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Digital Skills & Learning

A Silver Bullet for Education?

Webinar

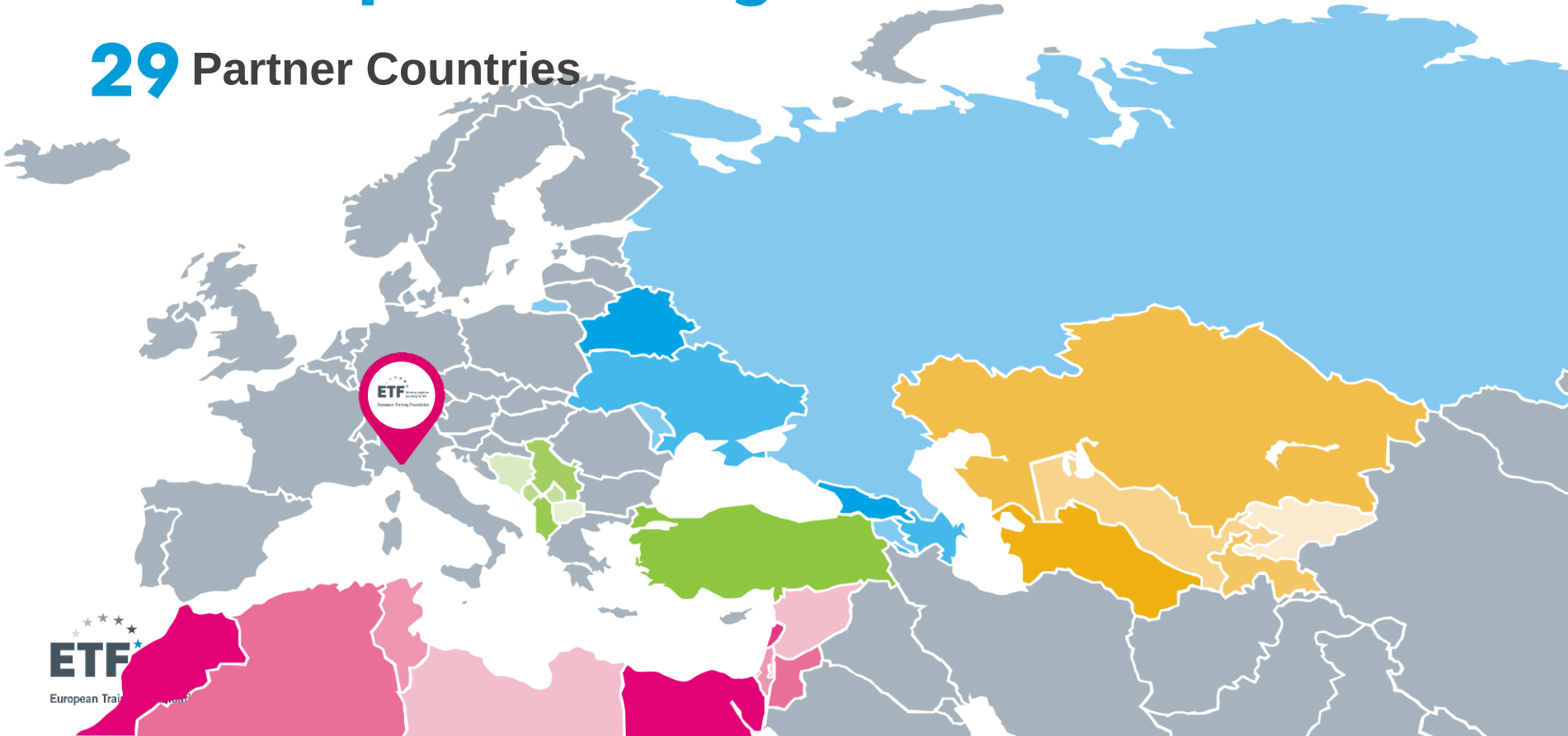
9 november 2019

ETF Working together Learning for life

European Training Foundation

The European Training Foundation

29 Partner Countries



What is European Training Foundation

The ETF works together with its partner countries on the reform of Vocational Education and Training systems, the analysis of skills needs and the development of partner country Labour Markets.

Reform of Vocational Education & Training

Digital and Online Learning (DOL)

Digital Skills and Competence (DSC)

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Today

Present the preliminary findings of a **study**
on Digital & Online Learning, Digital Skills and Competence
in VET in Moldova, Georgia and Ukraine

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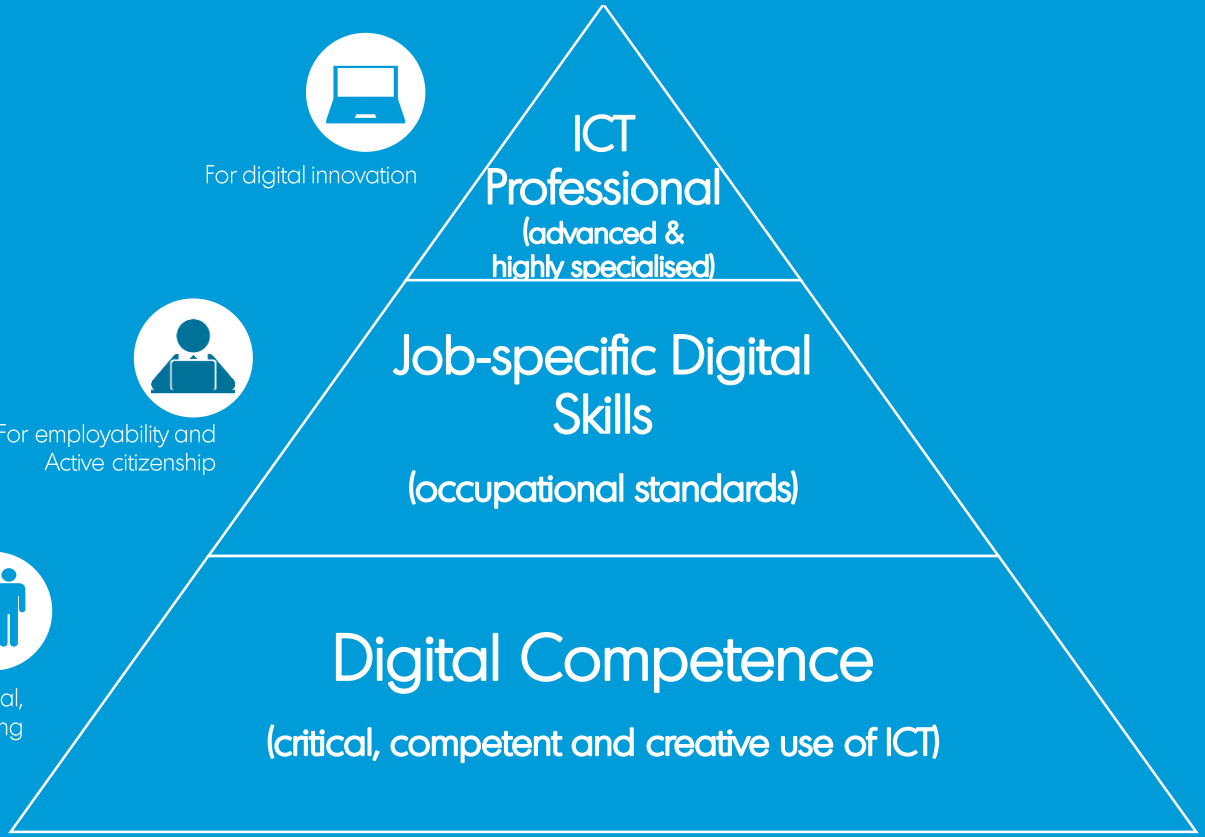
Digital Skills and Competence - DSC



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https://www.etf.europa.eu/en/publications-and-resources/publications/digital-skills-and-competence-and-digital-and-online

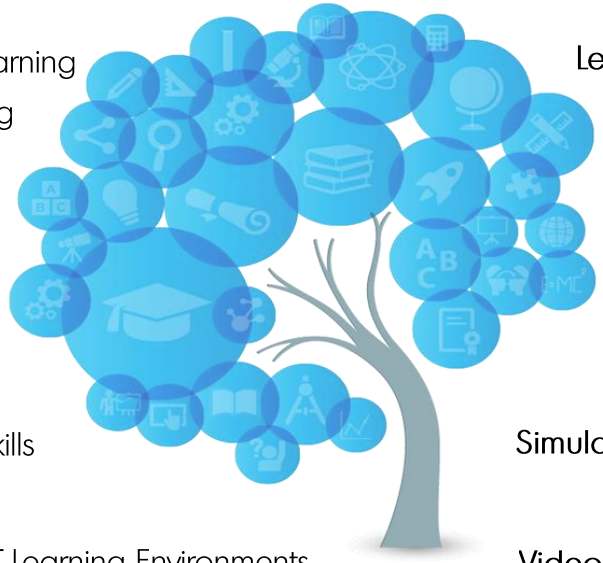
Digital (and Online) Learning - DOL

Active and personal learning

Collaborative learning

Learning Management System

Learning Analytics



Text book

Interactive eTextbook (e.g. OER)

