



GUIDELINES

AN ETHICAL FRAMEWORK FOR DIGITAL INCLUSION

EXECUTIVE SUMMARY

The STAY+ project aimed to develop guidelines for an ethical framework for digital inclusion, with a focus on addressing the needs and challenges of marginalized groups such as elderly people, refugees, and people with disabilities. The project was conducted by a consortium of European organizations and involved extensive research and consultation with stakeholders from the target groups, as well as experts in ethics, technology, and social policy. The resulting guidelines include a set of principles and recommendations for designing and implementing digital inclusion initiatives that are ethical, responsible, and respectful of human rights. By following these guidelines, teachers can monitor student engagement and promote their well-being in digital learning, leading to successful learning outcomes. The project also considers emerging technologies in teaching and the COVID-19 impact on digital inclusion. The guidelines offer a diverse framework for ethics, providing guidance for teachers, learners, the parental sphere, and school staff. The project also provides ethical assessment tools for ensuring a trustworthy and responsible digital learning environment. The STAY+ project highlights the EU and national landscape, providing insight into the current policies and strategies promoting digital inclusion. The guidelines offer practical recommendations for policymakers, educators, and organizations to promote digital inclusion that is ethical, responsible, and effective.





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1. BACKGROUND

Digitalisation has become a critical aspect of Vocational Education and Training (VET) institutions across the globe, and Europe is no exception.¹ The project STAY+ proposes a practical strategic reflection on digitalisation at European and 'Associated Countries' VET institutions (EUAC-VET), aims to evaluate the current state of digitalisation at European universities and identify opportunities to leverage technology to improve teaching, learning, and research. The strategic focus being placed on digitally enhanced learning and teaching has increased, undoubtedly accelerated by the Covid-19 pandemic, and is reflected in many national and European policies, with the renewed Digital Education Action Plan (2021-2027) underlining “the development of a high-performing digital education ecosystem” as a strategic priority, in particular priority 1, action 6 and .²

The consortium STAY+ acknowledge that one of the main benefits of digitalisation in VET is the ability to offer more flexible and accessible learning opportunities for students. Online courses and digital resources can help the said education and training bodies reach a broader audience of learners and allow students to learn at their own pace and convenience. Additionally, digital tools can facilitate collaboration among students and instructors, enable real-time feedback and assessment, and support personalized learning paths.³

However, there are also challenges associated with digitalisation in VET that need to be addressed. One of the primary challenges is ensuring that digital tools and resources are accessible to all students, regardless of their background or disabilities.⁴ Another challenge is the need to maintain high-quality standards for online courses and assessments, which requires initial and continuous training and support.⁵

¹ [Innovation and digitalisation: a report from the ET2020 Working Group on Vocational Education and Training](#)

² [Digital Education Action Plan \(2021-2027\)](#)

³ [30+ best online learning collaboration tools](#)

⁴ [Understanding the role of digital technologies in education: a review](#)

⁵ [Applying quality standards to strengthen blended and distance learning program](#)



To fully leverage the benefits of digitalisation in VET, the institutions need to invest in the development of digital infrastructure and resources, as well as support for the institution and staff to adapt to the new digital environment. Additionally, it is crucial to ensure that digitalisation efforts align with the overall institutional strategy and goals, as well as with the needs and expectations of students and other stakeholders.⁶

Overall, the project STAY+ provides a valuable opportunity for EUAC-VET to reflect on their digitalisation efforts and identify ways to enhance their teaching, learning, and research practices through technology. By embracing digitalisation and investing in the necessary resources and support, EUAC-VET can continue to provide high-quality education and also research opportunities to students and contribute to the advancement of knowledge and innovation in their respective fields.

An ethical framework for digital inclusion should prioritize the equitable and inclusive access to digital technologies and resources, while also ensuring the protection of individuals' privacy, security, and ethical considerations. The project STAY+ proposes the priorities outlined below:

- a) **access and equity** e.g., the framework should ensure that all individuals have access to digital technologies and resources, regardless of their socio-economic status, cultural background, or geographic location. This includes providing access to affordable broadband, hardware, and software, as well as digital literacy training and support.
- b) **privacy and security** e.g., the framework should prioritize the protection of individuals' privacy and security in the digital realm. This includes measures to protect personal data and prevent unauthorized access to digital systems and resources.
- c) **diversity and inclusion** e.g., the framework should promote diversity and inclusion in the digital world, ensuring that digital technologies and resources are accessible and inclusive to individuals of all backgrounds and abilities. This includes the use of inclusive design principles, as well as the development of culturally sensitive and accessible digital content.
- d) **transparency and accountability** e.g., the framework should prioritize transparency and accountability in the use of digital technologies and resources. This includes ensuring that individuals have access to clear and understandable information about the collection, use, and sharing of their personal data, as well as mechanisms for reporting and addressing issues related to digital inclusion and equity.
- e) **ethical considerations** e.g., the framework should incorporate ethical considerations into the design, development, and use of digital technologies and resources. This includes considering the potential social, cultural, and economic impacts of digital technologies, as well as their ethical implications, such as the potential for algorithmic bias or discrimination.

