

2 Strategic visions and policy co-ordination for digital education

This chapter presents some of the recent developments and emerging challenges that policy makers and education institutions have to consider when developing their strategic vision and pursuing policy co-ordination related to digital education. The analysis highlights promising approaches for improving strategic development, co-ordination, alignment, and adaptability of policies within increasingly digitalised education systems. In particular, it recommends that governments should recognise the benefits of a coherent digital education strategy, which is aligned to the wider policy ecosystem, and which takes account of the specific governance arrangements within education systems. Digital education strategies and policies should also maintain a future-oriented focus, considering the implications of emerging technologies.

Introduction

This chapter provides context for the more specific policy levers discussed in the following chapters by underlining the importance of a strategic vision that encompasses all aspects of digital education. A strategic vision must clearly set out goals for digital education and link them to concrete policy measures across the policy areas discussed in the report – such as infrastructure, regulation or capacity building for digital education - whilst providing concrete provisions for the monitoring and evaluation of these policies.

However, having a strategic vision for digital education alone is not enough to guarantee that good intentions turn into desired changes in practice. A strategic vision is most likely to lead to success in implementing policy reform if it is well-communicated and coupled with time-bound action plans and appropriate funding arrangements.

It is equally critical to pay attention to policy co-ordination. Policies for digital education should not be developed in silos. Policies both within and outside the realm of education have tangible effects on the implementation of digital education strategies. For example, existing policies for regional development, regulations for the technology sector or teacher professional development policies may all interact with digital education policies. Thus, a strategic vision for digital education should be aligned with the wider policy ecosystem to ensure coherency across policy fields. Policy co-ordination should ensure that the wider policy ecosystem sends consistent signals to the system actors and the various policies mutually reinforce each other in steering behaviours.

Strategic policies for digital education also need to be adapted to the governance arrangements within which they function. In this context, a strategic vision for digital education as well as related implementation plans should serve to delineate responsibilities for implementation among different levels of government, education institutions and other relevant stakeholders and encourage co-operation among them to achieve the desired vision and goals.

While a strategic vision for digital education should provide medium- to long-term guidance on the direction of policy reform, flexibility and responsiveness is critical in the rapidly evolving field of digital education. Strategic documents for digital education thus need to be flexible enough to adapt to societal, technological or economic changes, and to integrate new policies as they are developed. This can be guaranteed by designing purposeful feedback loops to identify and adapt to emerging needs, constraints or challenges, implementation issues or undesired effects.

Currently, countries face a range of challenges in terms of providing strategic direction for the digital transformation of their education system. This chapter seeks to investigate these challenges and present some promising policy approaches from OECD and EU countries. Some of the key questions that policy makers need to consider include:

- How might strategies for digital education support the implementation of digital education policies and enhance their coherence?
- Which other policies outside and within the education realm might affect digital education and how can synergies with the strategic vision be maximised?
- What role can strategies for digital education play in co-ordinating the responsibilities of different actors and levels of policy implementation?
- How can we ensure the status of strategies for digital education as living documents that are equipped to adapt to fast-changing technological environments and are responsive to experience and feedback?

Recent developments and current challenges

The landscape of digital education strategies is fast-changing and differs significantly across OECD countries

A review of the current strategies for digital education across OECD and EU member countries (Box 2.1 and Annex 2.A) underlines the fast-changing nature of digitalisation policies. Several countries have updated their digital education strategies since the outbreak of the pandemic: out of 45 OECD and EU countries reviewed, two-thirds released or updated strategic documents with at least some implications for digital education, and ten countries released substantive new strategic documents for digital education.

However, strategic activity in the field is not spread equally across OECD countries. Several southern and eastern European countries – including Italy, Portugal, Spain, Lithuania and Croatia – have introduced new digital education strategies over the last years, closing the ranks with central and northern European countries that had demonstrated long-standing efforts in the area. Within Europe, most strategic effort stems from countries in the mid-range of their digital development, as indicated by the Digital Economy and Society Index (DESI) (European Commission, 2022^[1]). On the other hand, digital education still only receives limited attention in countries on the lower end of the spectrum of digital development (based on the DESI Index) such as Romania, Bulgaria or Poland. Similarly, beyond the EU, OECD countries at the early stages of their digital development as indicated by their performance along OECD Going Digital Indicators - such as the Republic of Türkiye, Chile and Costa Rica - make little mention of digital education in their strategic government documents (OECD, 2023^[2]).

The governance arrangements of education systems are also reflected in the current provisions. In some federal countries, a lack of central steering powers on education matters precludes the possibility of binding central-level strategies for digital education. In such countries national authorities thus tend to provide guidance with a non-binding character (e.g. United States) or develop strategies for digital education at the subnational – rather than national – level (e.g. Australia and Canada).

Box 2.1. OECD data collection on high-level strategies for digital education in 2022

The fast-changing nature of digital education and continuous strategic work of OECD and EU countries on the topic require regular efforts to update and revise comparative analyses on strategies for digital education. Evidence on digital education strategies across OECD and EU countries was gathered through a 2022 OECD data collection exercise, building on and updating previous work on this topic (van der Vlies, 2020^[3]; European Commission/EACEA/Eurydice, 2019^[4]). For EU countries, the data collection involved exchanges with Eurydice country units within national ministries of education to obtain further information on countries' strategic work on digital education. In addition, experts from across OECD countries were asked to comment on the outcome of the data collection at the 8th meeting of the Group of National Experts on School Resources in March 2023. Detailed results of this data collection – including references to the most up-to-date strategic documents on digital education and when they were released – are presented in Annex Table 2.A.1.

Even where high-level strategies for digital education exist, there remains significant variance with respect to the content, depth of discussion, and concreteness of the goals formulated. For example, differences can be observed in the types of uses of digital technology targeted by strategic documents (e.g. whether they contain clauses on advanced technologies) and the extent to which they are linked to specific implementation instruments. The subsequent sections explore the current landscape of high-level digital education strategies in OECD and EU countries and illustrate how it has evolved in recent years.

Less than half of OECD and EU countries had an up-to-date strategy specifically for digital education both before and after the pandemic

Prior to the pandemic, the vast majority of OECD and EU countries covered strategic aspects of digital education in a specific strategic document or as part of a broader strategy (for instance, on education or digital innovation). However, less than half of OECD and EU education systems had a strategy *specifically* for digital education as shown in Figure 2.1.