Vocational skills

Simulation tools, VR, AR

Connecting VET Learning Environments

Video Pedagogy

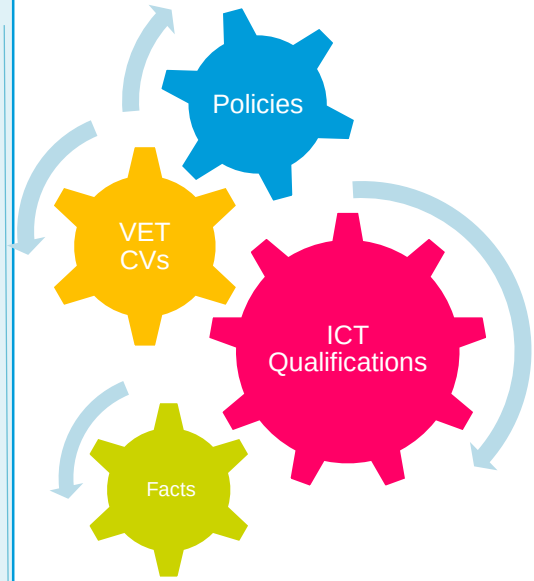
Methodology

Digital Skills & Competence of **VET learners**

Digital Skills and Competence of **VET teachers & trainers**

Digital and online Learning in **Initial VET**

Digital and online Learning in **Continuing VET**



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Our Experts

Veronica Midari

Moldova

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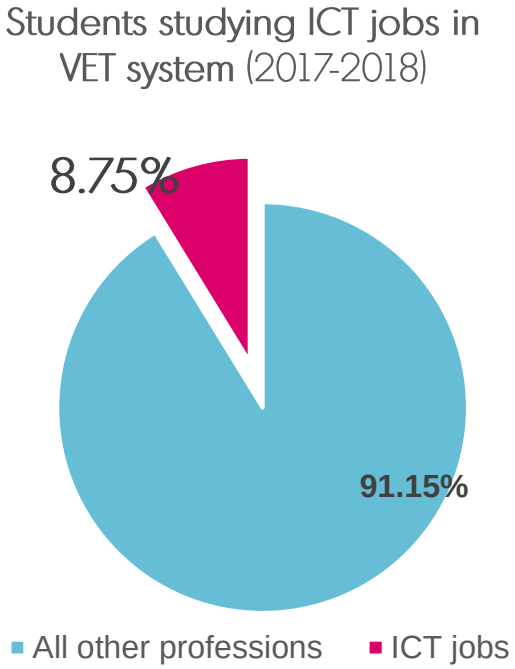
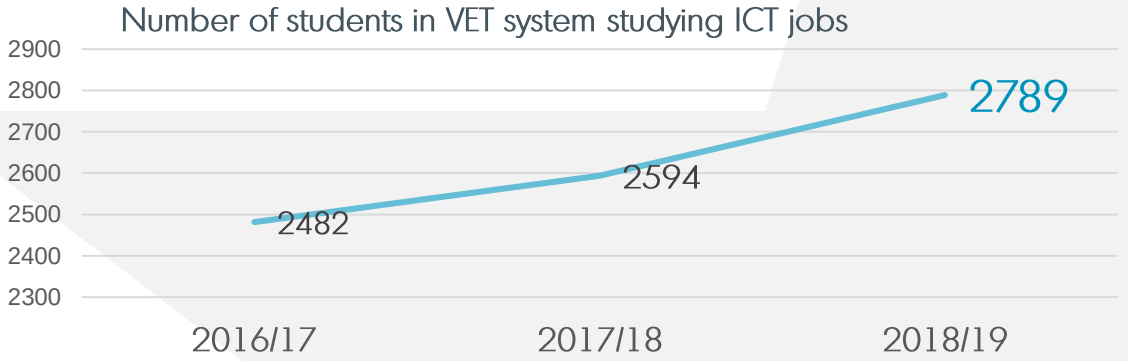
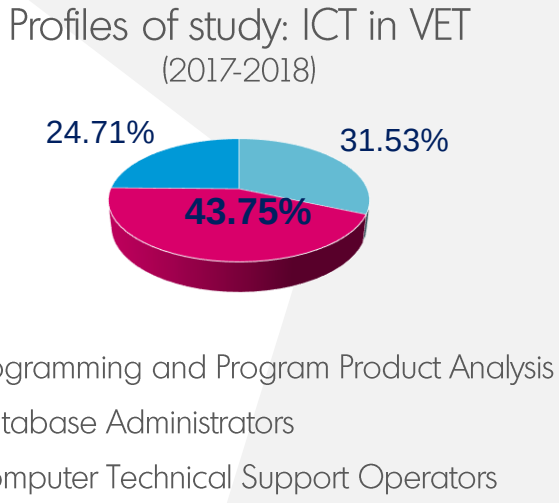
Digital Skills and Competence for Learners

KEY DATA: SUPPLY SIDE OF ICT SPECIALIST







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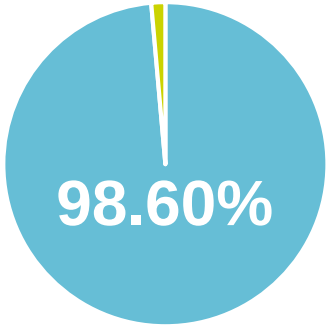
KEY DATA RELATED TO DIGITAL COMPETENCES OF VET STUDENTS

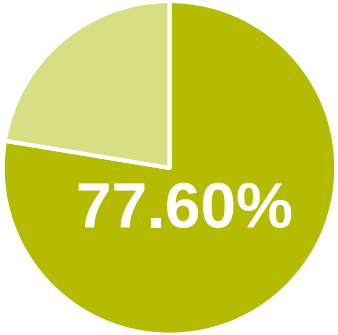
VET Students

(based on study about ICT used in VET for non-ICT jobs)

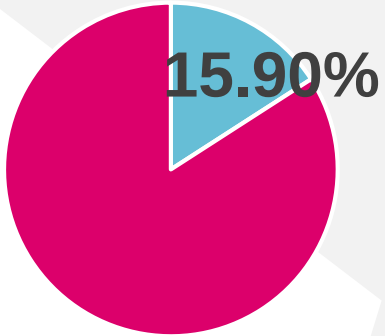
are on social networks



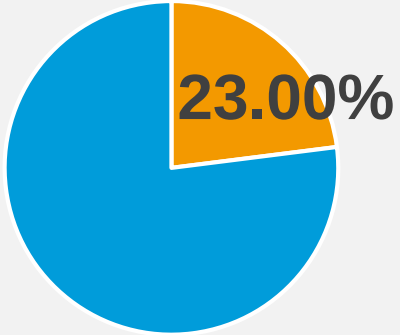
own a desktop or laptop computer



have high level digital skills



failed the digital test



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KEY DATA RELATED TO ICT: DEMAND SIDE

Evolution of ICT sector in Republic of Moldova						
Indicators	2011	2012	2013	2014	2015	% of growth
Turnover in mln MDL	1 287	1 287	1 601	2 115	2 596	**19,2%**
Number of employees	6 289	7 678	8 093	8 384	9 301	**10,3%**
Number of companies	483	572	618	703	779	**12,7%**

Development Strategy for the Information Technology and Digital Ecosystems Industry for 2018-2023, https://gov.md/sites/default/files/document/attachments/intr02_1_7.pdf

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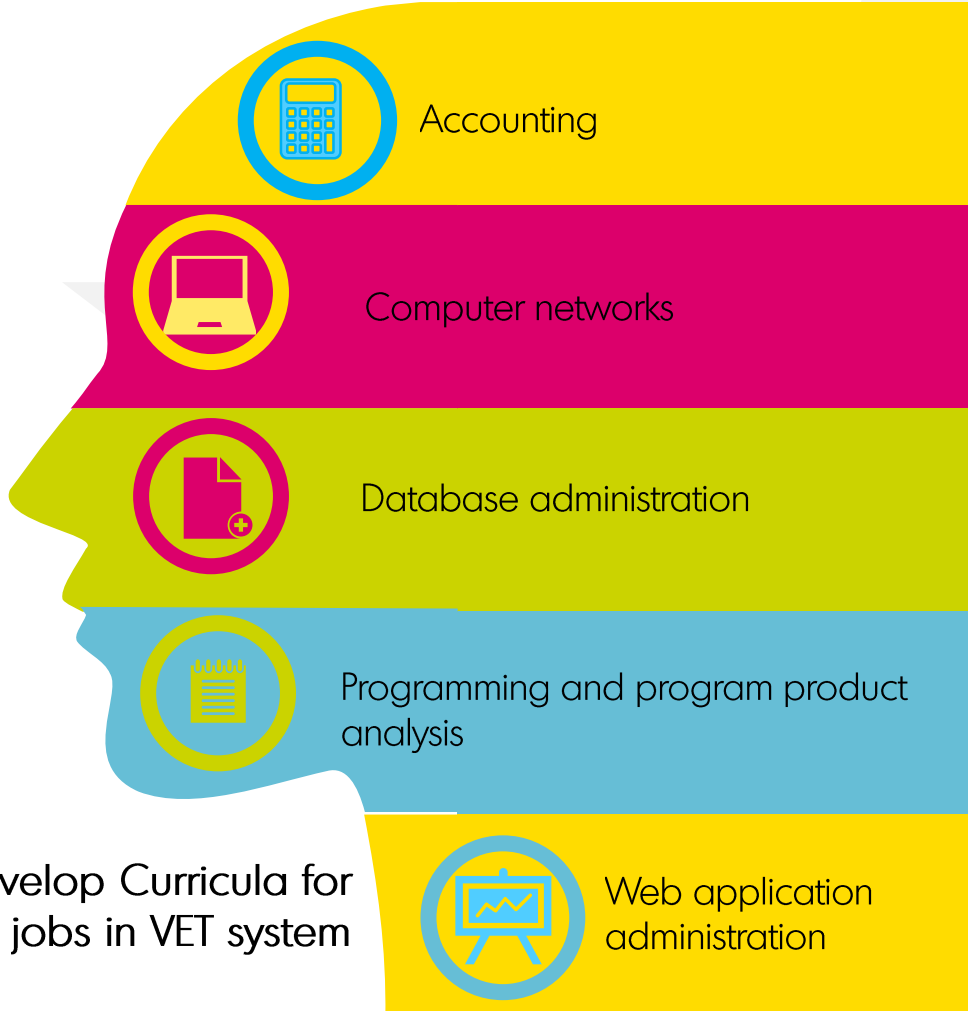
EU TECHNICAL ASSISTANCE PROJECT (2016-17)

Curricula

Development of occupational standards and modular curricula

Computers

Endowment of VET institutions with computers,



Project to develop Curricula for ICT jobs in VET system

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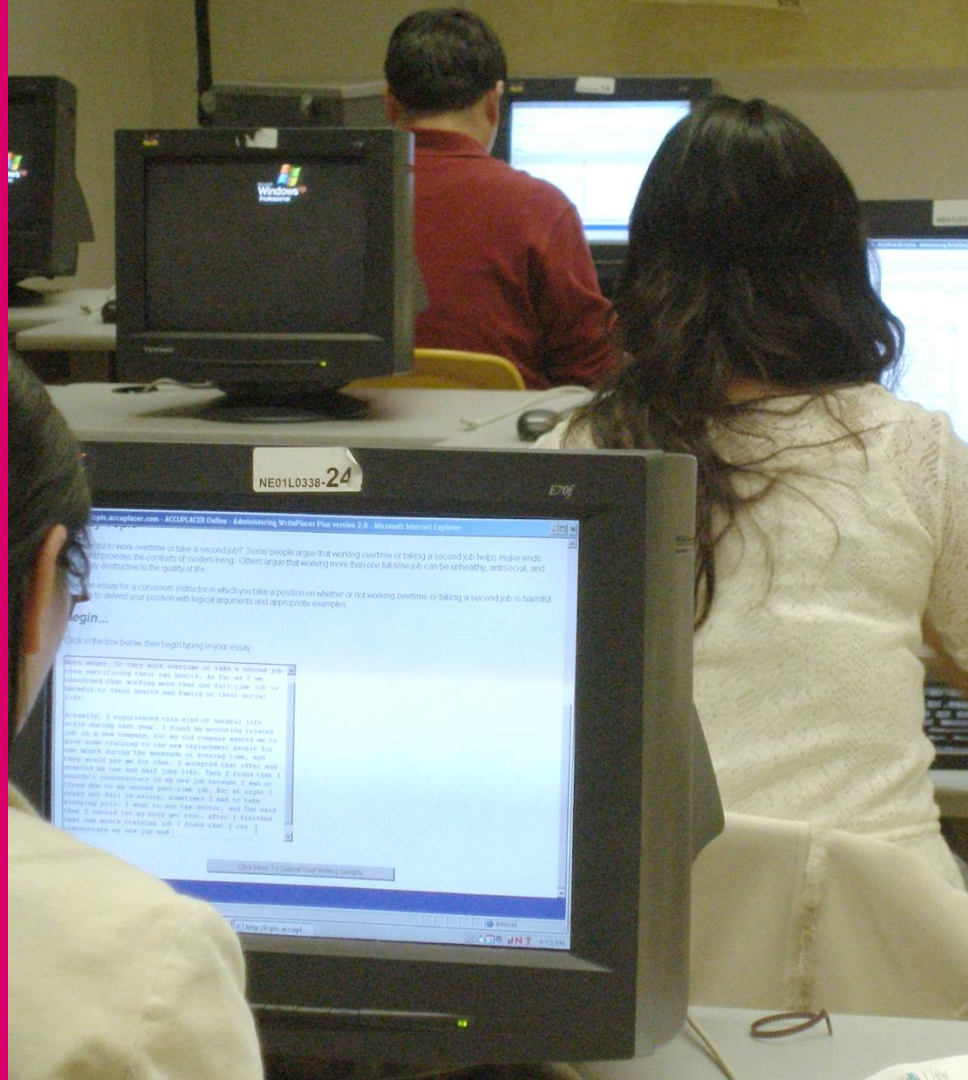
Digital Skills and Competence for Teachers