The present STAY+ guidelines propose to mitigate the barrier to the aforementioned prioritisations which are outlined below:

- a) **limited resources** e.g., a lack of resources, including funding, personnel, and infrastructure, can make it difficult to prioritize digital inclusion initiatives, resulting in programmes that are underfunded, understaffed, and unable to provide comprehensive services to disadvantaged learners;
- b) **technological complexity** e.g., digital technologies can be complex, requiring a certain level of technical knowledge and skill to use effectively, presenting a barrier to digital inclusion for people who lack the necessary skills or who have limited access to technology;

⁶ [Digital transformation: a multidisciplinary reflection and research agenda](#)



- c) **inadequate policy** e.g., ineffective or outdated policies and regulations can hinder efforts to promote digital inclusion while protecting privacy, security, and ethical considerations, for example, policies may not adequately address issues such as data privacy or cybersecurity, leaving users vulnerable to exploitation or harm;
- d) **cultural and linguistic barriers** e.g., language and cultural barriers can make it difficult for some individuals to access digital resources or participate in digital inclusion initiatives, resulting in exclusion and marginalization for people who are not fluent in the dominant language or who come from cultural backgrounds that are not represented in digital technologies;
- e) **lack of awareness** e.g. most people, especially those from disadvantaged communities, may not be aware of the benefits of digital technologies or may not understand how to use them effectively, leading to limited participation in digital inclusion initiatives and missed opportunities for growth and development;
- f) **systemic inequality**, including poverty, racism, and other forms of discrimination, can make it difficult for disadvantaged learners to access digital resources and participate in digital inclusion initiatives and addressing this setting is essential for promoting digital inclusion and ensuring that everyone has equitable access to digital technologies and resources

2. ETHICS

2.1 Emerging technologies in teaching

In the past decade, emerging technologies have been transforming the way we teach and learn, leading to the expansion of digital learning environments.⁷ Here are a few examples of emerging technologies that are having an impact on teaching and learning:

- a) **artificial intelligence** (AI) is being used to personalize learning experiences, provide real-time feedback to students, and automate administrative tasks, for example, AI-powered chatbots can help students with their homework, while machine learning algorithms can analyze student data to identify areas where they need additional support;
- b) **virtual and augmented reality** (VR/AR) are technologies are being used to create immersive learning experiences that simulate real-world scenarios. For example, students can use VR to explore historical sites, while AR can be used to overlay digital information on top of real-world objects;
- c) **gamification**, involves incorporating game elements into learning experiences to increase engagement and motivation. For example, students can earn points or badges for completing assignments or mastering specific skills;
- d) **Social Media** are being used, to a certain extent, to create collaborative learning environments where students can share ideas, resources, and feedback. Social media can also be used to promote peer-to-peer learning and connect students with experts in their field;
- e) **Mobile learning** e.g., mobile devices are being used, to a certain extent, to deliver learning content and resources anytime, anywhere. Mobile learning can be particularly effective for students who are unable to attend traditional classroom-based learning due to geographic or other constraints;

⁷ [Digital transformation: a multidisciplinary reflection and research agenda](#)



These emerging technologies have been capitalising on the potential to expand digital learning environments, increase access to educational resources, and provide personalized learning experiences that meet the needs of individual students.⁸ However, it is important to ensure that these technologies are used in an ethical and responsible manner, with a focus on promoting equity and inclusion for all learners.⁹

2.2 COVID-19 impact

The COVID-19 pandemic has had a profound impact on the global education system, forcing schools and universities to rapidly adapt to remote learning. The pandemic necessitated a rapid shift towards digital learning environments as traditional in-person classes became impossible due to the need for social distancing.¹⁰ The shift to digital learning had both positive and negative impacts. On the positive side, digital learning environments allowed for greater flexibility in terms of when and where learning could take place. This could be particularly beneficial for adult learners and students with other commitments, such as work or childcare. Digital technologies also made it easier to deliver learning content and resources to students in remote or hard-to-reach areas.¹¹ However, there were also several challenges associated with the shift to digital learning. One of the most significant challenges was the digital divide. Students from disadvantaged communities often lacked access to the necessary technology and internet connectivity to participate in remote learning. This exacerbated existing inequalities and highlighted the need for greater investment in digital infrastructure to ensure that all students have equal access to digital learning environments.¹² Another challenge was the need for digital literacy skills. Teachers and students alike had to quickly adapt to new platforms and technologies, which required a certain level of technical knowledge and skill. Many educators had to learn new skills on the fly, which could be challenging and time-consuming.¹³ The shift to digital learning also had an impact on student engagement and motivation. Many students found it difficult to stay motivated and engaged in a remote learning environment. This was particularly true for younger students who may have had difficulty adjusting to the lack of in-person social interaction and support.¹⁴ Finally, the pandemic highlighted the need for greater investment in digital infrastructure and resources to support digital learning environments. This includes investment in reliable high-speed internet connectivity, digital devices, and software tools. It also includes investment in training and professional development for educators to ensure they have the necessary digital literacy skills to effectively deliver digital learning experiences.¹⁵ In conclusion, the COVID-19 pandemic has accelerated the adoption of digital learning environments, highlighting both the benefits and challenges associated with this shift. While there were significant challenges, the pandemic also provided an opportunity to rethink and reimagine education for the digital age. Moving forward, it is essential to address the digital divide, provide adequate support for digital literacy skills, and invest in digital infrastructure to ensure that all students have access to high-quality digital learning environments.

2.3 Definitions

Digital inclusion or inclusiveness refers to the efforts made to ensure that everyone, regardless of their socio-economic status, race, gender, or any other characteristic, has access to and can effectively use digital technologies. Digital technologies are increasingly becoming a part of everyday life, and being digitally excluded can result in a lack of access to essential services, opportunities for growth and development, and civic engagement. Digital inclusion involves more than just providing access to digital technologies; it also includes addressing the systemic issues that contribute to inequality and ensuring that everyone has the skills, knowledge, and resources to effectively use digital technologies. This includes developing programs and initiatives to promote digital literacy, providing affordable access to digital technologies, ensuring that digital resources are accessible to people with disabilities or impairments, and promoting

⁸ [Guidelines for ICT in education policies and masterplans](#)

⁹ [Council conclusions on supporting well-being in digital education](#)

¹⁰ [The role of digital collaboration in student engagement towards enhancing student participation during COVID-19](#)

¹¹ [Digital education Action Plan 2021-2027: resetting education and training for the digital age](#)

¹² [REPORT on shaping digital education policy](#)