While broader strategies have the potential advantage of aligning policies for digital education with wider social and education goals, they often provide only a brief and superficial discussion of digital education issues. **Germany** provides an example for a country that combines the benefits of both types of strategies. Next to its specific strategy for digital education which is implemented through the ‘digital school pact’ (Kultusministerkonferenz, 2017^[5]; Bundesministerium für Bildung und Forschung, 2022^[6]), the German federal government has recently published an overarching strategy for the implementation of digitalisation reforms (Die Bundesregierung, 2021^[7]). This broader strategy provides a detailed catalogue of digitalisation initiatives planned across a range of policy areas, featuring concrete goals and implementation steps for each project. By including the ‘digital school pact’ as one of these initiatives, the strategy links education sector specific objectives with broader digitalisation goals.

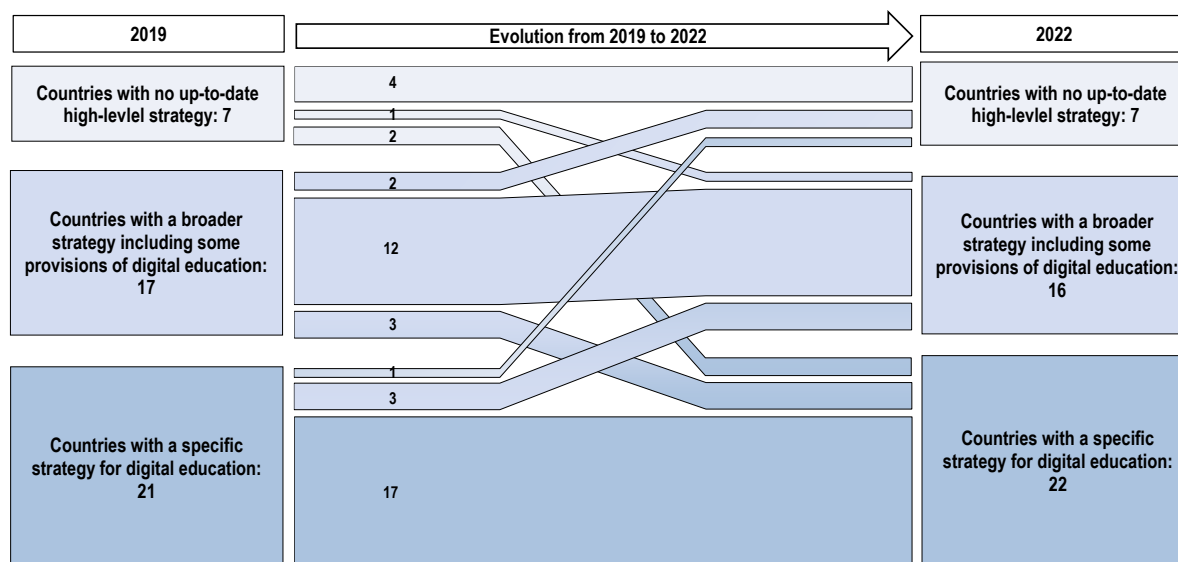
Including digital education in a broader strategy on digital innovation or skills also risks a misalignment of goals: while digital education strategies should focus on how digital technologies can support better *education outcomes*, broader strategies for digital innovation or skills usually narrowly discuss education as a means to boost digital skills for innovation or economic progress (van der Vlies, 2020^[3]). Indeed, the promotion of skills for the digital transformation featured as one of the top digital policy objectives of OECD countries in 2016 and 2019. In 2016, for example, all 38 countries that replied to the OECD Digital Economy Policy Questionnaire had at least one type of ICT education and training policy in place (OECD, 2017^[8]). Yet, digital technologies can improve a range of education outcomes, far beyond the acquisition of digital skills. For example (as discussed in Chapter 3), well-designed and implemented learning analytics can improve the quality of education provision at all levels of education. Considering digital education solely through the lens of developing digital skills is thus insufficient to unlock its full potential.

Prior to the pandemic, a Eurydice review of education systems included a stocktake of specific and broader strategies for digital education in European countries (European Commission/EACEA/Eurydice, 2019^[4]). In the data collection process described in Box 2.1, the OECD updated this information in 2022 and complemented it with data on OECD countries outside Europe. Figure 2.1 below illustrates how the strategic provisions in OECD and EU countries have changed over time (differentiating between specific strategies, broad strategies or no strategic objectives for digital education). The graph indicates that the overall number of education systems that have specific strategies for digital education remained roughly the same between 2019 and 2022 at around half of OECD or EU member countries. Since the pandemic, only two countries that did not have a strategic vision specifically for digital education introduced a comprehensive strategy dedicated to this topic (**Lithuania** and the **Netherlands**). Another three education systems, which previously captured their objectives for digital education in broader strategies, released more comprehensive specific guidance (**Croatia**, the **Flemish Community of Belgium** and **Finland**).

This relatively low number of countries that introduced new specific strategic guidance for digital education since the pandemic contrasts with a high level of activity in updating strategic documents where they already existed in 2019: more than half of the 17 countries that already had a specific strategy for digital education in 2019 updated this strategy in the last three years. Out of these 17 countries, only one did not update its digital education strategy upon expiration whilst another three pivoted to including their objectives for digital education in broader strategies (Figure 2.1).

Figure 2.1. Evolution of high-level strategies for digital education in OECD and EU countries from 2019 to 2022

Existence of high-level strategies for digital education by type of strategy



Notes: This figure refers to broader strategies as national digital or education strategies with some provisions for digital education. In most cases, these strategies only take superficial notice of policies for digital education and do so only insofar as they promote digital innovation and a digital economy. Specific strategies for digital education have the goal of improving education outcomes through digital education and tend to provide more extensive and concrete digital education policy measures.

The figure includes information on the existence of high-level strategies for digital education from all OECD member countries (the Flemish, French- and German speaking communities of Belgium are counted separately) as well as of those non-OECD member countries that are part of the European Union (Croatia, Bulgaria, Romania, Cyprus and Malta).

Information on the existence of high-level strategies was collected from national administrative education units or through background research by the OECD. Annex Table 2.A.1 provides further details on the strategies for digital education as well as information on the sources of evidence.

The large investments in and expanded use of digital technology in recent years call for the continuation of a co-ordinated and strategic approach to digital education which builds the foundation for quality assurance, monitoring and evaluation. In fact, regular updates of strategies for digital education are necessary to ensure alignment with the evolution of technology and governments' strategic goals.