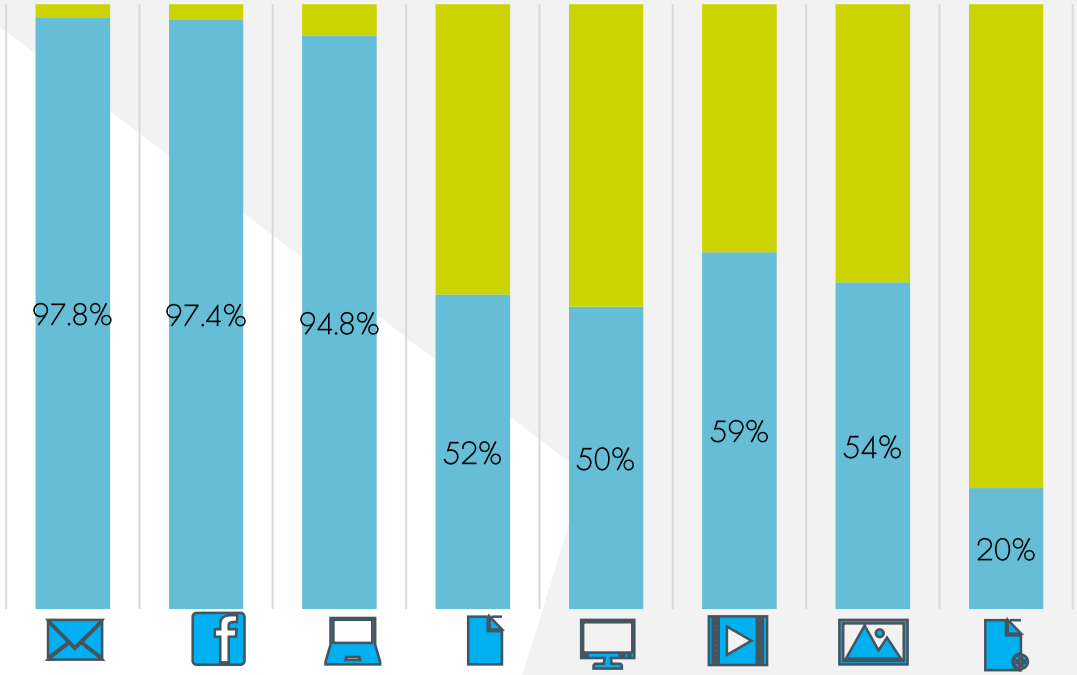


DIGITAL COMPETENCE OF VET TEACHERS

65% of VET teachers want more training in ICT

66% of VET teachers CPD in ICT has moderate or high impact on their teaching.

VET TEACHERS HAVE:



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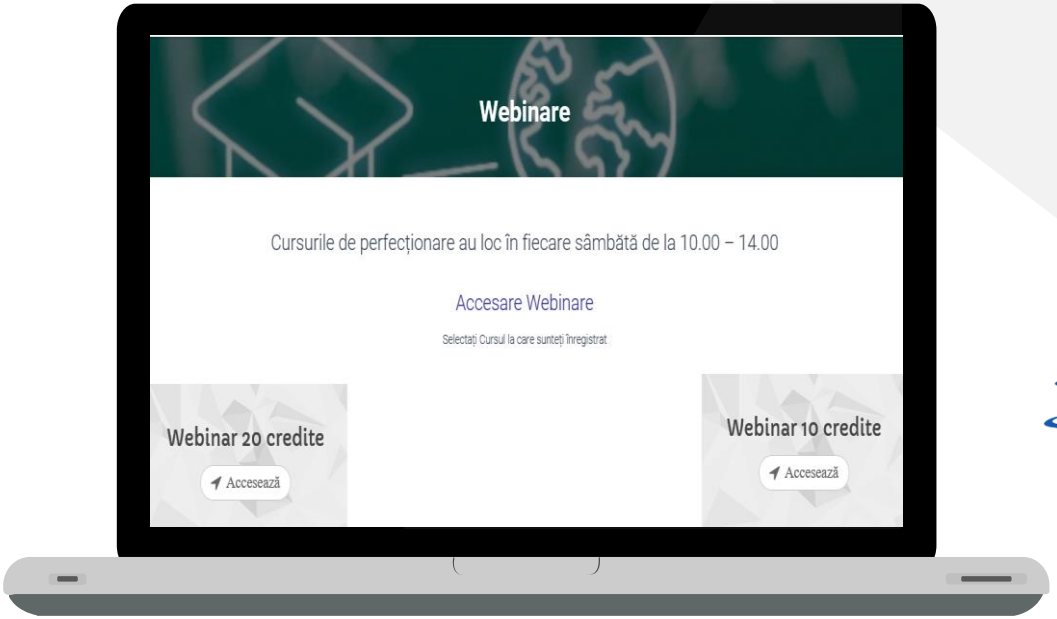
SHOW CASE: THE INSTITUTE FOR CONTINUOUS EDUCATION

Online courses based on webinars for teachers.



SHOW CASE: ICT VET CENTRE OF EXCELLENCE

Java

WEB 2.0

cisco Networking Academy

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Digital and Online Learning in initial VET

USE OF DIGITAL TECHNOLOGY IN I-VET

National Strategy Digital Moldova 2020: digital skills, access and digital content

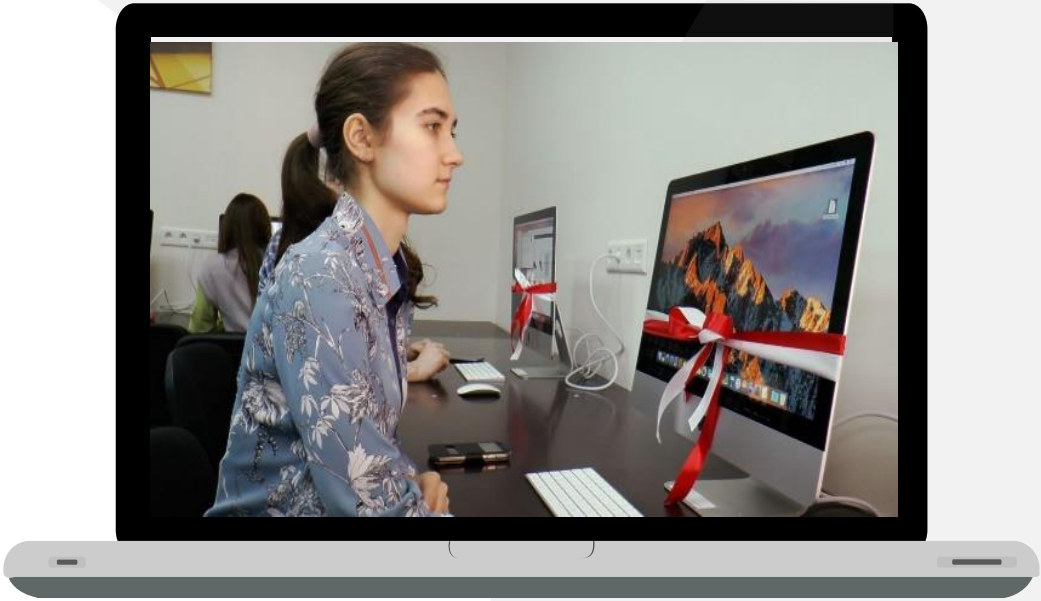
National Strategy for VET development 2013-2020

20%

educational software

100%
VET Institutions

IT courses



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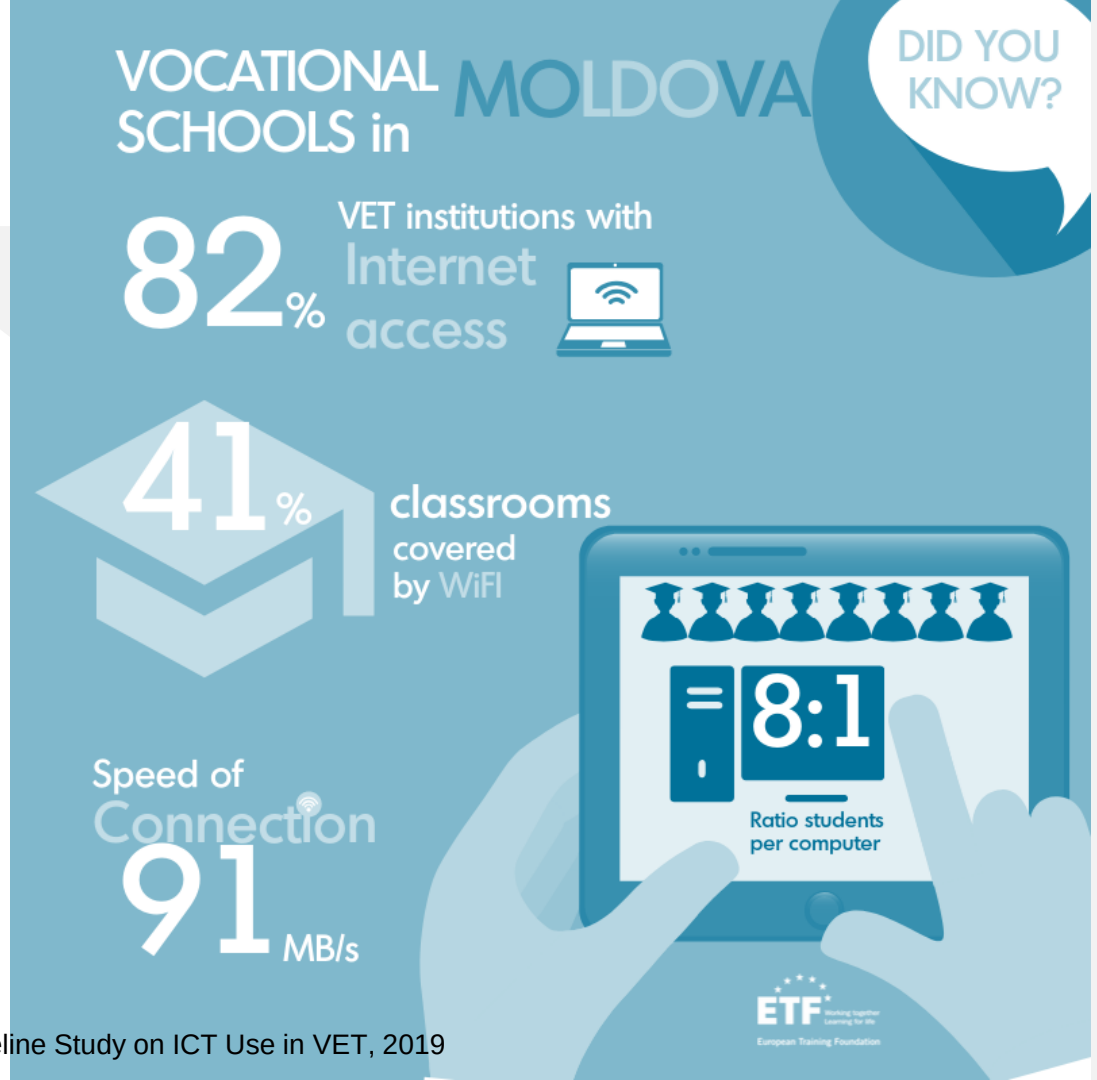
KEY DATA

Some VET institutions have and actively place information about school news

are also popular with VET students and teachers



ShiftEdu, Baseline Study on ICT Use in VET, 2019

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Digital and Online Learning in continuing VET

USE OF DIGITAL TECHNOLOGY IN C-VET

The WB mapping of continuous education providers shows:

- courses for IT Programming & Design are provided by **only 2%** of training providers,
- basic IT courses are provided **by 1%** of training providers,
- the majority of them being placed in the capital of the country.