¹³ [Teachers' use of technology and the impact of Covid-19](#)

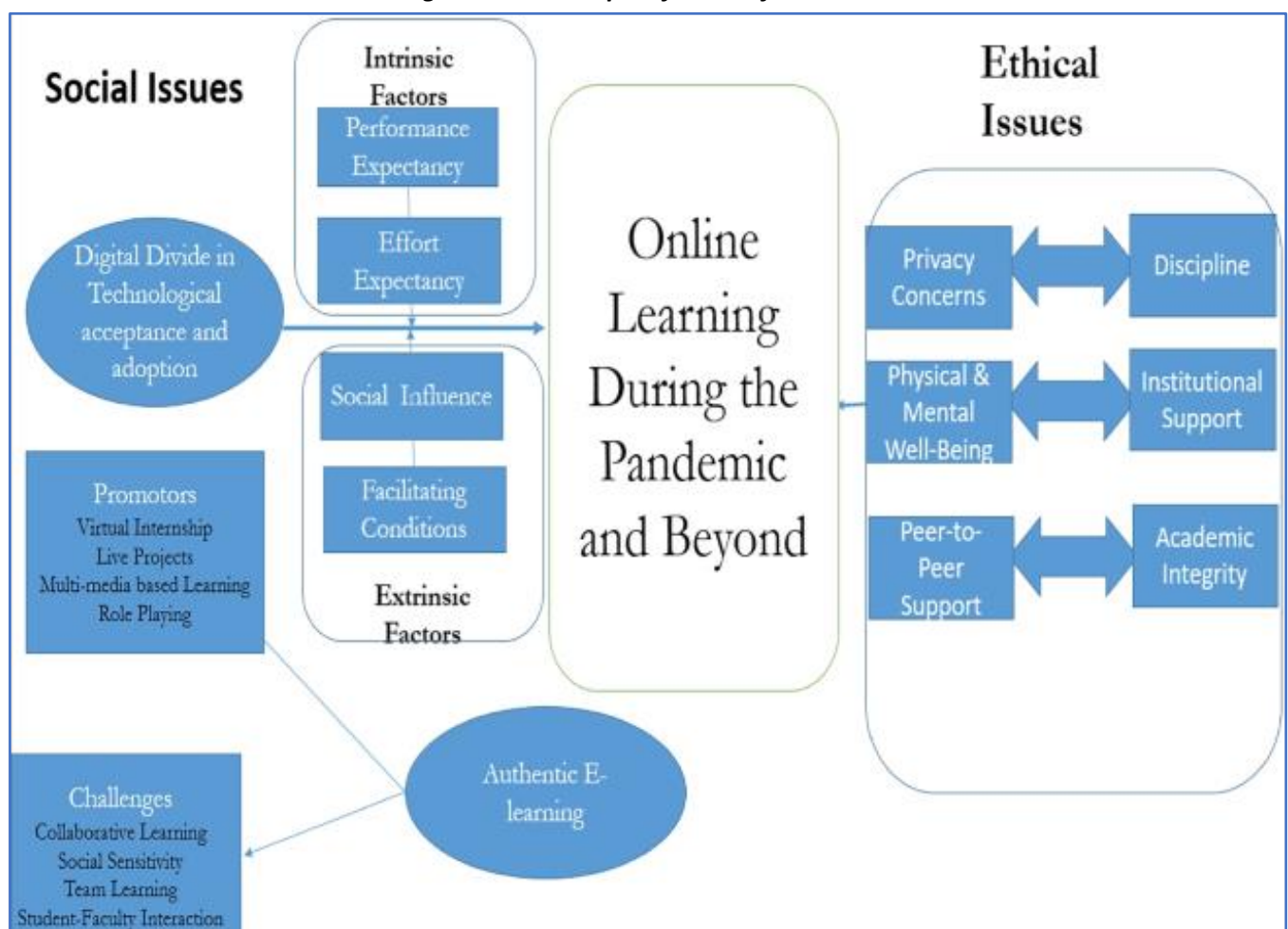
¹⁴ [Emergency remote learning during COVID-19 crisis: students' engagement](#)

¹⁵ [The future of education for digital skills](#)



diversity and inclusivity in the design and development of digital technologies. Digital inclusion is important because it can promote equity and social justice, reduce the digital divide, and provide opportunities for disadvantaged communities to access essential services and participate in civic life. It can also help to bridge the gap between different groups and promote greater social cohesion and understanding. Ethics in the education and training sphere is a complex and multifaceted topic that is informed by various theoretical frameworks. In the context of digital environments, several theoretical approaches can be used to guide ethical decision-making and practice. One important theoretical framework is the principle of ethical universalism¹⁶, which holds that there are certain ethical principles that are universally applicable across different cultures and contexts. This framework emphasizes the importance of human rights and dignity, and highlights the need to respect individual autonomy, non-maleficence, and beneficence. The figure 2.3 (below) outlines the social and ethical issues of online learning during the pandemic and beyond.¹⁷

Figure 2.3 – Example of ethical framework



In the context of digital environments, this means that educators and trainers should ensure that digital technologies are used in ways that respect individual privacy, security, and ethical considerations. They should also strive to create inclusive and equitable digital learning environments that provide opportunities for all learners to participate and succeed. Another important theoretical framework is the ethics of care¹⁸, which emphasizes the importance of relationships, empathy, and compassion in ethical decision-making. This framework highlights the need to consider the unique needs and perspectives of individual learners, and to create learning environments that foster positive relationships between educators and learners. In the context of digital environments, this

¹⁶ [Interactive universalism, the concrete other and discourse ethics: a sociological dialogue with Seyla Benhabib's theories of morality](#)

¹⁷ [The social and ethical issues of online learning during the pandemic and beyond](#)