The strategic approach to digital education may also vary across levels and sectors of education. In higher education systems, for example, digital education objectives are often included in broader digital transformation strategies – such as the *Harnessing Digital: The Digital Ireland Framework* in **Ireland** (Government of Ireland, 2022^[9]) – or in digital education strategies comprising the entire education system. However, some higher education systems have set plans exclusively focusing on higher education. **Hungary**, for example, adopted a Digital Education Strategy and Midterm Policy Strategy (“Shifting of Gears”) that established system-wide higher education digitalisation objectives for the period 2016-20. **Finland**, too, has a dedicated digital strategy for its higher education system, Digivisio 2030 (Digivisio2030, n.d.^[10]) while **Norway** has recently reviewed its higher education digitalisation strategy in light of the experience of the COVID-19 pandemic (Ministry of Education and Research, 2023^[11]).

Where they exist, strategies for digital education are focused on basic technologies rather than advanced applications

In most OECD and EU countries, digital education strategies focus on digital infrastructure and digital learning environments, whilst addressing challenges of fostering digital competence and bridging digital divides (van der Vlies, 2020^[3]). Improving access to high-speed Internet connection and digital devices (e.g. computers) is at the core of many national strategies for digital education. Objectives for digital learning environments focus either on easier access to quality learning resources or platforms for students and teachers (e.g. Massive Open Online Courses [MOOCs] and other digital educational resources), or on developing digital learning environments in schools and classrooms (e.g. through learning management and information systems). Digital education strategies also tend to focus on managing the challenges associated with digital education, including the development of digital skills (among students and teachers), bridging digital divides, and addressing privacy and security concerns.

Advanced technologies such as AI or blockchain rarely feature explicitly in digital education strategies of OECD and EU countries and – when mentioned – they are addressed in rather generic terms. **Japan** represents an exception to this pattern. Its strategy for digital education focuses on the use of advanced technology to support learning. While the strategy also touches on more common issues such as the availability of hardware and teachers' digital skills, many parts of the strategy are dedicated to themes such as the use of AI, virtual reality or big data in education (Ministry of Education, Culture, Sports, Science and Technology - Japan, 2019^[12]).

Digital education strategies vary significantly in their depth and concreteness, and often lack implementation, governance and funding mechanisms

Even among countries with strategies for digital education, there is significant variation in the concreteness and depth of their objectives. Some strategies for digital education state rather aspirational goals and only discuss policies in broad general terms while others specify concrete, time-bound policy measures for each of their broader goals. In fact, digital education strategies often lack a concrete implementation roadmap (van der Vlies, 2020^[3]), putting them at risk of only representing a statement of good will rather than having concrete policy implications. Evidence from EU countries also shows that digital education strategies often lack explicit monitoring or evaluation mechanisms (European Commission/EACEA/Eurydice, 2019^[4]). Further analysis on this matter is provided in Chapter 9 of this report.

Systematic information on the governance structures for monitoring and co-ordinating the implementation of digital education strategies, on roles and responsibilities for implementation or on co-ordination mechanisms is often absent from digital education strategies. In countries that lack digital education strategies but where digital education is referred to in wider digital strategies, responsibilities for the development, implementation and monitoring are likely to be more scattered. An increasing number of countries allocate such responsibilities to a ministry, body or function in charge of digital affairs (Gierden and Leshner, 2022^[13]). Though increasing in number, fewer countries allocate responsibility to an above-ministerial body or function which might be better positioned to align and co-ordinate policies (Gierden and Leshner, 2022^[13]; OECD, 2019^[14]).

Further, little is known about the budgets associated with digital education strategies as most of these documents do not explicitly reference underlying funding provisions. However, some information is available about the funding of general digital strategies. For countries that have a budget for their national digital strategy, financial resources are either explicitly attached to the strategy or draw on the budgets of different ministries or agencies with responsibility for the implementation of the strategy (OECD, 2020^[15]; Gierden and Leshner, 2022^[13]). Budgets explicitly tied to national digital strategies can better support co-ordination and enhance accountability. In contrast, more decentralised funding might simply be taken from ministries' existing funds and thereby result in underfunding (Gierden and Leshner, 2022^[13]). In 2019,

less than a third of the 34 countries covered by the OECD Digital Economy Policy Questionnaire had a digital budget explicitly tied to their national digital strategy (Gierten and Leshner, 2022^[13]). This suggests that the majority of digital strategies lacked sufficient backing with funding mechanisms.

Achieving the goals of digital strategies may also be hampered by government policies that work at cross-purposes to their stated aims. In **Hungary**, for example, higher education institutional funding methodologies, regulation of education offerings, academic career policies, and the accreditation system were identified as having potentially limited the uptake of digital technologies in teaching and learning, as well as the extent of the offer of hybrid and online study programmes (OECD, 2021^[16]). Subsequently, Hungary has commenced a number of reforms aiming at aligning its system features to support digital higher education, as part of its efforts to modernise higher education teaching and learning in general (OECD, 2023^[17]).

Promising approaches to developing digital education strategies

This section outlines some promising policy approaches related to the development of digital education strategies, based on available evidence and recent national examples.

Recognise the benefits of a coherent and co-ordinated strategy for digital education, linked to concrete implementation instruments

A coherent and co-ordinated strategy reflecting a vision for digital education and underpinned by concrete funding and regulatory instruments can support more effective policy design and implementation. The OECD Policy Framework for Sound Public Governance highlights a number of baseline enablers of better policy design and implementation. Commitment, vision and leadership to enhance the sustainability of policies and reforms feature among these enabling factors (OECD, 2020^[18]). Commitment for reform at the appropriate political level can be expressed through a government vision. Evidence from OECD country reviews shows that governments with capacity to formulate a strategic vision and effectively communicate it internally and externally are more likely to enhance policy coherence (OECD, 2020^[18]).

Countries may have different rationales or objectives in their digital education strategies. Commitment to digital education reforms can vary, depending on education systems' state of digital development, budgetary pressures or alternative reform priorities. A strategy for digital education is not a necessary or mandatory condition for governments, but rather a highly desirable feature that will help communicate the vision and secure stakeholders' commitment. In addition, as illustrated by the analytical framework described in Chapter 1, a digital education strategy can specify in a co-ordinated way the implications of digital education for a range of policy areas, such as infrastructure, data privacy and security, human and financial resources, institutional capacity, and educators' professional learning.