Moldova International ICT ratings:

- 59°/175 countries for ICT Development Index
- 65°/193 countries for e-Government Readiness Index
- 46°/128 for Global Innovation Index
- 71°/139 countries for Networked Readiness Index

(2018)

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SHOW CASE: TEKWILL

SHOW CASE:

ACADEMY PLUS

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Conclusions: Opportunities and challenges

CONCLUSIONS

Main Opportunities

- Development of digital competences of teachers and students is a trend
- Successful pilots supported by donors with teachers and students, including VET
- Private sector initiatives

Key Challenges

- No specific coherent policies at all levels of education related to digital learning
- Non-sufficient qualified VET teachers to deliver ICT based teaching-learning
- No developed digital learning materials on e-platforms
- Low connection between VET system and ICT business
- Small pool of VET ICT jobs graduates
- Low use of ICT in non-ICT business

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RECOMMENDATIONS

1. Implementation of special mechanism for training VET teachers in development & use of digital learning material
2. Continuous development of the Depository for digital materials for VET teachers and students
3. The International Computer Driving Licence to become mandatory as part of VET.
4. Improve VET Curriculum & Pedagogy
5. Support the activity of VET ICT Centre of Excellence
6. Industry insights for VET teachers
7. Implement problem based learning approach in VET system with delivery of ICT products for real life situations
8. Involve VET students in the activities of Tekwill and other centers like that one.

Q&A

Ask your question to

Veronica Midari

Let your voice be heard..

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Our Experts

Georgia – Merab Labadze

Georgia

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Digital Skills and Competence for VET Learners

IS DIGITAL COMPETENCE PROMOTED?

- Importance of Digital Competences is acknowledged by policy makers
- Basic Digital Competences are being developed across all specializations in public VET through mandatory modules
- ICT professions in VET are popular due to perspective of employment
- ICT related qualifications have been grouped independently in the NQF
- Government is supporting deployment of the selected VET programs in public schools including popular ICT vocational courses

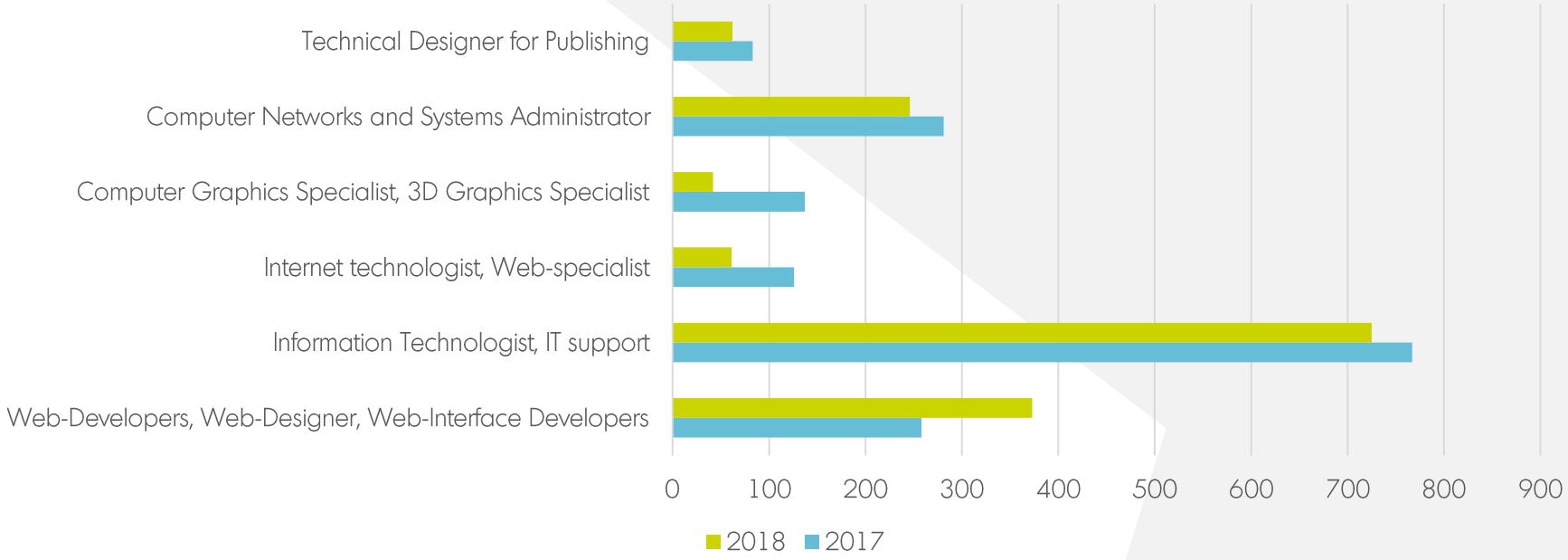
WHAT JOB-SPECIFIC DIGITAL SKILLS ARE PROVIDED?

Advanced job specific software packages are frequently used. Eg:

LMS systems fully deployed in some VET schools through donor-supported initiatives

- Fishing and Lab modules at Fazisi VET college
  - Moodle based customized LMS
  - Includes video explanatory lessons
  - Set of flash-based interactive simulations
  - Blended assessment system

IT SPECIALIZATIONS DATA: ADMISSIONS IN 2017 – 1652
2018 – 1509



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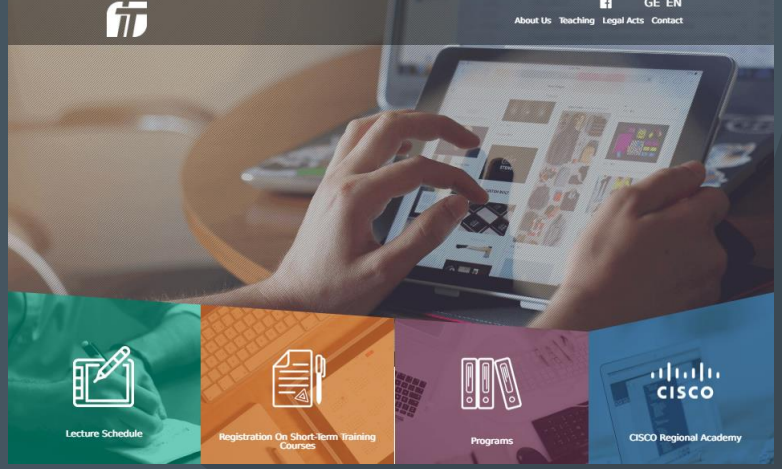
SHOW CASE
COMMUNITY COLLEGE ITVET

The leading provider of I-VET programs and short-term training courses in IT specializations - Information Technologies Academy ITVET - created in 2007.

100%
graduate
employment rate

Connections to
+50 companies



ITVET offers 6 programs on higher levels of Vocational Education:

Web Interface Developer

Desktop Publishing Technical Designer

Information Technology

Web Interface Designer

Network Administrator

3D Graphics Generalist

Computer Network and Systems

Web Technologies

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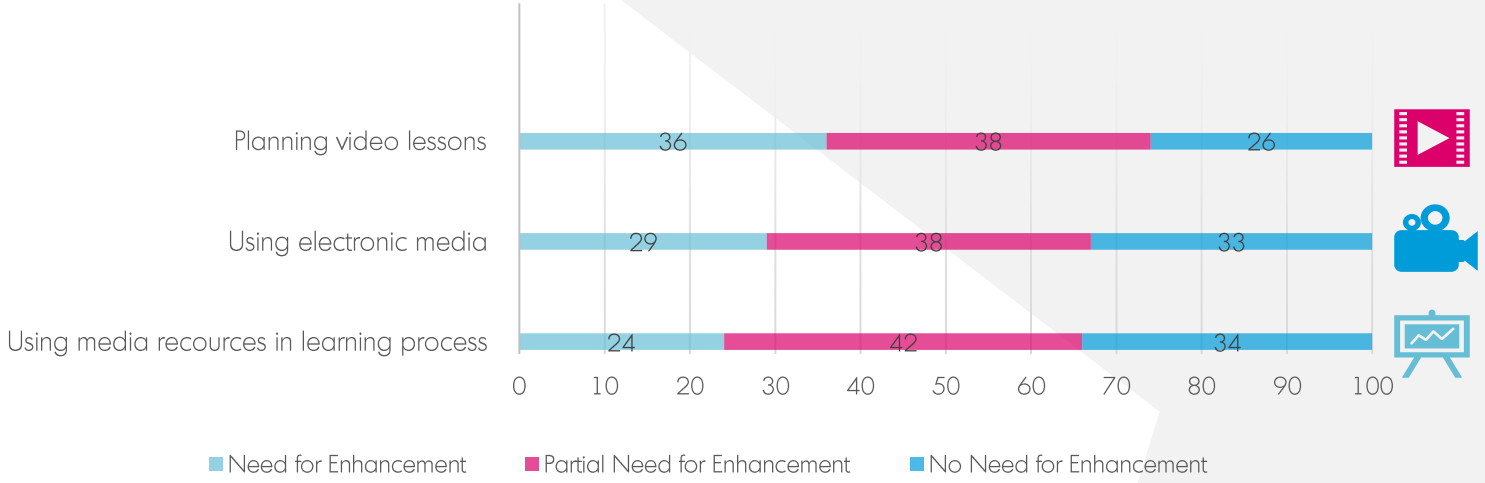
Digital Skills and Competence for VET Educators

CPD FOR DIGITAL SKILLS AND COMPETENCE OF EDUCATORS

Training Needs Analysis in Enhancing knowledge & skills in regard to Using Media Techniques in Teaching Process



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CPD USING DIGITAL AND ONLINE LEARNING

- Using DOL for CPD is not a mainstream policy and regular practice
- Pilots are usually related to donor initiated projects. Examples:
  - Flipped classroom pilot in 2 VET schools- Blacksea and Erkvani colleges
  - Distance learning elements in teacher training in usage of digital resources and LMS for several specializations
  - Introductory Video instructions for equipment of Fabrication Laboratories
  - TPDC online video guides and instructions – ict.tpdc.ge

Educational Technologies – Digital Resources Portal
National Center for Teacher Professional Development

YouTube
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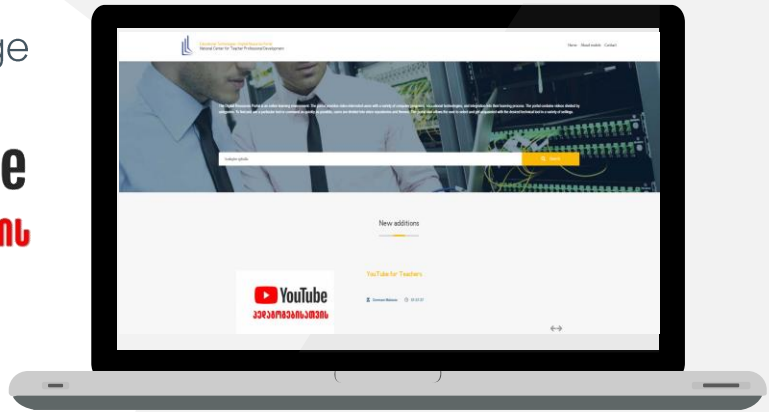

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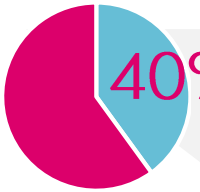
Digital and Online Learning in initial VET