¹⁸ [Care and the pluriverse: rethinking global ethics](#)



means that educators and trainers should be sensitive to the unique challenges and opportunities presented by digital technologies, and should work to create learning environments that prioritize human connection and empathy. A third theoretical framework that is relevant to ethics in the education and training sphere is social justice theory¹⁹, which emphasizes the importance of promoting equity and social justice in education. This framework highlights the need to address systemic inequalities and barriers to learning, and to create learning environments that promote diversity, inclusion, and social justice. In the context of digital environments, this means that educators and trainers should strive to create digital learning environments that are accessible, equitable, and inclusive for all learners, regardless of their socio-economic status, race, gender, or other characteristics. Overall, the theoretical background of ethics in the education and training sphere is informed by a range of approaches that emphasize the importance of universal ethical principles, care and empathy, and social justice. In the context of digital environments, it is essential to apply these theoretical frameworks to guide ethical decision-making and practice, and to ensure that digital technologies are used in ways that promote equity, inclusion, and human dignity.

2.4 EU landscape

In the European Union, there is increasing awareness of the ethical implications of using emerging technologies and especially digital technologies in various domains, including education. The European Commission has published a panoply of guidelines on ethics for digital learning environments, which aim to promote trustworthy and ethical education and training systems that respect fundamental rights, including the right to privacy and data protection, and are transparent, accountable, and explainable.²⁰ In the context of digital learning environments, ethical concerns may arise in various areas, such as data privacy and security, algorithmic bias, and the use of personal data for profiling and targeted advertising. The EU General Data Protection Regulation (GDPR) sets out rules for the processing of personal data in the EU and requires organisations to ensure that personal data is collected and processed in a lawful, fair, and transparent manner.²¹ In addition, the EU has funded various projects and initiatives aimed at promoting ethical digital environments in education, such as the 'ARVETI4.0 - Augmented Reality in Vocational Education and Training in the context of Industry 4.0' project, which aims to develop ethical guidelines for the use of digital systems, and Erasmus+ KA2 projects²², which focuses on promoting ethical and inclusive digital learning environments in VET. Overall, while there is growing awareness of the ethical implications of using AI and other digital technologies in education in the European Union, there is still much work to be done to ensure that these technologies are developed and used in a way that respects fundamental rights and ethical principles.

2.5 National landscape

In the UK. In the UK. Many education centres closed as a result of Covid-19 and moved to remote learning, in light of this, the United Kingdom was required to change its approaches to education and shifting some of the typically necessary skills in the labour market to a more digital focus. Many teachers and learners were expected to rapidly adapt to an online environment while continuing to meet their responsibilities and targets. Teachers often encouraged self-learning among their students, this included watching pre-recorded lessons and self-study, while also attending live remote lessons hosted on online video platforms such as Zoom and Microsoft Teams. With this, education centres have had to take into consideration the digital safety of their students as a key factor, especially among minors or vulnerable learners. This includes concerns with data being shared externally outside of the education centre, and many schools have taken varying approaches to tackle this. Unfortunately, the move to online learning highlighted not only concerns in digital safety but also issues of inclusivity and accessibility. A large gap between disadvantaged and advantaged students throughout the UK was highlighted by education centres and acknowledged by the government, this has led to the development of certain skills platforms such as improving digital skills and understanding the requirements of an adapted labour market, followed by the prioritisation of supporting learners' wellbeing through this change as part of a Covid-19 recovery plan.

¹⁹ [Learning in digital environments: a model for cross-cultural alignment](#)

²⁰ [Digital learning and ICT in education](#)

²¹ [The EU general data protection regulation \(GDPR\)](#)

²² [ARVETI4.0 - Augmented Reality in Vocational Education and Training in the context of Industry 4.0](#)



In Italy. Due to the pandemic, Italy was one of the first Countries all over the world to be obliged to close schools and implement online education: learners and teachers were expected to adapt quickly to online teaching and learning processes and they had also to acquire/improve digital skills in a short time to be able to use digital platforms and tools. The Italian Ministry of Education supported education institutions through the provision of tools and materials for online learning. Among them:

- webpage with training webinar available, thanks to the collaboration with INDIRE, the National Institute of Documentation, Innovation and Educational Research, one of the oldest research institutions of the Ministry of Education
- free-of-charge access to certificate learning platforms, thanks to the cooperation of the Ministry with tech partners; materials and contents useful for lessons, made available by partners such as RaiCultura, Treccani, etc.
- the provision of devices for disadvantaged students.

The pandemic has brought out clearly: the need to improve teachers' and students' digital competences; the presence of the disparity of access to online education among learners; inequality in the capacities of individuals to be motivated and engaged during remote learning, also considering the personal family contexts and social backgrounds. In the framework of the Area 1 "Connectivity" there is the Action 3 "Right to Internet" at school, that is achieved through a twofold strategy:

- ensure that all students have access to the Internet while they are at school;
- promote safe Internet access by less well-off students, even at home, to carry out study activities, in complementarity with the actions for the development of distance learning and integrated digital teaching launched during the Covid-19 emergency.

In Czech Republic. In the Czech Republic, the COVID 19 pandemic that affected the schools and students very hard. The school closure in the Czech Republic was one of the longest in EU. Czech Ministry of Education and its subordinate organizations provided methodological on-line consultations, was releasing continuously methodical documents and recommendations referring to several areas: how to manage and organize distance learning, curriculum, feedback to students, communication with students and parents and many others. Later on, activities were focused on **decreasing the negative effects of a pandemic and inequalities in students' education and their progress.**

The issue of **wellbeing** had been solved especially by NGOs, e.g. Czech Society for Inclusive Education (COSIV) which provided continuous support to schools and students: COSIV provided the methodological recommendations to schools emphasizing the importance of students' wellbeing and taking care of students threatened with the school failure and drop-outs.

