



## Digital inclusion

### Problem statement

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#### Addressed problem: integrate and bolster digital tools in VET system

Technology has not been yet effectively integrated into teaching practice across Europe. The use and effectiveness of digital tools varies widely across member states and across different school environments. The stark digital divide and education inequity have worsened with Covid-19 measures, as most learning practices shifted to distant methods and online tools were swiftly adopted. In a context where digital devices and internet access increase, it is becoming more and more obvious that digital exclusion may lead to professional and social exclusion.

Digital education strategies have typically been designed with all learners in mind, without sufficient attention to the specific barriers faced by marginalised learners or groups. On the other hand, inclusive education measures have not always included a clear 'digital' dimension. For this reason, it is necessary to link the aspect of digitalisation with that of inclusion in order to support vulnerable VET learners (e.g. migrants, refugees, with low socioeconomic background, with special educational needs) by enhancing their access to and use of digital means.

### Beneficiaries

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- ↳ Learners at risk of early leaving from education and training
- ↳ Learners who lack employability skills
- ↳ Learners with behaviour issues and/or frequently absent
- ↳ Learners with low self-confidence and self-esteem
- ↳ Low-motivated learners
- ↳ VET students (school based)
- ↳ Migrants / refugees

### Addressing the problem

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#### Tips: How can the introduction and development of digital tools contribute to inclusion?

The variety of digital tools opens to a wide range of possibilities and innovations in VET educational programmes. For instance, digital games, online repositories, digital learning management system and mobile applications can enhance the learning process while strengthening teachers' and learners' digital skills. Other tools such as VAR (Virtual Augmented Reality), AI (Artificial Intelligence) or AT (Assistive Technologies) have proven to be useful to specifically support SEN-learners with

reading, physical disabilities or attention disorders.

However, technology also comes with clear risks and limits:

- learners who do not have access/connectivity are excluded;
- equipping classrooms, teachers and learners with digital tools entails a considerable cost;
- equipping teachers and learners with sufficient digital skills and competences can be costly and time-taking;
- student agency and creativity can be restricted (e.g. AI bases its choices only on past events);
- the overuse of ICT can lead to a rise of mental health disorders (depression and anxiety among students have increased in relation to distant learning during Covid-19);
- vulnerable learners can become even more vulnerable online without tailored support to navigate safely;
- learners with special educational needs may have different learning paces while using ICT tools and are at greater risk to face difficulties during the learning process.

Drawing from the [EU Commission's research on how digital technology can promote inclusion](#), it emerges that the application of digital tools is more important than the digital tools themselves, and that ICT should facilitate and complement rather than replace other teaching methods and classroom practices. To be sustainable and lead to positive outcomes, the use of digital tools should be remedial and targeted.

Moreover, certain conditions need to be met for practitioners to use technology and to facilitate inclusive practices: schools need to be equipped with adequate infrastructure, training on digital skills should be made available for teachers and learners must be educated on how to use digital tools in a safe and proactive way.

In this regard, the EU political commitment in bringing forward the digital inclusion agenda in education is shown by the [Digital Education Action Plan 2021-2027](#), which has the twofold aim of developing a high-performing digital education ecosystem and of enhancing learners' digital skills and competences for the digital transformation.

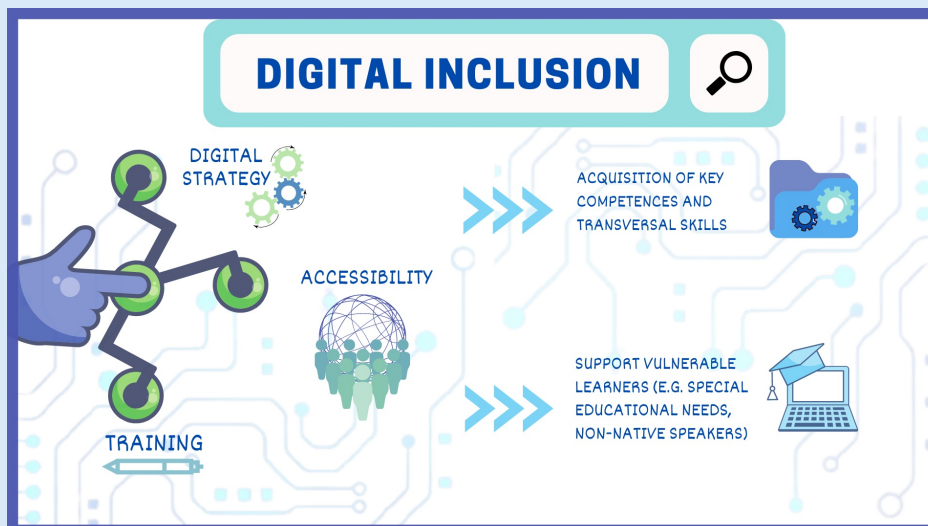
The following tips are given as advice to policy makers and practitioners involved in the design and delivery of such measures.