USE OF DIGITAL TECHNOLOGY IN I-VET

Ratio Student/PC

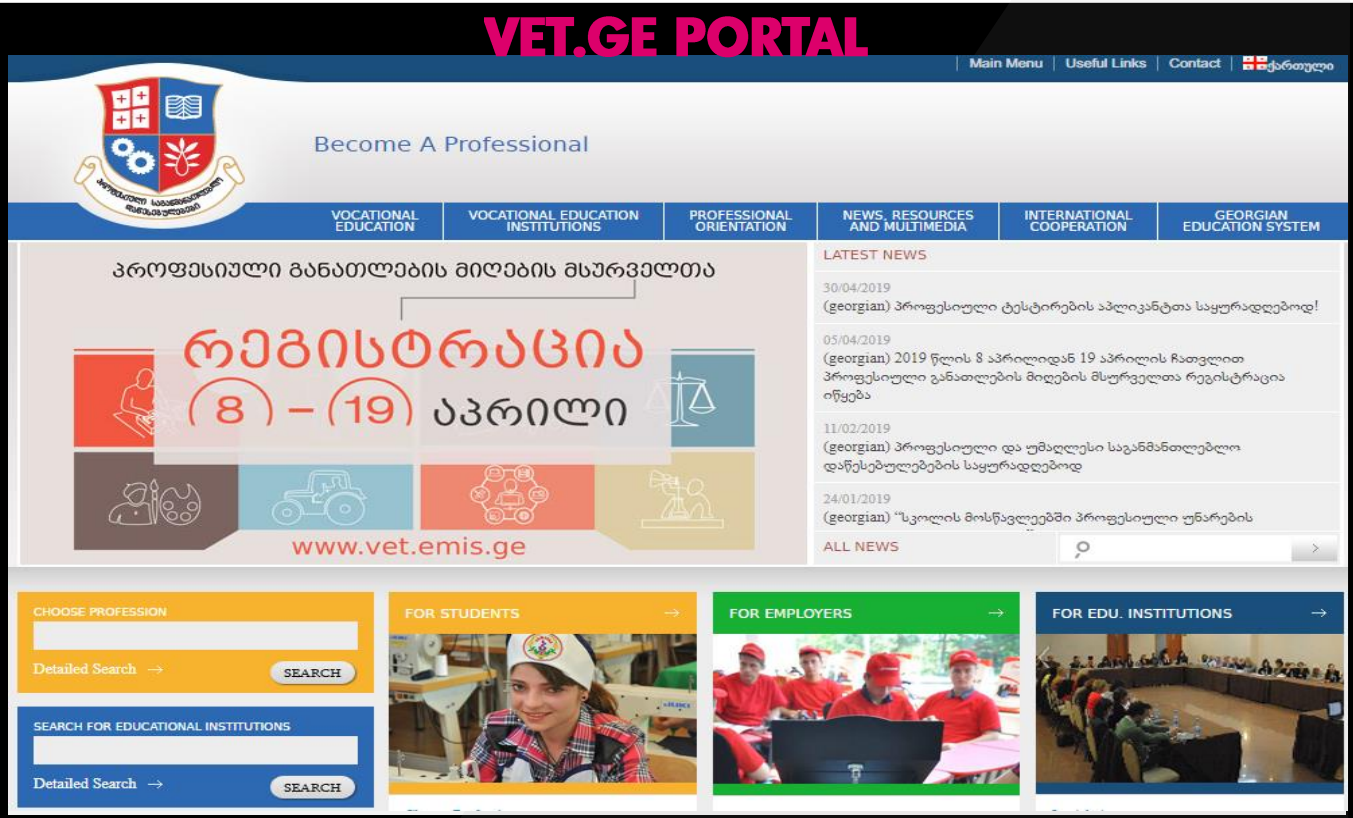


Broadband in VET institutions

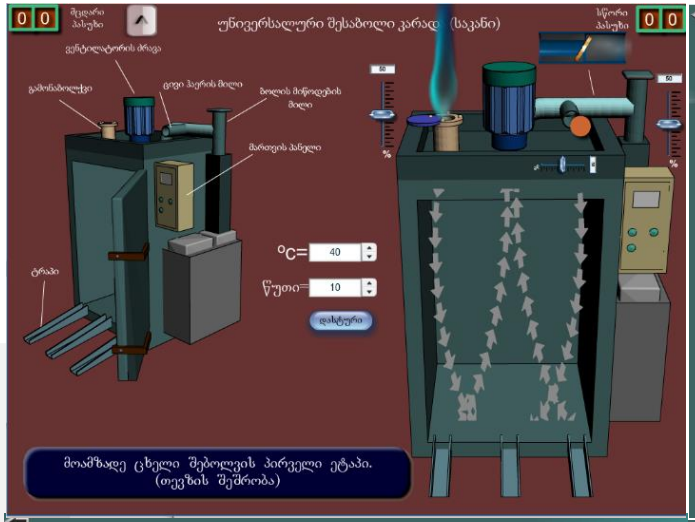
Own computer labs & internet

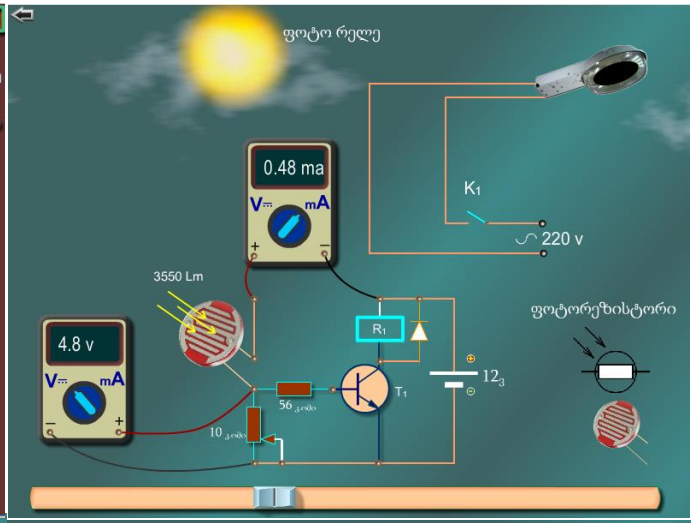
- Smartboards, simulators, occupation specific software packages integrated to the I-VET curriculum are also available.
- Textbook digitization is mostly limited to pdf versions of the printed books. Literature related to occupations, standards and EU guidelines have been translated and published online.
- Online/electronic resources are considered a useful complementary tool in delivering ICT related training programs
- FabLabs ICT managers network gains momentum in successful cooperation.

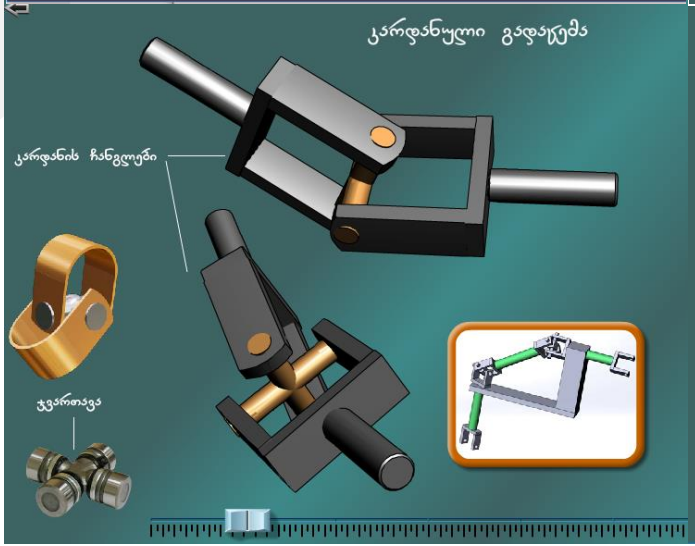
VET.GE PORTAL



VIRTUAL SIMULATIONS FOR VET COURSES







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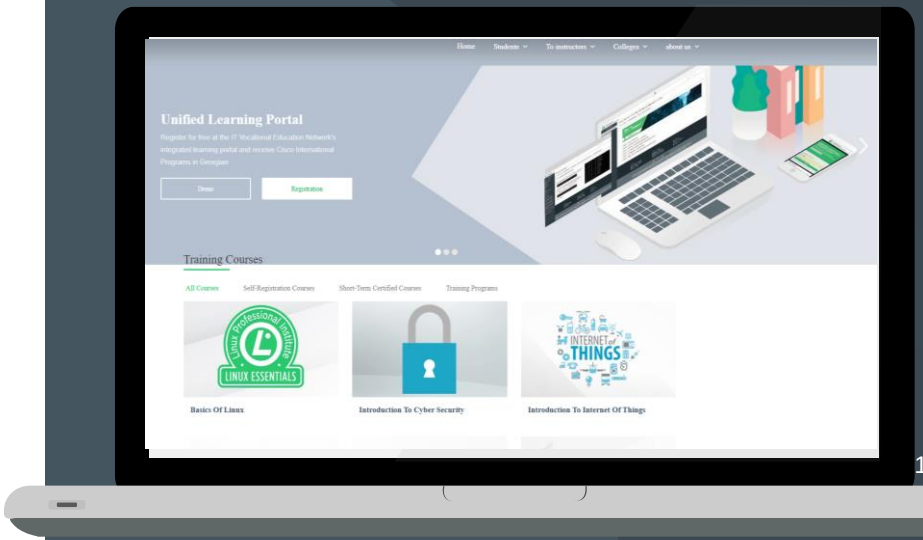
SHOW CASE:
TVET.GE PORTAL

The **main goals** of Millennium Challenge Corporation supported **tvet.ge portal** are:

- Development of a unified teaching model in TVET programs of Information Technology (IT);
- Foundation of IT Employers Council with participation of IT companies, employers and other stakeholders
- Establishment of Cisco Networking Academy in each of 9 partner colleges;

The tvet.ge portal provides access to all resources related to IT professional programs: guides, curricula, tests, indexed e-library, video lesson, distance learning tools, simulators and other innovative instruments



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Digital and Online Learning in continuing VET

USE OF DIGITAL TECHNOLOGY IN C-VET

- Since May 2019 private companies can implement short-term TVET programs and provide a State recognized certificate.
- IT companies, construction companies and tourism cluster have invested in launching their own adult learning programs or institutions. Foreign investments in agro vet.
- Social Media Marketing, Graphical Design, Web-Programming basics are popular offers of several leading training providers
- Use of job specific simulators in C-VET is growing in partnership with the industry
- Existing standards provide a general sufficient framework and guidance for DOL delivery in C-VET
- Government invests in adult digital competences with support of World Bank Genie project, and other smaller scale initiatives. Notable example - popular IT courses for former prisoners, convicts and their families
- No MOOCs. blended courses with elements of video-tutorials on the raise.

SHOW CASE: GEOLAB

GeoLab is a working space for young people interested in ICT technologies.

The training center provides regular training courses in:

- Web and Mobile Programming,
- Gaming,
- Coding,
- Digital Marketing,
- Graphics Design.

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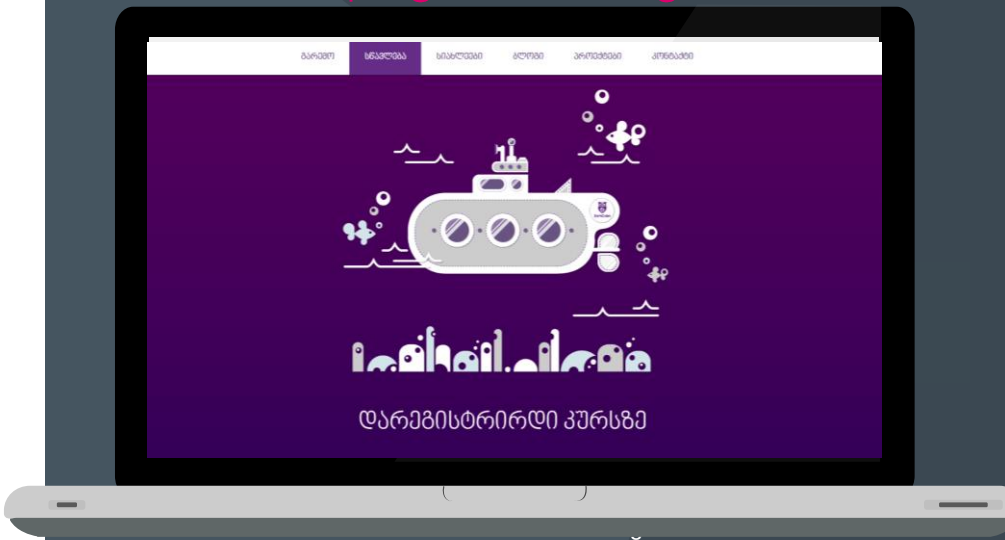
After GeoLab training I have created a web-page for Bank of Georgia funded Social Enterprise.

