrastructure and modernizing facilities. We have German Development Bank, European Investment Bank engaged in the process. I think we have all elements to bring in place for the successful programme over the coming years. Of course, it is good to have a modern VET Law and regulatory framework and then invest in the development of the curricular, training of teaching personnel and infrastructure. Besides, I joined the EU mission and wanted to show the EU guarantee and presence after the latest escalation of Russian aggression in Azovskyy region and we decided to direct EU support also to Mariupol, Berdyansk and Melitopol. And in the framework of "EU for Skills" project we also decided to direct the support for infrastructure side for our work in this particular part of Ukraine. It is more general observation, but you will learn details of the Torino Process later during the seminar. Let me thank you for the strong commitments and achievements in education sector. We are very proud of our partnership and I wish you all successful seminar!

Cesare Onestini, (ETF Director): It is a great pleasure to be here with you this morning in Kyiv! I would like to start by saying what the ETF's cooperation with Ukraine means for us. The Minister has just highlighted the number of challenges, but I think we should also start by saying how many good things have happened. First, what we see today is a commitment for reforms in VET system. We know it is essential if we want to have results. Secondly, there is no fear when we talk about resources. Usually, when you talk about education reforms there are a lot of good words and then when it comes to resources it appears a great problem. And we also see the strong commitment to bring the resources where the priorities are. We have heard from the EU Delegation colleague that the EU is fully committed from their side. And the third, from the ETF perspective we see that this commitment is from the top but it also shared in the country. And the presence of participants from different regions of Ukraine here shows that this change has to take place. It is not to minimize the challenges it is to say that preconditions are there for continuing the reform process and ensuring that it will be developed further. I have started the ETF one and half year ago and I look to the statistics with whom do we work with (we cooperate with 28-29 countries around the EU) and I see that Ukraine comes top. It is the country, where the ETF is engaged the most. And why? Because we respond to the desire for changes. The Minister rightly said about particular agenda. We want to support the country on the road of this process. But we can only do it if the country is convinced that it wants to do it. Here we have found the partner with whom we have been able to work. This is the way of introduction to say why for the ETF cooperation with Ukraine is very important. All the arguments are there to say yes the changes are possible, and the challenges are big. Once we are here we can make some progress. In most countries VET is losing attractiveness over the last 20 years. And it happened for different reasons in different countries. There has been a believe among the families that young people should strive to go to university, which is the way to get sustainable wages, but it is not actual anymore. If you look to the economy, for example industries with digitalization, or more traditional sectors (the way they are changing) such as agriculture, agro food, tourism, they require more skilled people. It is not enough now to have three month stage and you get job for life. You need to be very skilled because changes are affecting all sectors. Once we are striving to improve VET we also need to work on explaining our citizens why it is important. The choices what courses to take are made by the individuals, by families and by communities. That's why we need to convince them what value is in VET. And I know it is not easy, it is important to show that we provide quality education. And to provide quality we need partnership. We need to bring here business, authorities, social partners and civil society, because every starting point is different. You know it from the regions, for example, in Ukraine your regions look very different (even from the figures there are many important differences). The solutions in terms of training - we have to reflect the realities that you know better than anybody else. That's why your presence here is very important for the