A coherent and co-ordinated strategy for digital education can address existing challenges in the area of digital education more efficiently, better target resources to where they are most needed, and ensure that policy efforts have mutually reinforcing effects. When underpinned by concrete implementation instruments, including funding and regulation, a digital education strategy can increase countries' abilities to seize the potential of digital technologies for their education systems. In **Australia**, the Schools Digital Strategy of New South Wales provides an example of a coherent and co-ordinated digital education strategy (Box 2.2). Other notable examples include:

- The Digital Strategy for Schools to 2027 in **Ireland**, which relies on a three pillar approach that includes: i) embedding digital technologies in teaching, learning and assessment (taking a learner-centred approach and including objectives in the areas of school leadership, teachers professional learning, digital content, curriculum and assessment, etc.); ii) digital technology infrastructure (with objectives around the funding of digital infrastructure, the provision of broadband connectivity to

schools, the provision of guidance and procurement mechanisms to schools, etc.) and a more forward-looking pillar around iii) policy, research and digital leadership (Department of Education Ireland, 2022^[19]). The strategy builds upon and develops the priorities of the EU Digital Education Action Plan as well as of the wider Harnessing Digital – The Digital Ireland Framework. It is the result of extensive consultations with a range of stakeholders (education institutions, teachers, parents and students) and other countries with experience in the digitalisation of their education systems. An Implementation Plan is associated to the strategy, with a first implementation period covering 2023-2024, after which a review will be carried out which will support the preparation of a second implementation period.

- Similarly, the programme of school digitalisation until 2030 of the **Slovak Republic** revolves around strategic goals in five areas: i) digital infrastructure, ii) Electronic services and internal information system of the ministry, iii) Digital technologies and digital education content in the curriculum, iv) Skills and competences for the digital economy and v) Security in the information space (Ministry of Education of the Slovak Republic, 2021^[20]). The Strategy is accompanied by an action plan which lists necessary policy actions with reference to the strategic goals for all relevant institutional players including the ministry, schools at primary and secondary level as well as universities. The actions are also assigned a concrete timeframe and funding channels (Ministry of Education of the Slovak Republic, 2021^[21]).

Next to implementation instruments, some countries have introduced funding instruments for their digital education strategies:

- In **Germany**, the ‘digital school pact’ provides three billion euros of federal funding for the measures laid out in its digitalisation strategy. The German federal states have to report back to the central government on the implementation of the strategy, resulting in regular progress reports.
- Other countries have dedicated funding from the European Union for digital education. For instance, **Spain**’s latest strategy for digital education has budgeted EUR 301 million of funding from the Recovery, Transformation and Resilience Plan to the improvement of teacher digital competence. Similarly, the E-schools project in **Croatia** which implements digital reforms based on Croatia’s strategy for digital education relies on funding from the European Regional Development Fund and the European Social Fund.

Align digital education strategies to the wider policy ecosystem

Strategies and policies for digital education cannot be conducted in isolation from policies outside of the education realm. Countries need connected, multi-dimensional policies to address the challenges and make the most of opportunities brought about by the digital transformation, with education and skills-related policies at the heart of their policy efforts (OECD, 2019^[14]). Without co-ordination and the necessary policy framework in place (e.g. education policies, labour market policies), technological innovation is unlikely to translate into increased productivity (Andrews, Nicoletti and Timiliotis, 2018^[22]).

Policies for digital education need to be aligned with other policy areas that matter for both the extent to which countries seize the general benefits of the digital transformation, and for enabling a successful digital education. In particular, a multi-sectoral policy effort is crucial for supporting access to and innovation in digital education infrastructure (Chapter 6). Co-ordinating education policies with policies outside of the education realm also matters for building capacity for digital education (Chapter 7). While teachers’ and school leaders’ professional learning falls within the scope of education policies, building capacity among local and sub-central authorities with responsibility for digital education and supporting parents as digital education facilitators likely requires policy efforts beyond the education sector. Such policies can include, for instance, labour market or social policies to address financial or time-related barriers to adult participation in training, and public employment policies.

Mapping the range of policies with implications for digital education that sit outside of the education realm, as well as their connections and complementarities with digital education policies is an important first step in the design of a comprehensive and co-ordinated policy ecosystem that can effectively enable and support digital education. While the exact connection of digital education policies with other policies will vary from one jurisdiction to another, it may often include, for example: telecom infrastructure-related policies, business environment and competition policies, labour market policies, regional development policies, regulatory policies regarding the use of digital tools and social policies that bear on participation in/support for education and training. For instance, the new strategy for digital transformation in the higher education sector in **Norway** was developed by the Ministry of Education and Research, in collaboration with a working group comprising education institution representatives, the business community, student organisations and the Norwegian Directorate for ICT and Joint Services in Higher Education and Research (UNIT – now subsumed into Sikt, a new organisation for the knowledge sector). The consultation process resulted in the identification of six different strategic priority areas, with associated action points for each strategic objective. The strategy also identified the other relevant policy developments in the sector, such as the strategy for flexible and decentralised education at vocational colleges, university colleges and universities, the white paper on data economy, and the national strategy for Artificial Intelligence (Ministry of Education and Research, 2023^[11]).

Ensuring a co-ordinated policy approach for digital education also requires connecting digital education strategies to wider education system strategies and priorities. Indeed, the use of digital technologies is not an end in itself, but a means to education goals. Some countries have thus chosen to integrate their digitalisation-related objectives in their wider education strategies. This can be a promising approach, provided that it does not sacrifice the depth and comprehensiveness of the discussion of digital education. For instance, **Estonia** integrated a digital transformation programme in its lifelong learning strategy. While the strategy has the key goals of creating diverse and accessible learning opportunities, competent and motivated educators as well as learning options that are responsive to societal needs, concrete digitalisation reforms are proposed to achieve these objectives. The centrality of digital education in the Estonian education strategy is also reflected in the use of indicators on digital skills to benchmark the outcomes of the strategy (Ministry of Education and Research of the Republic of Estonia, 2021^[23]).

A coherent approach to digital education spanning several education levels is also important. The integration of digital technologies in learning may involve different strategies at different ages. Education systems play a key role in developing the skills people need to thrive in a digital world whether at young ages (e.g. to help children navigate a digital world to which they are exposed increasingly early) or later in life (e.g. to adapt to changing labour markets or digital public services). Each education level is a building block for subsequent ones in supporting individuals to seize the potential of digital technologies for learning while mitigating associated risks. This requires in turn a continuum of digital education-related policies, tailored to specific challenges faced by individuals at different ages but embedded in a wider lifelong learning perspective. In **Hungary**, for example, the Digital Education Strategy has a pillar structure, following students' learning path throughout all levels of public education to higher education and adult learning, while a set of horizontal pillars span the sectors of education (e.g. monitoring learning paths, accessibility for persons with disabilities, security) (Digital Success Programme, 2016^[24]).