A young rural resident. Graduate of Geolab distance training course

http://geolab.edu.ge



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Conclusions and Recommendations

CONCLUSIONS

Main Opportunities

- Prioritization of education and committed planned growth of Education spending by the Government creates a favourable momentum
- Successful pilot cases could grow
- Decentralization of the initiative yields results
- Growing number of PPPs in TVET
- Better recognition of the informal education
- Private sector initiatives creates a trend

Key Challenges

- Not sufficient cooperation between different branches of education system in designing and delivering coherent policies related to DSC and DOL
- Sustainability to major and minor political cycles
- Generally non-sufficient qualifications of TVET teachers to implement digitally enriched teaching across curriculum
- Still relatively low profile of TVET system in the society
- Lack of apprenticeship culture

RECOMMENDATIONS

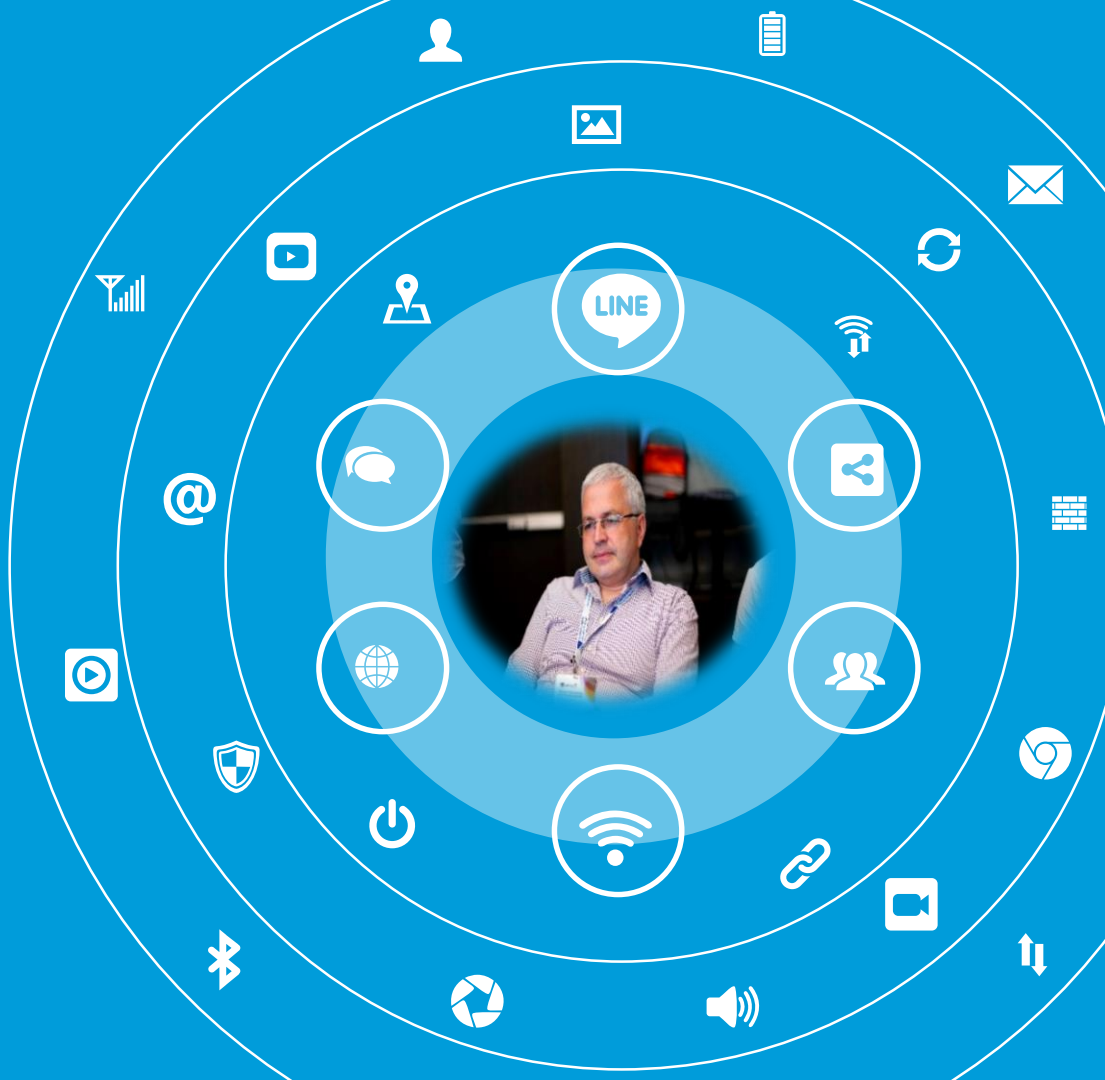
1. Improvement of Policy Making process by aligning to major DSC/DOL initiatives in General Education and beyond; considering complementary actions and policy measures.
2. Launching new cross-subject DSC courses for VET educators tuned to the modular curriculum
3. Investing in DOL content and programs systemic development and implementation in I-VET
4. Better showcasing of success stories and sharing them across the VET sector
5. Expanding PPPs and wider systemic acknowledgement of private certification
6. Further diversification of the DSC related VET programs offered in public schools
7. Supporting industry linkages and creating incentives for apprenticeship

Q&A

Questions to

Merab Labadze

Let your voice be heard..



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Our Experts

Natalia Morze

Ukraine

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DSC FOR VET LEARNERS

KEY POLICIES & STRATEGIES

- Modernisation of education system is a key national priority (2015)
- Draft law "On Vocational Education" (2019)
- Law on Education (2017)
- Conceptual principles "Modern Vocational Education" (2019)
- NQFs to modernise qualifications. (2018-....
- New standards to make qualifications meet labour market needs (2018-.....

Initiatives and practices

ETF is actively cooperating with the EU - EU4Skills

VET schools have licensed training for new ICT professions

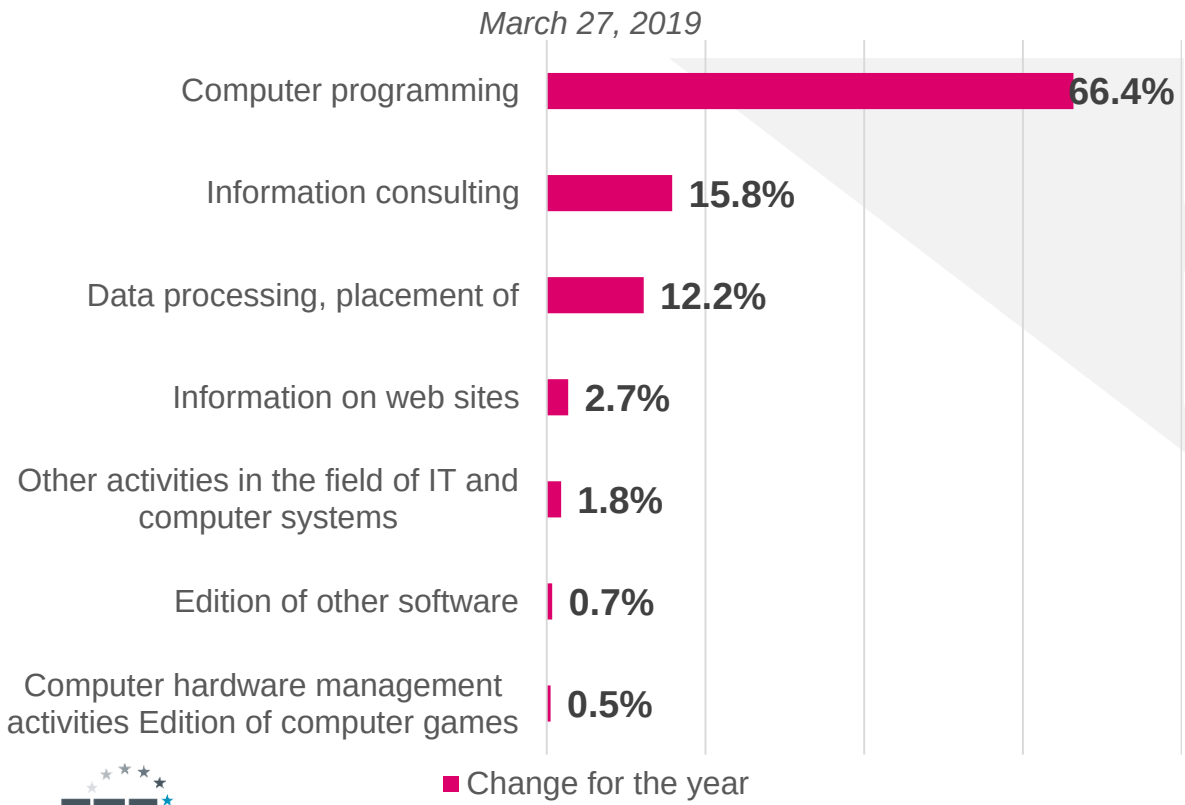
VET learners acquire digital skills through compulsory ICT lessons (144 hours)

I-VET intoduced new programmes as:

- "Information and software processing operator" (80 institutions),
- "Telecommunications operator" (5 institutions),
- "Office administrator" (5 establishments),
- "Administrator of radio and television programs" (1 institution).

No national monitoring system to measure students' progress in acquiring DSC

THE POPULARITY OF IT ACTIVITIES



The Ukrainian IT **industry** demonstrates a steady **growth** by an average of 19% annually with a growing demand for IT specialists and the supply side hindering the industry's development.

The number of people employed in IT sector in **2018** increased by **23%** and amounted to 154 thousand people against 125 thousand in 2017.

IT specialisations are mainly acquired in universities (**91%** of **IT specialists** in Ukraine are **higher education graduates**).

In 2016/17, there were **285 800 students** in vocational schools and less than **1%** was enrolled in telecommunication sector.

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Digital Skills and Competence for VET Educators

DEVELOPMENT OF VET TEACHERS AND TRAINERS

- 25 regional Institutes of In-service Teacher Training.
- Once in 5 years teachers have advanced face-to-face training. Their training programmme contains an obligatory module on the use of ICT in learning process of 36 hours.

The continuing professional development of VET teachers and trainers

Further training institutes in the regions

- Separate elective courses for the teacher training in VET.
- Participation in professional online networks and platforms.

- The Ministry of Education and Science adopted a Provision on distance learning in formal and non-formal settings.
- In 2018 the Cabinet of Ministers approved the "Concept of Pedagogical Education Development

To facilitate the usage of distance and online learning in CPD of VET teachers and trainers

"National Qualifications Framework" Law

- VET teachers and masters acquire digital skills and competences during their university studies by giving a subject exam or a credit.
- However, this is usually a basic digital course and it is not part of the final state exam to enter the teaching profession in a relevant field in VET.

