As the European Union is defining policies for the future, and in particular the Multiannual Financial Framework for years 2021-2027, the Council of European Professional Informatics Societies (CEPIS) welcomes the current budget proposal focusing on the European digital economy.

In our day to day work as digital empowerment ambassadors we meet thousands of teachers, university professors, trainers and managers of various educational institutions or companies involved in skilling, upskilling and reskilling millions of people throughout Europe. They are the real actors of a good education, and we believe that their role is often underestimated.

In such a huge educational effort, policies regarding digital skills still leave some challenges open.

Key Challenges in Developing Digital Skills

1. Different models of digital skills exist: although a significant work has been done over the last two decades to define ICT user skills and digital competence, the continuous technology innovation requires a permanent process to revise learning contents, materials, and even methods. Top-level policies can hardly cope with such a rapid pace of change, and as a matter of fact the definition of Digital Competence included in the Recommendation of the European Parliament and of the Council on key competences for lifelong learning (2006) was updated in 2018, 12 years later. As a consequence, such definitions and frameworks are necessarily generic, focusing more and more on abstract concepts and on personal attitudes, rather than describing real technology skills.
2. Abstract policy definitions create a gap between theory and practice, thus paving the way for new “trendy” initiatives led by parties representing vested interests, in many cases coming from non-European companies\(^1\). This happens both at EU level and at country level, where national strategies for digital skills may be affected by industrial lobbies and political compromises. Digital education is not just short-view training, but enables a longer-term career perspective; it needs to encompass European values in the information society, as they are unfolding and getting determined in new legislation; for instance, the General Data Protection Regulation elicited and defined values related to information processing, such as Privacy-by-Design.

3. Another gap divides perception and reality: research\(^2\) demonstrated that self-assessment is a poor measure of digital skills. Thus, any self-assessment tool, such as the Europass CV digital competence grid, should always be complemented by a diploma or a certificate as evidence of the claimed competence level. Certification defines skills and knowledge that individuals need, validates training quality, and motivates participants to successfully complete the training. These findings should be considered when developing digital skills policies at international, national and local level.

4. A lack of focus on actual demand of digital skills for employability (and on benefits that employees and employers get from certification) cause inefficiency of the public funding process and disposal of resources on too many various initiatives. The development of many fantasy programmes (most of them “reinventing the wheel”), reduces the effectiveness of public funds for digital skills and subtracts resources for a wider roll-out of projects based on proven methodologies\(^3\).

\(^1\) For instance, the buzzword of “coding” is promoted by a precise group of companies: “Code.org thanks its supporters: Facebook, Microsoft, Infosys Foundation USA, Amazon, Bill and Melinda Gates Foundation, Ballmer Family Giving, Ali and Hadi Partovi, Google” and many others, as resulting in the homepage of their website. Regarding the importance of informatics and computational thinking in education, CEPIS and its Member Societies have an unparalleled tradition of advocating for a higher political attention; said that, CEPIS fully supports the views expressed by the ECDL Foundation in 2015 through its position paper “Computing and Digital Literacy: Call for a Holistic Approach”.

\(^2\) In 2018 the ECDL Foundation issued a paper “Perception & Reality - Measuring Digital Skills Gaps In Europe, India and Singapore” endorsed and commented by CEPIS.

\(^3\) CEPIS considers good practices in developing digital skills those projects in which public funds support learning and certification aligned with market needs, for instance the ECDL project supported by the Ministry of Education in Cyprus.
Recommendations

1. Although we’re fully aware of the huge potential of self-learning and informal learning processes, still we believe that both pupils and adult learners are normally much more engaged with learning in a human relationship with peers and with facilitators such as school teachers, university professors, trainers, champions etc.; therefore, CEPIS recommends to pay special attention to projects aimed at **empowering teachers and training the trainers** as a prerequisite for education and training of larger groups;

2. Final certification of individual competences and skills⁴ is a unique way to assure a high quality to the learning process (both self-led and trainer-led) and to give the learners an objective measure of their progress and achievements; however, as confirmed in a recent document⁵ written by mandate of the European Commission, CEPIS believes that **world-class, independent, vendor-neutral, digital skills certification** best fulfills a variety of quality assurance approaches such as using an internationally recognised standard (notably the ICDL standard), undergoing internal and external audits, ensuring transparency, currency, etc.

3. CEPIS recommends a well-balanced approach to the development of digital skills across society, allocating **appropriate funding⁶ to each one** of the different policy targets:
   - **digital inclusion of all citizens** – funding for programmes that work to ensure the development of practical competences associated with technology engagement in a way that is accessible and appropriate for the target group,

---

4 “A high-quality assurance of training provided is of the utmost importance, ideally digital skills training should be authorised or certified by relevant public or private entities...” as written in DIGITALEUROPE’s Position on EU funding for digital skills in the next EU budget 2021-2027, Brussels, 8 October 2018

5 RfS 43 - Support to the Development of the ESCO qualifications pillar - Final Report v7 - February 2019

6 “DIGITALEUROPE acknowledges that all pillars of investment covered by the Digital Europe Programme are interlinked and interdependent. However, the proposed budget of nearly €700 million for skills (representing around 7% of the Programme’s total amount of €9.2 billion), seems rather low considering that the overall Programme's budget will be divided by 27 Member States...”
• **key digital competence for lifelong learning** – sustaining education of the new generations in a positive approach to digital technologies aligned with European values in the information society,

• **digital skills for employability** – empowering workforce and SMEs to improve and certify digital skills in accordance with job market requirements (as indicated by the Digital Skills and Jobs Coalition),

• **advanced digital skills** – allowing professionals across all sectors to positively contribute to, or even to drive digital transformation.