Account for the governance arrangements of education systems, while aiming for policy coherence

While digital education policies should be aligned with the wider policy ecosystem, they also require co-ordination between different education policy levers (e.g. combining infrastructure investments with capacity building) and the different levels of policy intervention involved in their implementation (e.g. between national and subnational authorities). There is a need to ensure that digital education strategies address the relevant policy levers at each level of the system and include mechanisms to communicate the intended goals to the respective authorities.

Delineation of responsibilities is key for the successful implementation of digital education strategies and the accountability of respective authorities, especially in education systems with complex governance structures.

Co-ordination efforts must also bridge the increasing complexity of education system governance. Most OECD and EU countries have experienced increased decentralisation and school autonomy over the past decades. In addition, a range of institutions and entities are involved in the governance of education systems (such as quality assurance agencies, inspectorates, funding agencies and professional learning organisations.). Thus, multi-level decision-making processes with fluid links between actors at different levels increasingly characterise governance arrangements in OECD systems (OECD, n.d.^[25]; Burns and Köster, 2018^[26]).

In such a context, there is no “one-size fits all” approach for the governance of digital education strategies or policies. Governments need to give consideration to the allocation of roles and responsibilities throughout the system that best suits their context, strengthen co-ordination mechanisms and ensure that the different entities or levels of government in charge of digital education have sufficient capacity to deliver on their responsibilities (OECD, 2018^[27]). Planning and implementation of digital education policies also requires careful consideration and understanding of decision making regarding the use of digital technologies in education.

Horizontal co-ordination mechanisms can be promoted at the different levels of the system, whether through specific co-ordination structures at the central level (e.g. the **Digital Luxembourg** initiative, Box 2.2) or at lower levels of the system (e.g. by providing guidance, supporting platforms for collaboration, pooling of administrative resources across schools or municipalities, or regulating co-operation) (OECD, 2018^[27]). The need for co-ordination is increasingly recognised by governments. In **France**, for example, the Economic, Social and Environmental Council, a consultative assembly to the government and parliament, has called for more co-constructed policy efforts for digital education between the central administration, local and regional authorities (Gariel, 2021^[28]).

In more decentralised education systems, policy efforts should aim to set and communicate the strategic directions at central level, devise adequate steering mechanisms and incentive structures for lower levels of governance, and build capacity at the lower levels of the system (e.g. regional and local authorities and schools) which hold ultimate responsibilities for planning and decision making in the area of digital education.

Box 2.2. Examples of co-ordinated policy approaches for digital education and skills strategy development

Co-designing comprehensive strategies to guide policy development and implementation for digital education: The New South Wales Schools Digital Strategy (Australia)

The government of New South Wales has designed a Schools Digital Strategy that provides a seven-year roadmap to enable schools and learners to develop and thrive in the area of digital education. The Strategy is the result of a two-year long process in which the government engaged with leaders, teachers and support staff in schools throughout New South Wales to understand their challenges and reflect on potential solutions (NSW Government, 2022^[29]). The Strategy puts forward five investment themes: Digital Support & Innovation Digital Devices; Network & Infrastructure; Digital Maturity & User Capacity; Digital Content, Experience & Data. Investments in these areas will be based on previous and existing investments of the Department of Education and will be targeted across students and schools depending on their identified needs. The Department of Education and the New South Wales

Treasury also co-designed an investment logic map for the strategy that examines the opportunities, drivers and initiatives to be implemented, as well as expected outputs (NSW Department of Education, 2019^[30]).

The Schools Digital Strategy is specifically linked to a range of other government strategies and policies, including Digital NSW (the digital strategy of New South Wales), the Department of Education Strategic Plan 2018-2022, the Connecting Metro/Country Schools Program (with a focus on schools' physical infrastructure) and the 20-Year Economic Vision for Regional New South Wales (NSW Department of Education, 2019^[30]).

Fostering horizontal government co-ordination for the digital age: the Digital Luxembourg initiative

The Digital Luxembourg initiative was created in 2014 to support the country's digitalisation and skills development policies. It is a horizontal and multidisciplinary government initiative that involves more than 60 public and private stakeholders from a range of areas, including ministries, researchers, innovators, the NGO sector and companies (OECD, 2019^[14]; Digital Skills and Jobs Platform, 2021^[31]). The initiative is co-ordinated by the Department of Media, Connectivity and Digital Policy and takes a holistic policy approach, focusing on the improvement of digital skills, the development of a digital ecosystem (e.g. through digital tech funding), the design of policies for the digital era (including open data regulations), digital infrastructure investments and e-government (SMC, 2022^[32]; OECD, 2019^[14]). While the initiative is not focused on digital education per se, it has supported more than 25 projects focused on the development of digital skills and the effective use of digital technologies in education (e.g. projects focused on coding, game development or big data analysis in schools). Digital Luxembourg supports new or existing projects for digital transformation, by enabling public-private partnerships, facilitating access to funding and enhancing the projects' visibility (Digital Luxembourg, n.d.^[33]).

While at the time of its launch, digitalisation initiatives in Luxembourg remained relatively limited and scattered, the Digital Luxembourg initiative has resulted in a wealth of digitalisation-related projects underpinning a broader national strategy (Digital Luxembourg, 2020^[34]). For instance, in the area of skills development for digital education, the initiative has enabled the transition from a handful of training opportunities for selected groups to comprehensive and broad training targeted at all citizens (from school education to universities, businesses and training centres). It is increasingly expanding its focus on the development of advanced digital skills for AI or blockchain. Digital Luxembourg also helped set up an innovation ecosystem in Luxembourg, through seed funding for tech start-ups via the Digital Tech Fund (a joint public-private partnership launched in 2016) (Trésorerie de l'Etat - Luxembourg, 2016^[35]; Digital Luxembourg, 2020^[34]).

Adapt digital education strategies and policies to emerging technology requirements and needs

As new digital technologies become available to support teaching and learning processes, education policy makers need access to updated information about technological evolutions and associated requirements (e.g. in terms of network bandwidth, computing power, data storage, training, update and maintenance). Performing horizon scanning and taking stock of technological evolutions and developments can enhance the preparedness of education systems in an ever-changing digital field. Evidence on how countries currently examine the evolution of digital education technologies is often anecdotal, but some countries have dedicated institutional arrangements to examine technological developments and their implications for education systems:

- In **Switzerland**, Educa is the specialist agency for digital technologies and education set up by the Swiss Conference of Cantonal Ministers of Education and the State Secretariat for Education,

Research and Innovation. It tracks developments in digital technologies with a focus on their application in education, assessing them and their potential use with respect to the strategic goals of the Confederation and the cantons in terms of enhancing the quality of education (Educa, n.d.^[36]). It also provides support to the education sector in preparing to address challenges related to digital education, and it develops and disseminates knowledge and expertise on an effective use of digital technologies in education. Its priority areas of focus and projects are adapted regularly depending on evolving needs. Beyond evolving technology requirements, digital education strategies or overarching policies may also need further adaptation based on emerging feedback or needs from the field.