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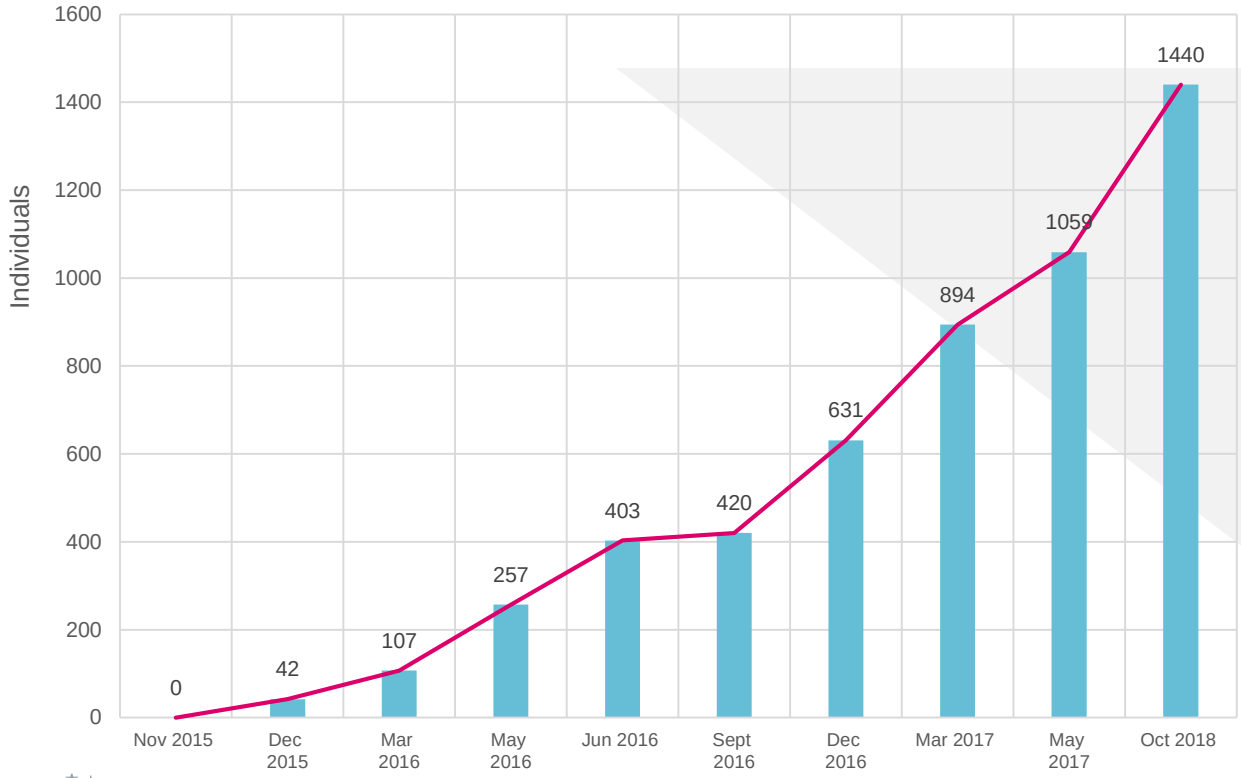
VET INSTITUTE BY NAPS



Since its creation in 2015, the number of users of LMS Moodle is steadily increasing. Vet.e-learning.org.ua

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FACTS AND TRENDS

- Cisco Networking Academy Programme has a goal to equip youth for a career in IT by providing professional and career development in IT field, comprising DSC for IT teachers.

- Draft teacher's DSC standard consists of 5 components

- **The Platform AIRO** is developed by the Academy of Innovative Development of Education - a scientific- pedagogical project initiative of the IMZO at the NAPS.

Google , Microsoft program (face-to-face and DOL)

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Digital and Online Learning in initial VET

USING DIGITAL AND ONLINE LEARNING IN EDUCATION AND TRAINING

- Regional VET Centres have created Digital material and on-line courses for VET students
- VET teachers over the past 10 years have created many different e-materials on CD-ROMs – electronic lessons.
- Most VET schools have created websites and Facebook profiles as the most convenient means of communicating with students and public.
- Ukrainian experiments at VET Institute by NAPS. Creation of the informational and educational environment at the vocational and technical educational institutions. Implementation of e-learning for Distance learning

Source: https://ivet.edu.ua/activity/eksperymentalna-robota

FACTS AND TRENDS

In 2014 the MoEU launched **a pilot on the usage of distance and online learning in VET schools** for students and adults living in the temporarily occupied territories.

100% VET Schools have internet

72,2% Schools have wi-fi.

*2017 survey on the use of digital and online learning, Ukraine

Internet Speed in Ukraine Schools

- 10 Mbps
- 10-30 Mbps
- 30-100 Mbps
- over 100 Mbps

Barriers to digital and online learning:

- lack of up-to-date equipment
- lack of licensed training software

Ukraine

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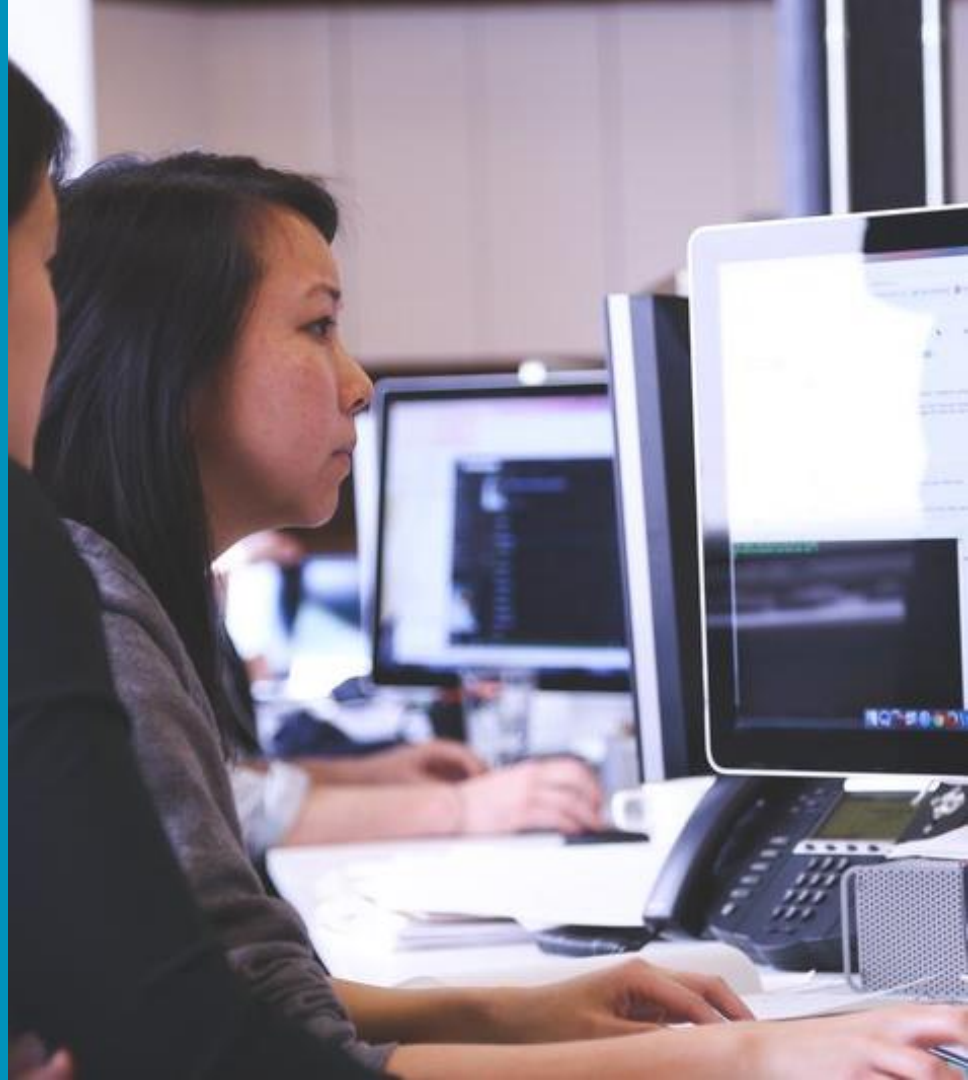
DOL IN C-VET AND ADULT LEARNING



KEY POLICIES, STRATEGIES

The Law of adult education system is being developed by the MoE and Ivan Zyazun Institute for Pedagogical Education and Adult Education in cooperation with other institutions

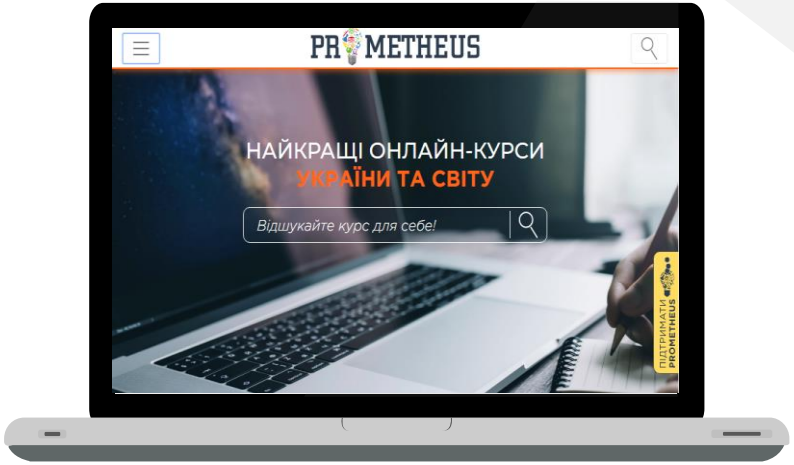
The Strategy for Vocational Education and Training advocates the introduction of different forms of continuing professional development

Non-formal education is developing rapidly, MOOC are created

At present digital skills remain under-developed in **continuing VET**

Licensed adult education providers offer training for occupations, programmes for key competences improvement, including digital skills &competences, as well as special professional training programmes, professional and personal development

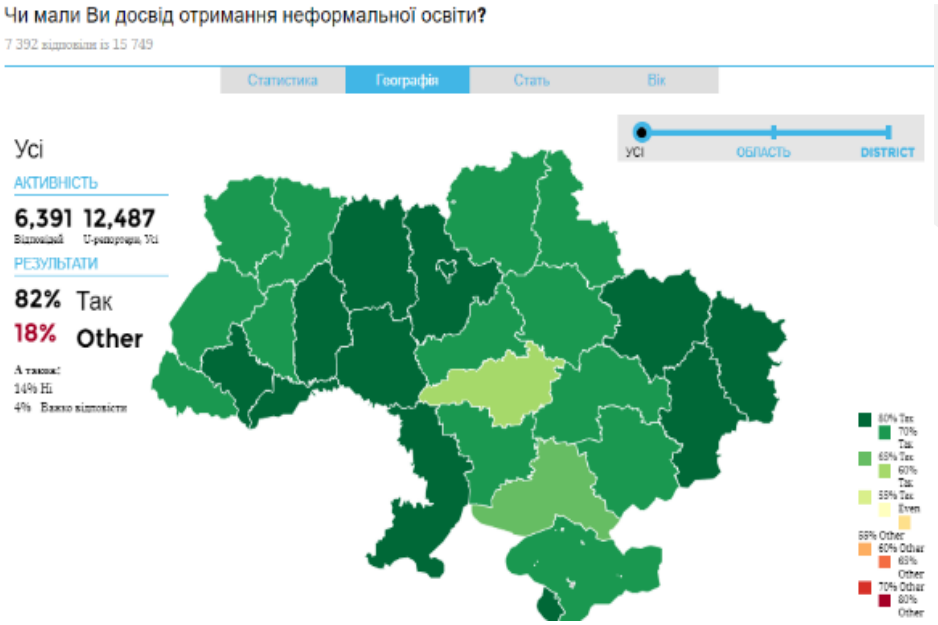
UKRAINIAN PUBLIC PROJECT OF MASS OPEN ONLINE COURSES



- Programming Basics of CS50
- Media literacy
- Basics of Web UI development
- Software Testing Basics
- Basics of Information Security
- Key competencies in Digital Age
- Programming Basics

Source: https://prometheus.org.ua/ https://ivet.edu.ua/news/novyny-z-eksperymentalnykh-navchalnykh-zakladiv/783-tekhnolohii-dystantsiinoho-profesiinoho-navchannia-elektronnyi-resurs

FACTS AND TRENDS



In Ukraine there are no data on the enrollment in various forms of adult education. To a certain extent statistics of upskilling and reskilling of workers can serve as an indicator.

Thus, the total number of people who have retrained and improved their qualifications was 292 thousand in 2008, which is significantly higher than in previous years (for example, in 2007 - 197 thousand).

In 2019 it is envisaged that 179 763 persons (specialists, scientific-pedagogical and working personnel) will undergo such trainings. The allocated state budget is about 34.6 billion UAH.