## **Tip 1: Raise awareness on the potential of digital tools for inclusion**

Digital technologies enable learning and teaching practices to make a step forward in facing the needs of marginalised learners. It is therefore important to provide knowledge of the digital tools available for schools (i.e. tablets, interactive whiteboards, online courses, etc.) and raise awareness on their potential. Personalised learning methods adopting technology can be beneficial for learners, enrich their experience and provide alternative pathways for different groups:

- For learners with long term illnesses who frequently experience extended school absenteeism, digital tools can support learning continuity by ensuring their connection to what is happening in the classroom and by supporting their socio-emotional wellbeing.

- For learners with developmental and attention difficulties, digital interventions hold the potential to increase their overall focus and production, control learning process and experience ownership, independence and self-mastery in performing specific learning tasks.
- For early leavers who are struggling with traditional pedagogies, digital tools have the potential to present new ways of learning which can be more engaging and motivating. For instance, by making learning more practically oriented through visual or immersive tools and approaches (e.g. Augmented Reality, Virtual Reality, Gamification).



Source: Cedefop

## 💡 Tip 2: Prioritise overcoming language barriers to access digital tools and content

Digital resources and tools can offer key benefits for migrant and ethnic minority learners for at least two aspects:

- Translation and multilingual learning tools can bridge the language barrier while also drawing on students' home languages as a rich resource for continued learning.
- Digital tools can function as cultural mediator as they play a key role in promoting cultural and ethnic open-mindedness.

It is therefore necessary to identify, scale-up and disseminate successful approaches concerning how multilingual tools, such as digital bookshelves, can help to support the development of language skills both in the mother tongue and in the language of instruction for VET and compulsory school-level migrant learners. For instance, given the big wave of migrants from Ukraine to different European countries since February 2022, online educational resources, as well as pedagogical material could be provided in Ukrainian language to support student refugees to continue their learning process.

### **Tip 3: Provide training and guidance to teachers to develop their digital skills**

Ongoing and specific training is fundamental to provide VET practitioners with necessary digital competences and skills to feel confident in including technology in the teaching practice and profiting from it. For this aim, the creation and use of networks for teachers to share good practices, methods and skills is effective.

Another important aspect is to ensure the availability of staff with technical competences at school-level to strategically support teachers in bridging technical and pedagogical uses of different tools and platforms.

Finally, guidance should be offered to teachers and VET providers on the use of EU frameworks ([DigComp](#), [DigCompEdu](#), [DigCompOrg](#)), and self-reflection tools ([SELFIE](#), [SELFIE for work-based learning](#), [SELFIEforTEACHERS](#), and [TET-SAT](#)) designed to establish common definitions and standards for digital competences.

### **Tip 4: Develop a monitoring and evaluation system concerning the use of digital tools**

Provide guidelines and tools to develop monitoring and evaluation mechanisms considering the use of technology in VET learning programmes. This includes regular feedback collection from learners, parents and teachers at local and national level. Reports should be made to observe the ongoing results and impacts that technology has throughout the education process.

### **Tip 5: Change of attitude and supportive environment**

A strong and effective school leadership with a clear digital strategy should set the guidelines for integrating technology in classrooms. It is important to establish a supportive school climate and consolidate VET providers' positive attitude towards the role of digital technologies within teaching and learning. For instance, there is evidence that for some teachers who were sceptical towards the use of ICT, reliance on digital platforms helped them to demystify technology and made them less risk averse, while giving them more realistic sense of their competences. Especially in distance learning environments, parents themselves should provide an effective support in encouraging their children to develop digital competences. Collaboration among teachers and parents should aim at building motivation for the use of digital tools.

## **Tip 6: Provide mental health support and psychological assistance in the context of remote learning and teaching**

If it is not used properly, or is used in an excess due to extended school closures (e.g. due to Covid-19), an intensive use of ICT could be harmful as it brings the risk of disconnection from reality and social relations, in some cases leading to detachment, mental health disorders, depression and feelings of anxiety. Especially for learners who are already at risk of early leaving, an attentive psychological support, on an individual and group basis, is often recommended to prevent learners, but in many cases also teachers, from being distressed.

## **Tip 7: Develop blended learning approaches**

Research findings suggest that “moderate” levels of integration of digital tools is more effective than learning taking place solely in presence or solely online . This facilitates flexible, mobile and self-paced learning, in balance with the in-person element of classroom-based learning to maintain social connection, engagement and well-being. Blended learning in VET happens when a school, educator or learner adopts a hybrid approach to the learning process, blending digital and non-digital tools and combining school site and distance learning environments . Digital means and resources can be used to supplement or revise the face-to-face learning. Blended learning aims at fostering classroom interaction while maximising the benefits of technology and digital resources and differentiating instruction methods according to students’ needs.