- In the **United States**, the Office for Educational Technology of the Department of Education is responsible for guiding and overseeing the use and integration of technology in American education systems (Office of Educational Technology, n.d.^[37]). Part of its mission is to ensure equity of access to the enhanced learning experiences made possible by technological developments. To that end, it conducts research on cutting edge technologies and their implications for education systems and makes the results widely available. It also provides information to state authorities, school districts and others about the available means to fund and use digital technologies in education systems. Its activities are intended to improve learning outcomes across education systems, including for K-12 education, higher education and adult education.
- **Italy's** National Institute for Documentation, Innovation and Educational Research (INDIRE), a research organisation of the Ministry of Education, researches and tests new technologies for improving teaching and learning, including emerging technologies (INDIRE, n.d.^[38]). For example, a current research project (funded by ERASMUS+) evaluates different approaches to the use of AI in teaching and learning.
- Other countries, such as **Germany**, have designed their digital strategies as living documents that they update on a regular basis (Gierten and Leshner, 2022^[13]).

Key messages

Policies for digital education require the mobilisation of several policy levers and co-operation with a range of stakeholders. These complexities call for a co-ordinated approach. A well-designed strategy for digital education which is aligned with the wider policy ecosystem and specific national governance arrangements can help to tie together the relevant policy streams and provide an overarching vision for digital education.

Currently, countries across the OECD and EU differ significantly in the extent to which they leverage strategic documents to co-ordinate digital education policies: Some countries provide nuanced strategic documents specifically for digital education whilst others treat digital education only superficially in broader strategies on education or digital skills. The chapter also presents some examples of strategic visions which are paired with concrete funding and implementation instruments – such as time-bound action plans or designated budgets for digital education.

Regardless of the type of strategic document, most OECD and EU countries limit their strategic aims to basic uses of digital technologies: Advanced technologies – such as AI or blockchain – are rarely featured in strategies for digital education in OECD and EU countries. However, the chapter emphasises the importance of taking a forward-looking approach to strategic planning to provide effective guidance for digitalisation of education systems in the medium run and to unlock the full potential of digital technologies. Beyond considering already available uses of advanced technologies, this calls for further efforts to anticipate upcoming technological trends and their implications for education systems as well as including mechanisms to update and adjust strategic goals to the latest technological developments.

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Annex 2.A. High-level strategies for digital education

Annex Table 2.A.1. Collection of high-level strategies for digital education across OECD and EU countries

Country	High-Level Strategy or related documents	Notes on high-level strategy
Australia	<p>Digital Economy Strategy 2030 https://digitaleconomy.pmc.gov.au/sites/default/files/2021-07/digital-economy-strategy.pdf</p> <p>Examples for sub-central strategies:</p> <ul style="list-style-type: none"> • Schools Digital Strategy (New South Wales) • https://education.nsw.gov.au/about-us/strategies-and-reports/schools-digital-strategy • Digital Strategy 2022-2025 (South Australia): • https://discover.education.sa.gov.au/digital-strategy/index.html • Digital Strategy 2022-2026 (Queensland) • https://alt-qed.qed.qld.gov.au/publications/strategies/digital-strategy 	Australia's broader Digital Economy Strategy for 2030 discusses some measures for digital education on a national level in its skills and inclusion section. However, several states and territories have released their own specific strategies for digital education.
Austria ^c	<p>8-point plan 'digital school' https://digitaleschule.gv.at/</p>	Austria published a specific plan for digital education in 2020. The plan pins down eight concrete goals for school digitalisation.
Belgium (FL)	<p>Vision note 'Digisprong' https://publicaties.vlaanderen.be/view-file/40711</p>	In 2020, the Flemish Community of Belgium introduced a specific strategy for digital education which sets out goals and concrete action points for school digitalisation.
Belgium (FR) ^c	<p>Stratégie numérique pour l'éducation http://enseignement.be/download.php?do_id=14908</p>	The Digital Strategy for Education of the French Community of Belgium was passed in 2018 and sets out key action priorities along five axes of school digitalisation.
Belgium (GE) ^c	<p>Guidelines for Information and Media Literacy https://ostbelgienbildung.be/PortalData/21/Resources/download/schule_ausbildung/schulische_ausbildung/130916-LEITFADEN_IMK_-_Gesamtdokument.pdf</p>	The German-speaking Community of Belgium currently has no top-level education digitalisation strategy. The 'Guidelines for Information and Media Literacy' provide some orientation for school digitalisation, however, without a binding character. The guidelines are currently under revision to reflect the Community's increasing concern in digital education.
Bulgaria ^c	<p>National Program Digital Bulgaria 2025 https://www.mtc.government.bg/en/category/85/national-program-digital-bulgaria-2025-and-road-map-its-implementation-are-adopted-cm-decision-no73005-12-2019</p> <p>Digital Transformation of Bulgaria for the period 2020-2030 https://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&ld=1318</p> <p>Bulgaria 2030 https://www.minfin.bg/en/1394</p>	Bulgaria's specific education sector strategy (strategy for the effective application of digital technologies in education) expired in 2020. After that, the objectives of the strategy were adopted into a range of strategies with a broader focus.
Canada	<p>Canada's Digital Charter: A plan by Canadians, for Canadians https://ised-isde.canada.ca/site/innovation-better-</p>	On a national level, the 'Canada's Digital Charter' provides a broader strategy for digitalisation which also touches upon digital education. In addition, some provinces - such as Quebec - have introduced their own