Due to immediate state financial intervention, the technical background of schools and their equipment with digital technology has been significantly improved. The teachers were trained in technologies, schools figured out which on-line communication platforms will use (Google classrooms, Teams, Zoom etc.) to teach remotely.

The procedures and processes set at all level of schools were organized with maximum effort to manage this challenging period with the greatest possible effect. On the positive side, schools have managed to engage most students to remote learning.

In 2021, the Czech government approved a National Recovery and Resilience Plan aiming at equalizing the differences in knowledge, skills and competencies of primary and secondary students' schools, including social and physical activities to promote students' wellbeing.



In Türkiye. In 2020, in response to the challenges posed by the pandemic, there was a growing need to enhance distance education practices that provide students with meaningful and engaging learning experiences. To achieve this goal, it was important to leverage advanced technologies and adopt a balanced approach to synchronous and asynchronous learning activities.²³ Today, it is necessary to prioritize process-oriented approaches to measurement and evaluation, develop roadmaps that promote digital data literacy and ethical use of technology. It is crucial to embrace new educational roles and foster the development of digital competencies and skills, while ensuring that digital transformation is accompanied by a mental shift that promotes social justice and equity. One must also be mindful of the potential impact of the digital divide, and strive to create inclusive educational environments that prioritize empathy and understanding. In Türkiye, distance education has been implemented in middle and high schools, with a focus on improving infrastructure, communication, and access. Teaching activities are primarily delivered through television channels, while the Education Information Network serves as a supportive environment for exams, information security measures, and other related activities. To maximize the benefits of these practices, we propose a blended framework that integrates information network and television broadcasting, with a view to promoting effective learning outcomes for all students.

²³ [Blended distance education during COVID-19: evaluation of Turkey's K12 applications](#)



Table 2.2 – National landscapes on ethics in the education and training sphere considering digital environments

Country and key policy framework	Accessibility	Inclusion	Privacy
<p>The UK. Over the last few years, the United Kingdom has made efforts to support individuals in further education and future job prospects which were affected because of Covid-19 and learning was moved online. To tackle a noticeable lack of inclusivity, the United Kingdom set up a Covid-19 recovery plan which included the development of online programmes to support individuals in education. However, these efforts were examined to be varying in accessibility through the United Kingdom's disadvantaged and advantaged schools²⁴.</p>	<p>Issues were raised that providing disadvantaged students with a device was not a solution for access, instead, education leaders addressed that the problems resided in internet access, device appropriateness, availability of parental support, and an appropriate environment. In 2021, the Department for Education, collaborating with the Quality Assurance Agency, developed the Graduate Employment and Skills Guide. This was created in an effort to support current tertiary and graduate students to transition into a labour market that has partially moved online by identifying skills, encouraging self-learning, gaining experience, and applying for jobs²⁵. Their programmes offer virtual and additional support to help student recruits adapt to a remote working environment.</p>	<p>The UK has made efforts to ensure its gap of inclusion between advantaged and disadvantaged students and that they are granted equal inclusion when it comes to learning skills for employment. A small number of schools offered non-digital asynchronous remote solutions. In these cases, teachers delivered most of their teaching through paper-based work packs, worksheets, textbooks, and other physical resources, such as art supplies, which one school delivered to pupils' homes²⁶. In 2020, Wales also produced the Personal Learning Accounts programme as part of the Covid-19 recovery plan. Offering distance-learning courses designed to fit a learners' responsibilities in their field, for example digital skills²⁷.</p>	<p>Considerations around protecting the safety of learners in education were made key amongst many schools when making decisions on which platforms and digital tools were used for their remote offers. Some schools opted to disable cameras in an interest of safety. Other schools discussed the idea of having extra staff present for live lessons. The April 2020 COVID Addendum to the Guidance for Safer Working Practice outlines for leaders and staff what they should consider when assessing the risks around their remote learning solutions²⁸.</p>
<p>Italy. The Italian Ministry of Education since 2015 had elaborated the "Piano Nazionale Scuola Digitale – PNSD ("National Plan for the Digital School"), entered into force in 2016. It is the main plan for the digital transformation of the Italian school. It is composed by 35 actions, divided in four areas of intervention: 1) Connectivity: actions to ensure access to the Internet by all educational institutions, students and school staff;</p>	<p>During the pandemic emergency, an attempt was made to make access to digital teaching a reality for all students, equipping those who did not have it with mobile devices to attend online lessons. Furthermore, within the aforementioned "National Digital School Plan - PNSD", in Area 1 "Connectivity" is included Action 3 "Right to the Internet" at school which is implemented through a twofold strategy: - ensure that all students have access to the internet while at school</p>	<p>During the pandemic, with a view to encouraging the participation of all students in teaching, many schools have tried to use communication methods, tools and even informal approaches (phone calls, chats, face-to-face "visits" respecting distance) to motivate their students and facilitate their participation. Under the PNRR (National Recovery and Resilience Plan), "Education" mission, training actions aimed at school staff are financed.</p>	<p>When implementing distance learning, it is essential to pay the necessary attention to the protection of sensitive data, privacy and security of all those involved. In order to offer concrete support to educational institutions, the Ministry of Education and the Privacy Authority have jointly drawn up precise instructions for the management of personal data and the protection of privacy, also identifying the profiles of responsibility of the actors involved</p>

²⁴ [Learning Remotely When Schools Close, OECD](#)

²⁵ [Employment and Skills Guide](#)

²⁶ [UK Gov, Remote Education Research](#)

²⁷ [Personal Learning Accounts Programme](#)

²⁸ [Safer Recruitment Consortium](#)



