



The growing prevalence of digital solutions in daily life drives the need for systemic change based on **digital transformation** in general and, more specifically, in inclusive education systems.

The European Agency for Special Needs and Inclusive Education (the Agency) asserts that the ultimate vision for inclusive education systems is to ensure that all learners of any age are provided with meaningful, high-quality educational opportunities in their local community, alongside their friends and peers. This also requires a systemic change that considers all levels of the education system.

Recent national and international crises in Europe have shown education systems' flaws. Remote learning has particularly impacted learners experiencing the digital divide. When transforming digital and learning spaces, the aim must be to build back better to create sustainable, resilient systems.

This policy brief aims to provide information and recommendations for policy-makers to consider the transformation of digital education and inclusive education as interrelated.

***Inclusive Digital Education* report**

The Agency worked with the Institut für Technologie und Arbeit (Germany) to prepare the *Inclusive Digital Education* report, which examines the need for inclusive education and digital transformation to be considered in an interrelated way. It analyses research, policy, practice trends and expert views, giving an overview of developments and highlighting issues in inclusive digital education that still need to be addressed.

The vision of **inclusive** (and) **digital education**:

- ◉ involves all levels of the education system – from the individual (learners and teachers), to the organisational (schools), to the regional or national level;
- ◉ addresses inclusion, exclusion, digitalisation and the digital divide as interconnected, interdependent cross-cutting issues;
- ◉ is anchored in the education system's structures to foster resilient education systems that offer equitable education opportunities for all learners;
- ◉ is based on **digital transformation** that goes far beyond merely applying digital technologies in education.

This policy brief presents some of the report's key findings and their relevance for policy on inclusion and digital transformation to build more resilient education systems.



Key messages for inclusive and digital education policy

The key messages address four interrelated and interconnected policy areas and their roles in the digital transformation of inclusive education:

- Technology
- Learners and teachers
- Educational institutions
- Regional and national governance of the education system.

Technology

A user-centred design approach that embraces universal design can avoid drawbacks like poor usability, high costs or a lack of information technology (IT) support. Assistive technology is only used when universally-designed technology is insufficient to meet all users' needs.

Technologies like artificial intelligence (AI), virtual and augmented reality may considerably influence inclusive digital education in the future. Therefore, research into their use, effectiveness, accessibility, benefits and risks is important. AI technology's personalisation and adaptation opportunities may be key to achieve a universal design and use for educational tools.

Universal design for learning is an overarching strategy to prevent exclusion in digital education.

However, interdisciplinary teams and/or research groups must develop the necessary infrastructures and innovative technologies for inclusive digital learning. These groups should comprise educators, IT experts and learners, including those vulnerable to exclusion.

Policy-making and practice must seriously consider the ethical implications of using AI and other new technologies in education, particularly in inclusive settings. Policy must ensure ethical use of new technologies and protect all learners from the digital divide.

Learners and teachers

Vulnerability to exclusion in digital education can be associated with learning-related phenomena that are strongly linked to (societal) system mechanisms.

Within education, both policy and practice must address the following central aspects for learners:

- Raising awareness of learners' vulnerability to digital exclusion by the education system in digital contexts in general and specifically which individual and environmental conditions (e.g. digital competences, social inequalities) influence learners' degree of inclusion in education and their access to digital education.
- Addressing individual learners' access to and opportunities to socially participate in digital education, and ensuring they contribute to developing digital solutions for their own learning. The 'hidden' expertise of learners, families and peers in supporting their own learning should be harnessed to develop and test new technologies.



When designing inclusive digital education settings, the focus must not be on individual learners' needs, but on combining insights from various individuals or groups vulnerable to exclusion. This ensures a holistic perspective on inclusion and enables high-quality digital education for all learners.

Teachers still lack digital competences. Initial teacher education and continuing professional development must continuously address this. The ability to use digital technologies, media education and assistive technology is important, but so is the ability to select digital learning content and design inclusive learning environments addressing individual learners' preferences, competences or skills.

Teachers must make ethical decisions and assess pros and cons when implementing digital tools in their teaching, for example, regarding data protection and new technologies' practical requirements. Ethical guidelines to help teachers make decisions about inclusive digital teaching are lacking.

Media literacy, data literacy and data-based decision-making are crucial in inclusive digital teaching. Digitalisation and inclusion are, however, considered separate topics in the early education levels, which causes difficulties.

Educational institutions



Teachers need support from the organisational level (i.e. schools) to receive the necessary knowledge and guidance. Co-operation among stakeholders – teachers, school leaders, support staff, the wider community, education boards, policy-makers, families – is essential to assess which structures and digital solutions are needed to support each learner. Formal co-operation and exchange methods exist, but stakeholders increasingly communicate via social media. An evaluation of challenges, opportunities and effectiveness is required.

Recent crises have highlighted the issue of educational organisations' resilience. Ensuring resilience is a horizontal task that extends through all levels of the education system. Policy can establish conducive framework conditions and protective factors that make educational organisations more resilient.

Regarding digitalisation, the COVID-19 pandemic has shown that digital and inclusive education promote greater system resilience. Organisations that had prepared for inclusive digital education before COVID-19 seemed to fare better in the crisis.

How far these results can be used to draw conclusions about general crisis resilience, independent of COVID-19, remains to be seen.

Regional and national governance of the education system

The COVID-19 pandemic has deepened educational inequalities by imposing remote learning, but it also provides a unique opportunity to reform education. This includes better linking schools, parents and communities and improving inclusive digital education for all learners.

Across countries, policy decisions for education systems are made at different levels – regional or national, for example.

Independent of what level education systems are governed from, there is great potential in digitalising monitoring activities for inclusive education at national, regional and local levels. Digital technologies could help to collect and aggregate relevant data on inclusive education more efficiently and make it immediately available to policy-makers. Moreover, making data available at different system levels can foster self-reflection and evidence-based decision-making, from the classroom to the school, the region and the country.

Conclusion

It can be argued that the education sector has often been insufficiently involved in technology design and development and in discussing the ethical implications of using digital media and technologies to proactively address inclusive education's requirements. Likewise, digital transformation and inclusive education have mostly been viewed as separate issues.

However, both digital transformation and inclusive education are system transformations. Seeing them as interconnected, interdependent cross-cutting issues and involving stakeholders from all system levels in future developments create the potential for more resilient education systems that are accessible to all.