Country	High-Level Strategy or related documents	Notes on high-level strategy
	<p>canada/en/canadas-digital-charter/canadas-digital-and-data-strategy</p> <p>Examples for sub-central level strategies:</p> <ul style="list-style-type: none"> • Digital action plan in education and higher education (Plan d'action numérique en éducation et en enseignement supérieur) (Quebec) http://www.education.gouv.qc.ca/dossiers-thematiques/plan-daction-numerique/plan-daction-numerique/ 	strategies at a sub-central level.
Chile	<p>Strategy for Digital Transformation 2035 (Estrategia de Transformación digital Chile Digital 2035) https://www.cepal.org/sites/default/files/events/files/estrategia_de_transformacion_digital_chile_2035_final_.pdf</p>	Chile's broad strategy for digital transformation briefly names improving educational quality through digital technologies as one of its objectives. However, the section dedicated to this goal is very short.
Colombia	<p>Technologies to learn: National policy to promote the innovation in educational practices through digital technologies https://colaboracion.dnp.gov.co/CDT/Conpes/Econ%C3%B3micos/3988.pdf</p> <p>Plan TIC - The digital future belongs to everyone (Plan TIC El Futuro Digital es de Todos) https://mintic.gov.co/portal/inicio/Atencion-y-Servicio-a-la-Ciudadania/Preguntas-frecuentes/107127:El-futuro-digital-es-de-todos</p>	<p>Colombia's specific strategy for digital education "Technologies for learning" was released in 2020 and builds on the Computers for Education (Computadores para educar) project. Apart from an extensive assessment of the state of digitalisation of Colombia's school system, the strategy presents several lines of actions going forward and identifies the relevant time frames for implementation. An action and monitoring plan in the annex of the strategy keeps track of the extent to which the specified objectives are accomplished over time and the financial resources invested in them.</p> <p>More broadly, the Plan TIC sets digitalisation goals for the wider economy and society, including some goals for the digitalisation of schools. The goals are complemented by corresponding indicators which the Ministry of Information Technologies and Communications uses to track the progress of digitalisation in quarterly reports.</p>
Costa Rica	<p>National Development Plan for Telecommunications 2022-2027 (Plan Nacional de Desarrollo de las Telecomunicaciones 2022-2027) https://www.crhoy.com/wp-content/uploads/2022/08/PNDT-2022-2027-Versio%CC%81n-09-agosto-2022.pdf</p>	Costa Rica has introduced an updated board digital strategy in 2022. While the plan states the fostering of digital skills as one of its key policy goals, it hardly makes direct reference to schooling and higher education policies.
Czech Republic ^c	<p>Strategy for the Education Policy of the Czech Republic up to 2030+ https://www.msmt.cz/uploads/brozura_S2030_en_fin_online.pdf</p>	The specific education sector strategy of the Czech Republic (Digital Education Strategy 2020) expired in 2020. After that, the country's objectives regarding the digitalisation of the education sector were integrated into its broader education sector strategy which briefly addresses digital education in one of its sub-sections.
Croatia ^c	<p>Strategic Framework for Digital Maturity of Schools and the School System in the Republic of Croatia (2030) https://www.carnet.hr/wp-content/uploads/2020/03/Strateski-okvir-za-digitalno-sazrijevanje-skola-i-skolskog-sustava-u-Republici-Hrvatskoj-2030.pdf</p>	Croatia's specific strategy for digital education was developed as part of the Croatian E-Schools project. It defines the areas and levels of the digital maturity of schools and is co-ordinated with the European Framework for Digitally Competent Educational Organisations. The Framework covers five areas and five levels of the digital maturity of schools.
Cyprus	<p>Digital Skills National Action Plan 2021-2025 https://www.dmrid.gov.cy/dmrid/research.nsf/planning_el/planning_el?OpenDocument</p>	The previous broader digitalisation strategy (Digital Strategy for Cyprus 2012-2020) explicitly suggested reforms in the education sector. To the author's best knowledge, the National Action Plan for Skills (2021-2025) now provides the most detailed up-to-date information on the cyriot school digitalisation endeavours.
Denmark ^c	<p>Denmark's digitalisation strategy - together on digital development https://fm.dk/udgivelser/2022/maj/danmarks-digitaliseringsstrategi-sammen-om-den-digitale-udvikling/</p> <p>2021 Policy agreement https://www.uvm.dk/aktuelt/nyheder/uvm/2021/dec/211206-ny-aftale-skal-styrke-boern-og-unges-digitale-dannelse</p>	Denmark's previous specific digitalisation strategy (Action Plan for Technology in Education) has been replaced by a new broad digital strategy which also includes its ambitions for the digitalisation of the education sector in a section on future-ready skills. In addition, Denmark has set aside DKK 52.5 million for digital education of children and young people through the 2021 Policy Agreement.

Country	High-Level Strategy or related documents	Notes on high-level strategy
Estonia ^c	Education Strategy 2021-2025 https://www.hm.ee/en/ministry/ministry/strategic-planning-2021-2035#documents	In 2021, Estonia introduced its new 'Education Strategy 2021-2035', a broad lifelong learning strategy which touches on digital skills in the context of making education responsive to social and labor market needs.
Finland ^c	New Literacies Programme for 2020-2023 https://uudetlukutaidot.fi/	Finland's 'New Literacies Programme' for the 2020-2030 period is part of the ministry's Right to Learn Program. The programme homepage provides detailed descriptions of the relevant ICT-related competences for different age groups.
France	Stratégie numérique pour l'éducation 2023-2027 https://www.education.gouv.fr/strategie-du-numerique-pour-l-education-2023-2027-344263	France released a new digital strategy for education in January 2023 which sets out a vision for digital education policy benefitting students, their parents, teachers and all agents in the education ecosystem. The strategy sets out the goals for digital education until 2027 along four axes: creating an enabling governance ecosystem for digital education, developing citizenship and digital skills through digital education, supporting the education community for digital education and designing effective digital systems.
Germany ^c	Education in the digital world https://www.kmk.org/fileadmin/Dateien/pdf/PresseUndAktuelles/2018/Digitalstrategie_2017_mit_Weiterbildung.pdf Supplementary recommendations on teaching and learning in the digital world https://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2021/2021_12_09_-Lehren-und-Lernen-Digi.pdf Recommendations for the digitalisation of teaching in higher education https://www.kmk.org/fileadmin/Dateien/pdf/PresseUndAktuelles/2019/BS_190314_Empfehlungen_Digitalisierung_Hochschullehre.pdf Progress report Digital Pact https://www.digitalpaktschule.de/files/220616_DigitalPakt_Schule_Fortschrittsbericht_barrierefrei.pdf	Germany introduced a strategy for 'Education in the digital world' in 2016 – a comprehensive digitalisation strategy covering school- and higher education – which was complemented with further recommendations on digital teaching and learning in 2021. This strategy built the foundation for digitalisation reforms such as the recent 'Digital Pact' which provides large-scale national support for federal states to invest in digital infrastructure. Separate recommendations exist for the higher education level.
Greece	Digital Transformation Bible 2020-2025 https://digitalstrategy.gov.gr/	The Greek 'digitalisation bible 2020-2025' exemplifies a broad digitalisation strategy with substantive provisions for digital education covering all education levels.
Hungary ^c	Digital Education Strategy of Hungary https://digitalisioletprogram.hu/files/0a/6b/0a6bfc72ccbf12c909b329149ae2537.pdf Public Education Strategy 2021-2030 https://2015-2019.kormany.hu/download/d/2e/d1000/K%C3%B6zvetlen%20A9si%20strat%C3%A9gia.pdf	Hungary released a detailed specific strategy for digital education in 2016. No update has been issued since. However, the Public Education Strategy for 2021-2030 also includes provisions for digital education.
Iceland	n/a	To the authors' best knowledge, Iceland does currently not have a strategy for digital education.
Ireland	Digital Strategy for Schools to 2027 https://www.gov.ie/en/publication/69fb88-digital-strategy-for-schools/#:~:text=See%20Also,-Overview,an%20ever%20evolving%20digital%20world.	Ireland recently introduced a specific strategy for digital education which covers the 2022-2027 period and will be accompanied by an action plan with concrete and time-bound policy actions.
Israel	National Digital Program https://www.gov.il/BlobFolder/news/digital_israel_national_plan/en/The%20National%20Digital%20Program%20of%20the%20Government%20of%20Israel.pdf	In its 2017 broad digital strategy, Israel sets out a vision for digitalisation of a range of sectors. There is a brief section dedicated to formal education specifically, although education is touched upon several times as a crosscutting theme.
Italy ^c	Piano Scuola 4.0	Italy launched a specific strategy for digital education in 2022 as foreseen by the national plan for recovery and resilience. It includes two main initiatives