Country and key policy framework	Accessibility	Inclusion	Privacy
<p>2) Environments and Tools: actions aimed at providing educational institutions with innovative learning environments, based on the use of digital technologies;</p> <p>3) Skills and Contents: actions aimed at promoting and enhancing students' digital skills and encouraging the development of quality contents for digital teaching;</p> <p>4) Training and accompaniment: actions aimed at supporting educational and digital innovation through accompaniment courses for educational institutions and training for school staff²⁹</p>	<p>- promote safe access to the Internet by less well-off students, even from home, to carry out study activities, in complementarity with the actions for the development of distance learning and integrated digital teaching launched during the Covid-19 emergency .</p>	<p>"Scuola Futura" is the platform for the training of school staff (teachers, ATA staff, DSGA, DS), as part of the actions of the National Recovery and Resilience Plan (PNRR), Education Mission. Contents and training modules are divided into 3 thematic areas (Digital transition, STEM and multilingualism, Territorial gaps), which take up 3 of the investment lines for skills defined by the PNRR: Integrated digital teaching and training of school staff on the digital transition, New and skills and new languages, Extraordinary intervention to reduce territorial differences and fight against early school leaving. A specific training measure is dedicated to educational institutions, which present context indicators with possible risks of early school leaving. It is an integrated programme, which provides for the setting up of innovative digital teaching environments and the training of teachers for the inclusive and enabling use of educational technologies.</p>	<p>and the organizational measures to be implemented³⁰</p>
<p>Czech Republic. In response to the COVID-19 pandemic, numerous countries implemented restrictions on physical attendance at schools, and the Czech Republic, an EU nation with a population of 10 million, followed suit on 11th March 2020. However, despite the ban on in-person schooling, the educational process remained uninterrupted throughout the primary to tertiary education sectors. Pupils and students have been able to continue their education seamlessly through a combination of home-based learning and close collaboration with their respective schools,</p>	<p>Online learning in the Czech Republic has gained significant popularity and importance, especially in recent years. It offers flexible educational opportunities to individuals of all ages and has become a valuable component of the Czech educational system. The Czech Republic has several e-learning platforms that cater to various educational levels, from primary school to higher education. These platforms provide a wide range of courses and learning materials, allowing students to study at their own pace and convenience.</p>	<p>While online learning brings numerous benefits, there are also challenges. These include ensuring equal access to technology and the internet for all students, maintaining student engagement in a virtual environment, and addressing the need for teacher training in online instructional methods. The Czech Republic recognizes the importance of digital skills in the modern era. To bridge the digital divide, online learning platforms offer courses focused on digital literacy, coding,</p>	<p>Internet connectivity was initially established in the Czech Republic in 1991, but it wasn't until 1994 that commercial access to the Internet became available. The growth and accessibility of e-learning in the country were greatly facilitated by various factors, including the widespread adoption of computers in households and businesses, as well as notable advancements in Internet connections. These developments played a pivotal role in fostering the expansion and progress of e-learning within the Czech Republic.³² In the Czech Republic,</p>

²⁹ <https://www.miur.gov.it/scuola-digitale>

³⁰ <https://www.agendadigitale.eu/sicurezza/la-privacy-nella-didattica-a-distanza-linee-guida-e-ruoli-chiave-per-una-governance-corretta/>

³² [E-Learning trends in Central Europe: the case of the Czech Republic](#)



Country and key policy framework	Accessibility	Inclusion	Privacy
<p>predominantly relying on electronic communication methods.³¹</p>		<p>programming, and other technology-related skills.</p>	<p>privacy concerns in online learning are typically addressed through various laws, regulations, and policies that aim to protect personal data and ensure the privacy of individuals. The primary legislation governing data protection in the Czech Republic is the Act No. 101/2000 Coll., on the Protection of Personal Data, which was aligned with the European Union's General Data Protection Regulation (GDPR).</p>
<p>Türkiye. In recent years, Turkey has demonstrated significant progress in enhancing its educational performance. However, to sustain and further advance these achievements, it is crucial to focus on strengthening inclusivity, ensuring that all students have access to high-quality and engaging education, irrespective of their background or educational path. This will require ongoing efforts to improve educational infrastructure, provide adequate resources and support to students and teachers, and foster a culture of lifelong learning that encourages and enables continuous personal and professional development. By prioritizing inclusivity and equity, Turkey can build on its successes and create a more vibrant, equitable, and prosperous society for all its citizens.³³</p>	<p>To address the challenges posed by the pandemic, the Turkish government has launched EBA TV, also known as the Education Information Network TV, which offers educational programming for students who are unable to attend school. This service provides twenty-minute educational videos across three channels, which are broadcasted by the Turkish Radio and Television Corporation (TRT). Despite these efforts, research has revealed that the learning processes of forcibly displaced children have been affected by the pandemic due to difficulties accessing the internet and devices such as televisions, tablets, and computers. To mitigate these challenges, it is essential to develop and implement additional strategies that ensure all students have equal access to high-quality educational resources, regardless of their circumstances.³⁴</p>	<p>Inclusiveness education is an important aspect of education in Turkey, as it is in many other countries around the world. The Turkish Ministry of National Education has taken steps to ensure that education in Turkey is inclusive and accessible to all students, regardless of their backgrounds, abilities, or disabilities. One of the main ways that the Ministry of National Education has promoted inclusiveness in education in Turkey is by implementing inclusive education policies in schools. These policies aim to ensure that all students are able to access and participate in education on an equal basis. This includes providing support for students with disabilities, as well as those from disadvantaged or marginalized backgrounds.³⁵</p>	<p>Given their position of trust, public authorities and educational establishments have a heightened responsibility to comply with data protection laws and ensure the highest level of data security, especially when processing personal data of minors. Data protection authorities have increased scrutiny of the public and education sectors, particularly regarding the use of technology during the COVID-19 pandemic. There has been a rising number of fines in the public sector for breaching data protection laws related to sensitive data processing (such as health data), profiling, and tracking or surveillance of individuals. This trend is likely to continue in the future, highlighting the need for continued vigilance and investment in robust data protection measures.³⁶</p>