⁴⁷⁶ according to the agreement between the EU and Ukraine it is EUR 58 m

credibility of the Torino Process. Another important feature is that we need to put question of VET reform into wider issue of human capital government. And here in Ukraine it will be the starting point and there will be the challenge how to make it the reality. It means that when you design your education system you do think about what is the best way to create meaningful and sustainable jobs which are needed. And it is question of data, question of understanding trends, talking to experts and business. We build this element into Torino Process, but this time we want to make it stronger, we want to bring this look of HCD needs (what is needed, what will likely be in more demand, what are the gaps between offer and demand). In this Torino Process round we will focus on this issue and hope to get better response. When we talk about VET we usually mean young people who make their first choice, but we also know that one of the big challenges is continuing education for older people who might not have jobs or have jobs, which are not sustainable anymore. Unfortunately, Ukraine looks more like any other European countries having the problem of aging population and this is one more element that you should keep in mind when we look at VET sector and we need to build it into school reform. It is question of upskilling, updating, having transversal competences. For example, I was on meeting with the Director General of the VET of the EU in Romania and the question of our discussion was how do we generate our transversal skills (learning about critical thinking, leaning about running a career, learning about what you need in order to grow) and nobody found the answer. This is really a challenge. My personal opinion is that we need to ask young people more, because young people have very different way of thinking nowadays, we cannot even imaging how their brain is developing, looking on the screen all the time, learning in completely different way, because that is how they get the information. And we need to understand how to use this way of learning in order to give them the skills which they will need when they grow up. So at last, a couple of words about Torino Process itself and why we think it is so important at this stage. First of all, as the Minister rightly said, it's your process. It is not the ETF process, ETF is happy to have experts supporting, bringing experience of others; it is a process that has to be useful in supporting what you want to do at the level of the country and at the regional level. Secondly, we usually use the Torino Process to look what's not working or where it is a gap with data and understand better what to do. But I think we should use the Torino process as a tool to see what is going well. Also we are trying to look at the TP as at excellence, innovation. I was in Turkey, Tunisia, Israel there are so many good ideas and we want as the ETF to collect good ideas, bring them together (our proposals) and find out how they can work here. The project of the EU Delegation is a wonderful opportunity to connect the theory and analysis with the needs. The ETF was very much involved in the designing and supporting the project, making sure that we are continuing sharing the expertise. The project is now entering to very operational level. So the TP really needs support to the way which the project is to respond to the real needs. I will stop here. In my last words I want to outline the importance of what we will be doing as the part of the TP. You have really set a foundation for the reforms that might not give the results next 2-3 years, but if this is right we will see the results in a generation which will contribute to the change of the course of the country. Thank you very much!

VET reform and the latest update on progress and achievements

Pavlo Khobzey (First Deputy Minister, Ministry of Education and Science): I want to start with a few slides, which shows where we go and what challenges we face. If we look at the network of VET institutions, we see 10% decline. Number of students decreased by 16%, the share of 9th grade pupils who choose to study further at VET schools is 20%. I agree with Cesare Onestini that the prestige of VET and the reduction in the number of VET students it not only typical of Ukraine, but also of other EU countries. We have expanded the range of specialties of national significance, but, in my opinion, it is lack of motivation of students to choose these specialties.

In fact, one-third of VET students study in the cities of oblast centres. These are the best VET schools as they had significant investments. However, municipal government wants to finance only those students who live in their city (near 37%), while 63% are external, which can potentially put their efforts for city development in the future.

We have *Government Plan*, where VET modernisation has been determined as one of the key priorities for Ukraine. I understand that it requires vision, and this vision is fixed in the *Concept of modernisation* adopted in May 2018 by the College of the MoE (in early April this document will be submitted to the government for approval). We also hope that the Draft Law '*On vocational education*' will be adopted in the first reading between April and June, 2019. In December, 2018 the Prime Minister signed the EU Agreement 'EU4Skills' (EUR 58 m), including EUR 21 m on soft component. Besides, credit agreement was signed with the EIB (EUR 50 m, but the sum can be doubled). I hope that we will come to concrete steps in specific areas, as they are currently in the preparatory phase.

Next question. We have three important things: funding, quality of VET and social partnership, which distinguishes VET from secondary education. We are not only players here, more important are employers who should dictate us and with whom we should work together.

Decentralisation. In previous rounds of the Torino Process, funding was from the state budget, and we did not have a clear vision of outcomes which could be applied for making decisions locally. As we have entered the Torino Process 2018-20, I hope that the received data will be used for the development of regional plans and for the projects that we have started. We are grateful to the U-LEAD program, aimed at increasing the capacity of VET councils to become an effective decision-making body for the approval of regional order. If we do not build a triangle (officials-business-education) it will be difficult to move in this direction.