## **Tip 8: Foster intersectoral partnerships**

Cross-sectoral and intersectoral partnership between tech companies, NGOs, philanthropist educational publishers and schools can offer diverse types of support which varies from providing ICT equipment to Wi-Fi access for schools. From a digital inclusion perspective, it is important to facilitate access to EdTech tools and receive appropriate guidance on how to use them.

## **Tip 9: Ethical considerations**

Especially during the pandemic crisis, public-private partnerships have become a common phenomenon in educational contexts. This raised reservations and ethical concerns on the perceived increasing privatisation of public education system. It is necessary to draw clear lines when establishing these partnerships, considering private interest within the education landscape as well as data rights, privacy issues and school's responsibilities. Overall, VET providers need to ensure that governance, ethics and data of the learners are rightly handled, and that technological solutions are well adapted and tailored to meet needs in educational settings. To this extent, VET practitioners should also be involved in the development and piloting of inclusive digital tools.




## Expected outcomes

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Education technologies can enhance the learning experience while enabling the acquisition of key competences and transversal skills (i.e. digital literacy, communication, technical skills) which will result useful in professional contexts. The integration of digital tools in education and training processes can bridge the digital gap and remove learning barriers for specific vulnerable groups (i.e. migrant learners, learners affected by serious illness, learners with attention difficulties) who are traditionally at risk of educational underachievement and exclusion, by increasing their opportunities of collaboration and engagement with the learning environment.

The positive outcomes can be expected at different levels:



 <b>INDIVIDUAL</b>	 <b>INSTITUTIONAL</b>	 <b>SYSTEM</b>
<ul style="list-style-type: none"> <li>• Positive attitude to learning, education and training</li> <li>• Improved learning outcomes</li> <li>• Improved well-being</li> <li>• Improved digital skills</li> <li>• Improved capacity to deal with one's learning difficulties</li> <li>• Improved 'work readiness'</li> <li>• Improving self-awareness - understanding of own abilities</li> </ul>	<ul style="list-style-type: none"> <li>• Common digital framework</li> <li>• Provision better meets needs of learners, in particular at-risk groups</li> <li>• Increased focus on creating welcoming and inclusive learning environments that encourage learner engagement and motivation</li> <li>• Increased information sharing and collaboration between VET teachers and trainers to ensure effective coordination of measures and interventions</li> <li>• Ensuring specific interventions are identified and tailored to the needs of the individual learner</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced digital and learning gap</li> <li>• Improved inclusion of learners from minority and high-risk groups</li> <li>• Reduced risk of early leaving</li> </ul>

## Related protective factors

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 <p><b>Education achievement and attendance</b></p>	 <p><b>Health and well-being</b></p>
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**Inclusive environment**



**Positive self-perception linked to learning ability**



**Work readiness**

## Related resources

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### Good practices

 Good practice

#### Training for Success (TfS)

In Northern Ireland, the 'Training for Success' initiative offers training to help young people develop personal and social skills, employability skills, essential skills in Communications, Application of Number and Information Communication Technology whilst working towards nationally recognised qualifications.

 United Kingdom

### Tools



 Tools

## Digital video platform "Film your job"

"Film your job" aims to promote apprenticeships by introducing young people to apprenticeship and trades through short videos shared on a dedicated platform as well as on social media.

 France

 Tools

## PlugInnovation

In Sweden, a website has been developed which offers a central digital knowledge platform for people working in the area of early leaving. It offers information, guidelines, methods, checklists, questionnaires, and case studies in relation to success factors for retention, one of which is 'flexibility'.

 Sweden








## Publications

 Publications

## Digital gap during COVID-19 for VET learners at risk in Europe

*Synthesis report based on preliminary information on seven countries provided by Cedefop's Network of Ambassadors tackling early leaving from VET*

**Cedefop's ambassadors for tackling early leaving from education and training [call for further support](#) to address the needs of learners at risk and ensure their equal access to quality distance learning.**

 EU level  
 Germany  Greece  
 Portugal  Romania  
 Spain  Turkey  United Kingdom

 Publications

## Enhancing learning through digital tools and practices - How digital technology in compulsory education can help promote inclusion

*Final report: October 2021*

**Ecorys is pleased to submit this final report for the study: Enhancing learning through digital tools and practices: how digital technology in compulsory education can help promote inclusion (EAC/08/02/2020).**

 EU level

 Publications

## Enhancing learning through digital tools and practices - How

## digital technology in compulsory education can help promote inclusion

*Executive summary*

**The overall aim of the study was to assess the actual and potential role of digital technologies in promoting access, quality and equity in compulsory school education across the EU27, and in complementing and enhancing traditional forms of teaching and learning.**

 EU  
level

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Source URL: <https://www.cedefop.europa.eu/en/en/tools/vet-toolkit-tackling-early-leaving/intervention-approaches/digital-inclusion>