³¹ [Mandatory home education during the COVID-19 lockdown in the Czech Republic](#)

³³ [Education policy outlook Türkiye](#)

³⁴ [Access to digital education in Türkiye](#)

³⁵ [Inclusive educational practices in Turkey during the period of COVID-19](#)

³⁶ [Public sector and education](#)



3. GUIDELINES

3.1 A framework for ethics

Implementing an ethical framework in digital learning environment initiatives is crucial to ensure that technology is used in a responsible and ethical manner. Some overall interlinked and mutually supportive recommendations for implementing an ethical framework in digital learning environments include those below in the present chapter:

- a) incorporating ethical considerations into the design and development of digital learning initiatives, including a focus on privacy, security, and transparency;
- b) establishing clear guidelines and standards for the use of data in digital learning environments, including obtaining informed consent from individuals and ensuring that data is used only for its intended purpose;
- c) providing ongoing training and support to educators and administrators to ensure that they understand the ethical implications of using technology in education;
- d) encouraging collaboration and engagement among all stakeholders, including students, parents, educators, and technology developers, to ensure that ethical considerations are integrated into all aspects of digital learning initiatives;
- e) regularly reviewing and updating the ethical framework to reflect changes in technology and educational practices, as well as feedback from stakeholders.

By adopting an ethical framework for digital learning initiatives, educational institutions can ensure that technology is used in a responsible and ethical manner, benefiting students and society as a whole.

3.2 Framework for teachers

The ethical framework in digital learning environments for teachers includes a set of guidelines and principles that help ensure the responsible and ethical use of technology in education. Some key components of this framework include:

- a) respect for student privacy and data protection e.g., teachers must ensure that student data is kept confidential and that privacy is respected when using technology in the classroom; they should only collect and use data for legitimate educational purposes and obtain informed consent from students and parents as needed;
- b) responsible use of technology e.g., teachers should use technology in a responsible and ethical manner, including using appropriate security measures and ensuring that digital resources are accessible and inclusive to all students;
- c) fairness and equity e.g., teachers should ensure that digital learning initiatives are accessible and inclusive to all students, regardless of their background or circumstances;
- d) transparency and openness e.g., teachers should be transparent and open about their use of technology in the classroom, including communicating with students and parents about the tools and resources being used and how student data is being collected and used;



- e) professional development e.g., teachers should continuously develop their digital literacy skills and engage in ongoing professional development to ensure that they are able to use technology in an ethical and responsible manner.

By following these guidelines and principles, teachers can help create a safe, inclusive, and responsible digital learning environment for their students.

3.3 Framework for students

The ethical framework in digital learning environments for students includes a set of guidelines and principles that promote responsible and ethical use of technology in education. Some key components of this framework include interlinked and mutually supportive measures as outlined below:

- a) respect for privacy and security e.g., students should respect their own and others' privacy, as well as the security of digital resources and systems; they should not share personal information or login credentials with anyone else and should use strong passwords to protect their accounts;
- b) appropriate use of technology e.g., students should use technology appropriately and responsibly, including following guidelines for online behavior, avoiding cyberbullying, and using digital resources only for legitimate educational purposes;
- c) respect for intellectual property e.g., students should respect intellectual property rights, including copyright laws, and only use digital resources in ways that are legal and ethical;
- d) inclusivity and respect for diversity e.g., students should respect diversity and inclusivity, including treating all individuals with respect and avoiding discriminatory behavior or language;
- e) digital literacy e.g., students should develop their digital literacy skills and be aware of digital literacy practices and resources that can help them use technology in a responsible and effective manner.

By following these guidelines and principles, students can help create a safe and ethical digital learning environment that promotes their academic success and well-being.

3.4 Framework for the parental sphere

The ethical framework in digital learning environments for the parental sphere includes a set of guidelines and principles that promote responsible and ethical use of technology in education. Some key components of this framework include interlinked and mutually supportive measures as outlined below:

- a) respect for privacy and data protection e.g., parents should ensure that their children's personal information is protected and that their privacy is respected when using technology in the classroom; they should be informed about the types of data that are being collected and how it is being used, and they should provide informed consent for their child's participation in digital learning initiatives;
- b) appropriate use of technology e.g., parents should encourage their children to use technology appropriately and responsibly, including following guidelines for online behavior, avoiding cyberbullying, and using digital resources only for legitimate educational purposes;
- c) respect for intellectual property e.g., parents should encourage their children to respect intellectual property rights, including copyright laws, and only use digital resources in ways that are legal and ethical;
- d) inclusivity and respect for diversity e.g., parents should encourage their children to respect diversity and inclusivity, including treating all individuals with respect and avoiding discriminatory behavior or language;



- e) digital literacy e.g., parents should support their children in developing their digital literacy skills and be aware of digital literacy practices and resources that can help their children use technology in a responsible and effective manner.

By following these guidelines and principles, parents can help create a safe and ethical digital learning environment that promotes their child's academic success and well-being.

3.5 Framework for school's staffs

The ethical framework in digital learning environments for school staff includes a set of guidelines and principles that promote responsible and ethical use of technology in education. Some key components of this framework include interlinked and mutually supportive measures as outlined below:

- a) respect for student privacy and data protection e.g., school staff should ensure that student data is kept confidential and that privacy is respected when using technology in the classroom; they should only collect and use data for legitimate educational purposes and obtain informed consent from students and parents as needed;
- b) responsible use of technology e.g., school staff should use technology in a responsible and ethical manner, including using appropriate security measures and ensuring that digital resources are accessible and inclusive to all students;
- c) fairness and equity e.g., school staff should ensure that digital learning initiatives are accessible and inclusive to all students, regardless of their background or circumstances;
- d) transparency and openness e.g., school staff should be transparent and open about their use of technology in the classroom, including communicating with students and parents about the tools and resources being used and how student data is being collected and used;
- e) professional development: school staff should continuously develop their digital literacy skills and engage in ongoing professional development to ensure that they are able to use technology in an ethical and responsible manner;
- f) ethical decision-making e.g., school staff should use ethical decision-making processes when considering the use of technology in the classroom, including considering the potential impact on student privacy, equity, and inclusivity.