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Key Challenges

CONCLUSIONS

Main Opportunities

- Development digital competences of teachers and students is one of the priority areas for MoE
- Support Private sector initiatives to developing of basic Digital competences and Professional ICT competences is increasing and have a good results
- Regional initiatives supported by decentralization policies are delivering positive results
- The importance of informal education for students and teachers is increasing

Key Challenges

- Lack of public education policy in the field of DSC and DOL, which would include VET
- Insufficient cooperation in the field of DSC and DOL between various state ministries and departments (Ministry of Labor, Ministry of Education and Science, State Agency for e-Governance, Ministry of Health)
- Lack of relevant VET statistics and analytics
- Lack of requirements to education managers' DSC skills, lack of monitoring system of DSC and DOL for VET teachers and trainers
- Outdated regulatory framework for implementing DOL in VET
- Low DSC level of VET staff
- Lack of DOL implementation policy in C-VET

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RECOMMENDATIONS

- To develop a digital strategy in Ukraine education for 5 years, including VET
- Develop new standards for infrared equipment to train students in new professions
- Develop, discuss, and implement DCS for students and teachers for the use of ICT in new professions.
- Develop formal programs for the development DCS for VET students, such as DigComp, ESCO, ECDL
- Update the DOL provision for the system in the VET system
- Create concept of DOL for VET teachers and masters
- Provide special vocational software in VET
- Introduce tools to improve the digital readiness of I-VET schools, such as SELFIE
- Develop Strategy of Adult Learning and Lifelong Learning.

Q&A

Questions to

Natalia Morze

Let your voice be heard..

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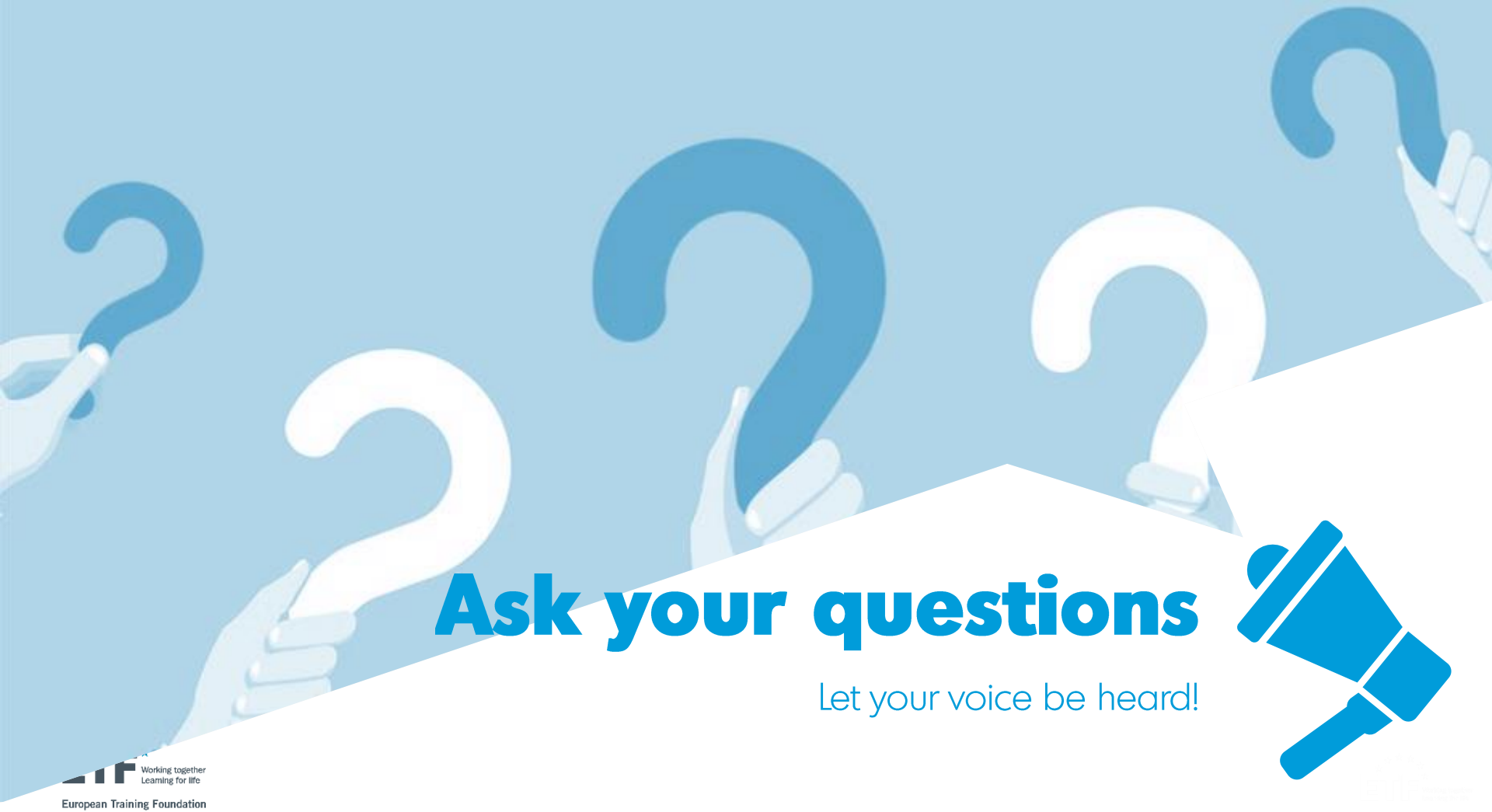

Ask your questions

Let your voice be heard!

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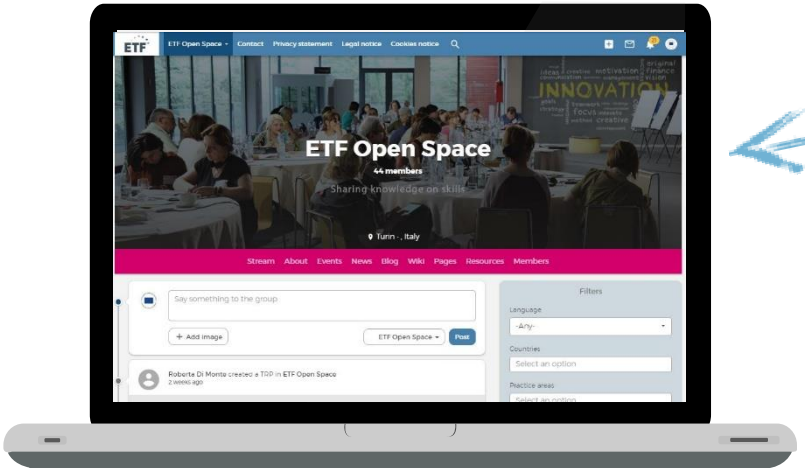
Take our quick survey and let us know.

survey gizmo

https://bit.ly/31Irhf0



Stay tuned with ETF!

Join our plaftorm for further discussion on Digital Skills and Competence and Digital online Learning

www.openspace.etf.europa.eu

What's next?

SAVE THE DATE: Next Webinar

End of November 2019

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Wrap-up

1

DSC of VET Learners

- Digital literacy and job-specific digital skills are delivered not assessed
- References: ECDL (extra-curricula) and EU tools and frameworks (e.g. DigComp)

2

DSC of VET of Teachers and Trainers

- DSC requirements (defined) yet not adopted)
- CPD: DSC offer (for DOL) is limited, CPD still face-to-face

3

I-VET Digital (and online) Learning

- Limited use in classroom, traditional practices
- More in workshops, e.g. simulations tools for VET subjects

4

C-VET Digital (and online) Learning

- DOL is still a new formula
- Offer for DSC for adults is limited, NGOs and ICT companies on the lead

DSC-DOL policy

promotion, **no adoption***

not specifically on VET (covered?)

Digital Competence together with other 'Key Competences'

A few qualifications for ICT

*Policy adoption

CV Reform | Teachers Training | Assessment standards

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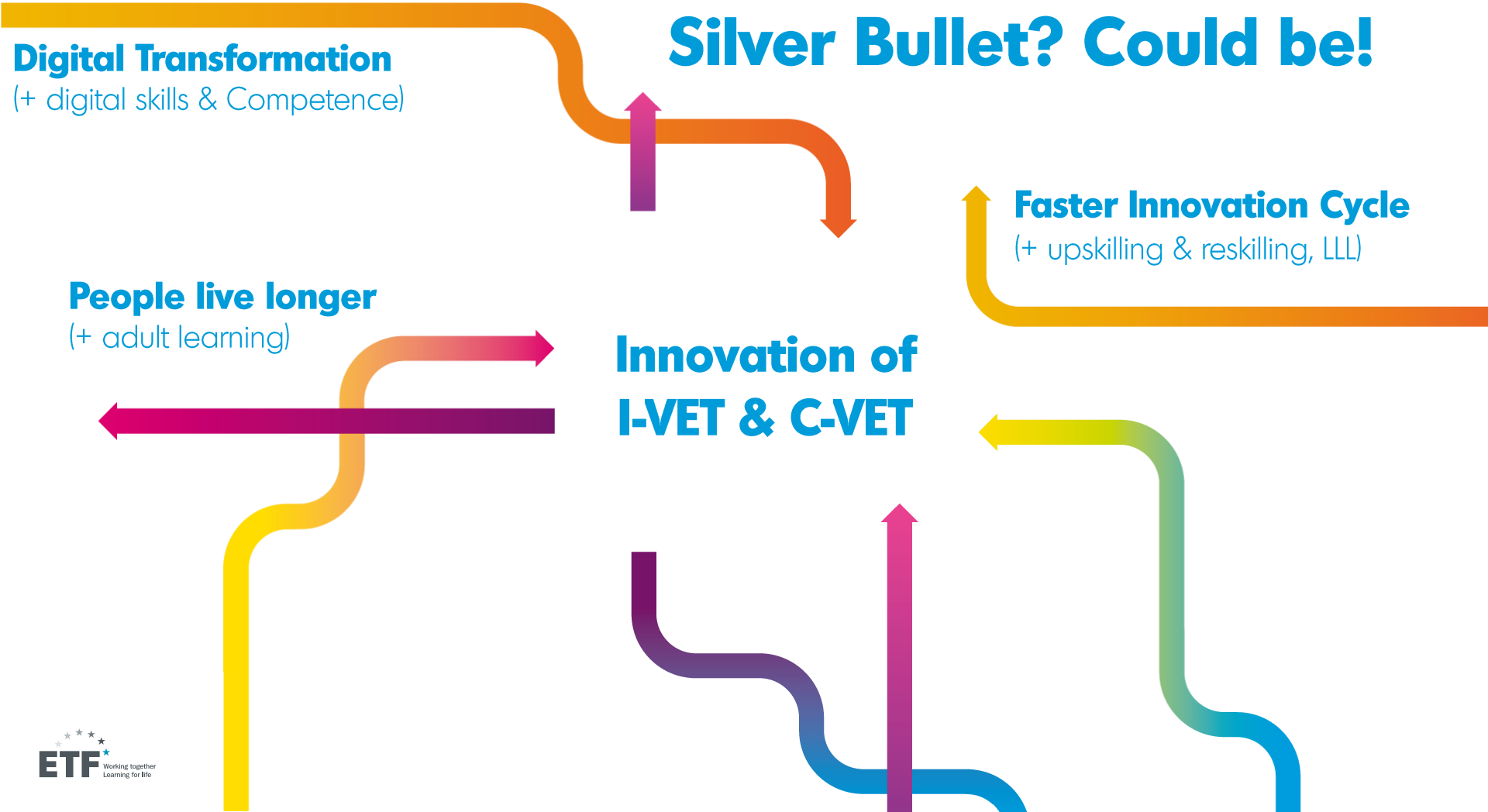
Silver Bullet? Could be!

Digital Transformation
(+ digital skills & Competence)

Faster Innovation Cycle
(+ upskilling & reskilling, LLL)

People live longer
(+ adult learning)

Innovation of I-VET & C-VET



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Thank you!

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