Network optimization. We do not have the resources to support those institutions that will never become training centres. It is necessary to reduce their number, and at the same time increase the number of children who study in those VET institutions where we have already created necessary conditions.

VET is part of our plans for the high school. Necessary skills, competent approach in Ukrainian schools, critical thinking, group work, time planning, career planning are important things for the New Ukrainian School. We should remember that VET is just another way of our high school. For the development of the New Ukrainian School, we have European support from the Government of Finland (EUR 8 m, including 6 m for the New School and 2 m for schools with minority languages).

Quality of education. Creation of new standards on a modular basis based on a competent approach (with the help of the ETF) is extremely important for us as we need to understand where we go. Next issue of the quality of education is the New Ukrainian School: content-teacher-environment. As for teachers, there is a big challenge as to the level of wages. If the salaries of masters or teachers are not increased it will be very difficult for us to build some plans because they must be implemented by motivated people. Another issue is the quality of methods and materials, approaches to children, motivation of children to master the profession. Centres of Excellence are what we want to build in the framework of the EU project and government allocations (last year UAH 100 m was spent on development of such Centres from the budget). Creation of the National Qualification Agency that would control the quality and training of masters is our objective as well. And the fourth element of strategic modernisation is social partnership and the labour market. We cooperate with employers on professional standards and the creation of centres for professional qualifications. We focus not only on students, but also on the adult population. We create attractive conditions and educate the adult population in such centres. Another important issue is Career guidance and raising the image of VET education. We hope to increase the share of VET graduates to 30% (proportion 30:70) in 5 years.

Lessons learned and how Torino Process can contribute to VET development in Ukraine

Viktoriya Karbysheva (National Coordinator of Torino Process in Ukraine, VET Directorat, Ministry of Education and Science): I would like to focus on acquired experience and how the Torino process can contribute to VET development. I will focus more on history, experience, on how everything has begun and where we are today. Ukraine joined the Torino Process in 2010. Reports were prepared in

2012, 2014, and 2016. In 2014 Ukraine first launched the preparation of reports at the regional level (as a pilot project) in five regions (Vinnitsa, Sumy, Khmelnytsky, Dnipropetrovsk and Kyiv). In 2016 all regions joined the process.

What are the lessons? The methodology of the Torino Process can be applied and adapted at the regional level (we will do it also this year). The analytical council proposed by the ETF will be adapted as well. The second lesson is a deep analysis based on the Torino Process methodology, which is possible only due to the professional potential of regional teams. Therefore, a very large number of stakeholders are now involved at the regional and national levels (trade unions, social partners and employment centres). Best practices (cases) from the regions have been included to the National report.

Key stages of the process:

1. Creation of the working group, distribution of responsibilities, agenda.
2. Collection of statistical data: (administrative data, official web-sites, literature, analysis of demand in the labour market, in particular, portal for job search and career guidance, which reflects situation on the labour market in Lviv and Volyn regions).
3. Consultations with all stakeholders.
4. Reporting (25 reports were prepared and presented at seminars and conferences).

Key outcomes of the Torino Process implementation at regional level:

1. Global look at VET development in the region.
2. Possibility to conduct comparative analysis and see how the system is changing.
3. Presentation of regional achievements at national level.
4. Introduction of innovative ideas and using European methodology for policy analysis.

Key outcomes of the Torino Process implementation at national level:

1. Formulation of state policy in VET sector.
2. Ability to identify strong and weak points (imbalances in training of skilled personnel).

According to the Association Agreement between Ukraine and the EU (432 article) countries should exchange information in the sphere of VET. Thus, the TP is the process of information exchange. How did we use reports (national and regional) prepared in 2016? First, we used them for the preparation of official documents, such as '*Concept of VET development in Ukraine*'. Second, they were also used for the EU project 'EU4Skills: Better Skills for Better Jobs in Modern Ukraine 2018 – 2020'. Third, regional reports helped to evaluate where to open training centres (Centres of Excellence).