By following these guidelines and principles, school staff can help create a safe, inclusive, and responsible digital learning environment for their students.

3.6 Assessment tools

There are several ethical assessment tools that can be used to ensure a trustworthy and responsible digital learning environment, outlined next. The UNESCO's "Framework of Ethical Principles in AI": this framework provides a set of ethical principles and values that should guide the development and use of AI, including in the education sector. These principles include respect for human autonomy, non-maleficence, and transparency.

The "Digital Citizenship Curriculum" (DCC) by Common Sense Education: this curriculum provides resources and lesson plans to help educators teach students about digital citizenship, including topics such as online safety, privacy, and responsible technology use. The DCC is a comprehensive programme designed to assist students develop the skills they need to become responsible and ethical digital citizens. The curriculum covers a wide range of topics related to digital citizenship, including online safety, privacy, cyberbullying, digital footprints, and information literacy. The curriculum is divided into three levels: elementary school, middle school, and high school.



Each level contains a set of lessons that are designed to be age-appropriate and engaging for students. The lessons are interactive and include a variety of activities such as group discussions, role-playing exercises, and online simulations. The curriculum also includes resources for teachers and parents, including lesson plans, videos, and discussion guides. These resources are designed to help teachers and parents facilitate discussions with students about digital citizenship and provide them with the tools they need to be responsible digital citizens. All-in-all, the Digital Citizenship Curriculum by Common Sense Education is a valuable resource for educators and parents who want to help their students and children navigate the digital world safely and responsibly.

The "Digital Learning Compass" by European Schoolnet, which is a network of 34 Ministries of Education from across Europe: this tool provides a self-assessment questionnaire that can be used by teachers and educators to evaluate their digital competence and identify areas for improvement. The aim of the Digital Learning Compass is to support schools in the effective use of digital technologies for teaching and learning. The initiative provides a framework for schools to evaluate their current use of digital technologies and to identify areas for development. The framework is based on six key areas: Leadership and Vision, infrastructure and Support, Curriculum and Assessment, Teaching and Learning, Professional Development, Safety, Privacy, and Digital Citizenship. Schools can use the framework to assess their strengths and weaknesses in each of these areas and to develop a plan for improving their use of digital technologies. The initiative also provides a range of resources and tools to support schools in their implementation of the framework. The Digital Learning Compass is part of a wider effort by European Schoolnet to promote the effective use of digital technologies in education. Through its various initiatives, European Schoolnet aims to help schools to adapt to the digital age and to provide students with the skills and knowledge they need to succeed in a rapidly changing world.

The "Ethical Design Manifesto" (EDM) by Ind.ie, a non-profit organisation: this manifesto provides a set of guidelines for designing ethical digital products and services, including those used in education and training. The EDM is a set of principles created by the Ind.ie to promote ethical and humane design practices. The manifesto outlines ten principles that designers and developers can follow to ensure that their work respects the privacy, autonomy, and dignity of users, outlined next:

- a) human rights: design should respect human rights and dignity. human effort: design should minimize the effort required of users to achieve their goals.
- b) ethical alternatives: design should enable ethical alternatives to existing products and services.
- c) privacy: design should respect privacy and minimize data collection.
- d) no dark patterns: design should not use deceptive patterns that manipulate or exploit users.
- e) accessibility: design should be accessible to everyone, regardless of ability.
- f) sustainability: design should be environmentally sustainable and not contribute to the destruction of the planet.
- g) diversity: design should embrace diversity and not discriminate against any group of people.
- h) openness: design should be open and transparent, allowing users to understand how it works.
- i) interoperability: design should be interoperable with other products and services, promoting a healthy, competitive marketplace.

Overall, the Ethical Design Manifesto encourages designers and developers to prioritize the needs and rights of users over profit or convenience. By following these principles, they can create products and services that are both effective and ethical.

The "Ethical Framework for Educational Technology" by Jisc, a UK-based technology organisation for higher education: this framework provides a set of principles and guidelines to help educators and institutions ensure that their use of technology is ethical, responsible, and aligned with educational values and goals. Jisc has developed an



ethical framework for educational technology that aims to ensure that technology is used in a way that is ethical, equitable, and transparent. The framework is based on six key principles:

- a) benefit: educational technology should be used to enhance the learning experience and improve outcomes for students. it should be designed with the needs of learners in mind, and its benefits should outweigh any potential risks,
- b) autonomy: students and educators should have control over how their data is collected, used, and shared. they should be able to make informed decisions about the technology they use, and their privacy and autonomy should be respected;
- c) justice: educational technology should be used in a way that is fair and equitable. it should not perpetuate or exacerbate existing inequalities, and efforts should be made to ensure that all learners have access to the technology they need to succeed;
- d) openness: educational technology should be open and transparent. its functionality, data collection practices, and use should be clear and easy to understand, and users should be able to access and analyze their own data;
- e) responsibility: those who create, deploy, and use educational technology have a responsibility to use it in an ethical and responsible way. they should consider the potential impacts of the technology on learners and society as a whole, and take steps to mitigate any negative effects;
- f) trust: educational technology should be trustworthy. it should be reliable, secure, and accurate, and users should be able to trust that the technology is being used in a way that is ethical and transparent

By following these principles, educational institutions can ensure that they are using technology in a way that is ethical, equitable, and transparent, and that promotes the best interests of learners and society as a whole.

The above are just a few examples of the many ethical assessment tools and frameworks available to support the development of a trustworthy and responsible digital learning environment.