Margareta Nikolovska, the ETF's country coordinator for Ukraine: Margareta Nikolovska started her speech summing up the opening session and stressing on the importance of sub-national level of Torino Process: 'Torino Process at national level is really nothing if we don't have you, regions, with us'. She briefly described the event program for 2 days, including introductory session (Session 1), analytical framework (Session 2) and challenges of policy analysis (Session 3). Margareta Nikolovska outlined the importance to plot the discussion on human capital development into the Torino Process. She overviewed key changes in the Torino Process 2018-20 and focused more on 4 principals of the TP: ownership, participation, holistic analysis/approach and evidence-based analysis. Further step will include examination of regional trends as Ukraine is a member of Eastern Partnership region.

2. Summary of the Session 2: Guiding the analysis: the National Reporting Framework and indicators

What is new in the National Reporting Framework? The indicators: list and definitions

Mihaylo Milovanovitch, ETF: What is new in the National Reporting Framework? First of all, it is broader look. For example, what VET can do for labour market service, higher education and for

children, who are left on the street and etc.; linkages of VET with general and higher education and its impact on the socioeconomic environment. Building block A (introductory part) was changed as well. It should show where we are on the map and what our key challenges are. It is meant to prepare the ground and collect basic information about the country and its VET system, which should be relevant to areas covered in the NRF. Next change is more focus on life-long learning perspective. It is difficult to evaluate how prepared is VET for the things beyond their classes. It is also difficult to evaluate whether the country report about the problem or about solution (very often they are mixed), therefore in this round of the Torino Process such questions are split. If you identify the problem, which you want to discuss in the Torino Process you may use several criteria: a) problem hinders human capital development; b) problem can be solved by applying policy through education. Next novelty is introduction of summary of findings after each building block, which includes policy challenges, factors that contribute to each of these policy challenges, solutions to these challenges, progress with the implementation of the solutions and recommendations. Besides, there is new 'open floor' section, where countries are free to provide information on problems and policies that the NRF did not ask about, as long as they match the overarching theme of the building block. Also the preparation of the ETF assessment is firstly introduced into Torino Process.

General requirements for the Torino process National report are the following: a) evidence, either qualitative or quantitative, should be reliable, with a reference to a source, which can be verified; b) make a statement or observation in response to each question, one issue at a time; c) do not provide information about policy intentions to address the issues (only in the section about policies); d) recommended maximum length per response is within the range of 100 – 500 words. The ETF recommends a list of suggested indicators for the analysis. The list is not exhaustive and the authors can use other data and indicators to support their analysis, in addition to the ones suggested by the ETF.

3. Summary of the Session 3: Torino Process implementation and work programme for the country

What has changed since last cycle in VET in the regions? Overall situation in relation to each principle of TRP

Speaker: Mihaylo Milovanovitch, ETF

This session was focused on practical training in groups. All participants were divided into groups and asked to prepare detailed answers for 3 questions:

- 1) Find a problem of human capital development which needs to be solved through education.
- 2) Who should participate in discussion of this problem and why?
- 3) If you have to write the Torino Process report about the problem that you have chosen, which TP principle will be difficult to apply and why?

Problems of human capital development that were considered during the session included mismatch between the qualification received and self-realization on the labour market (labour market demand); lack of motivation for human capital development; lack of investment approach in VET schools for the use of modern equipment; problem of creating orders in VET sector; unreliable data in the forecasting system; unpreparedness of the education system for live-learning education.

Viktoria Karbysheva (National Coordinator of Torino Process in Ukraine, VET Directorat, Ministry of Education and Science): Summing up the session 3, Viktoria Karbysheva outlined key stages of the Torino process at sub-national level with timelines and data sources. In particular, heads of the

regional departments of the MoES were proposed to use longer period for data analysis (more than 2 years, 4-5 years, taking into account the process of decentralisation in Ukraine) and prepare their reports by June 15, 2019. Besides, at the end of May, National Coordinator of Torino Process in Ukraine is planning to hold 3 focus groups meeting (for participants from regions). The Torino process National report has to be prepared by the end of June 2019.