Country	High-Level Strategy or related documents	Notes on high-level strategy
	https://pnrr.istruzione.it/wp-content/uploads/2022/07/PIANO_SCUOLA_4.0_VERSIONE_GRAFICA.pdf	focused on digital classroom infrastructure and fostering key digital skills.
Japan	<p>Promoting measures to utilise cutting-edge technology to support learning in a new era https://www.mext.go.jp/a_menu/other/1411332.htm</p> <p>Roadmap on the utilisation of data in education https://www.digital.go.jp/assets/contents/node/basic_page/field_ref_resources/0f321c23-517f-439e-9076-5804f0a24b59/20220307_en_education_outline_01.pdf</p> <p>Giga school program https://www.japantimes.co.jp/2021/03/22/special-supplements/japans-giga-school-program-equips-students-digital-society/</p>	In 2019, the Japanese Ministry of Education, Culture, Sports, Science and Technology introduced a specific strategy for digital education which – to the author’s best knowledge - still represents the most comprehensive strategy for digital education. In 2021, the government of Japan passed the Basic Act on Forming a Digital Society which showcased Japan’s commitment to fostering digital transformation and digital skills. Since then, the government made large investments in digital skills development, created the Digital Agency to co-ordinate the digital transformation and introduced several policy plans including the roadmap on the utilisation of data in education.
Korea	<p>Roadmap for Digital Talent Cultivation http://english.moe.go.kr/boardCnts/viewRenewal.do?boardID=265&boardSeq=92601&lev=0&searchType=null&statusYN=W&page=1&s=english&m=0201&opType=N</p>	The Korean government has recently announced to release a specific strategy for digital education with the aim to provide a million Koreans across education levels with the necessary digital skills by 2027. This plan follows previous white papers on ICT in Education. Further, there is a Information Education Plan on a provincial level which is updated annually but not publicly available.
Latvia ^c	<p>Digital Transformation Guidelines 2021-2027 https://digitalanedela.lv/wp-content/uploads/2021/09/Latvijas-Digit%C4%81%C4%81s-Transform%C4%81cijas-pamatnost%C4%81dnes-2021-2027.pdf</p> <p>Education Development Guidelines https://eprasmes.lv/wp-content/uploads/2022/02/Latvijas-lzglitiba-attsitibas-pamatnostadnes-2021-2027.pdf</p>	In Latvia, there are two broader strategies that have implications for education digitalisation: the Digital Transformation Guidelines 2021-2027 and the Education Development Guidelines 2021-2027.
Lithuania ^c	<p>Digital Transformation of Education https://www.e-tar.lt/portal/lt/legalAct/254ed330b95e11ec8d9390588bf2de65</p>	In 2021, Lithuania released the progress instrument ‘Digital Transformation of Education’ which pints down concrete actions for the digitalisation of education, building on the country’s national development plan.
Luxembourg	<p>Einfach Digital https://men.public.lu/fr/publications/dossiers-presse/2019-2020/einfach-digital.html</p>	In 2020, Luxembourg launched its new initiative ‘einfach digital’, succeeding the previous ‘digital4education’ initiative. In a 2022 policy survey conducted by the OECD Centre of Education Research and Innovation (CERI), Luxembourg further expressed the intention of updating the current strategy with learnings from the pandemic in 2023.
Malta	<p>National E-Skills Strategy 2019-2021 https://eskills.org.mt/en/nationaleskillsstrategy/Documents/National_eSkills_strategy.pdf</p>	Malta’s broad strategy for digital education expired in 2021. However, to the author’s best knowledge a new strategy is under development at the point of the writing of this document.
Mexico	n/a	To the author’s best knowledge, Mexico does currently not have an up-to-date digitalisation strategy for the education sector.
Netherlands	<p>Digitalisation agenda for primary and secondary education https://www.nederlanddigitaal.nl/binaries/nederlanddigitaal-nl/documenten/publicaties/2019/11/19/digitalisation-agenda-for-primary-and-secondary-education/Digitization+agenda+primary+and+secondary+education.pdf</p> <p>Value-Driven Digitalisation Work Agenda https://www.government.nl/documents/reports/2022/11/30/value-driven-digitalisation-work-agenda</p>	In 2019, the Netherlands released its first specific strategy for digital education, aiming to set the course of digitalisation in education. In addition, the broader digital strategy ‘Value-driven Digitalisation Work Agenda’ covers a range of aspects regarding the integration of digital skills in curricula and providing support to school institutions to teaching these skills.

Country	High-Level Strategy or related documents	Notes on high-level strategy
New Zealand	Digital Strategy for Aotearoa https://www.digital.govt.nz/assets/Digital-government/Strategy/Digital-Strategy-for-Aotearoa-English-PDF.pdf	New Zealand's broad digital strategy discusses digital education as a cross cutting theme. In a 2022 policy survey conducted by the OECD Centre for Education Research and Innovation (CERI), New Zealand has declared intentions of reforming its strategic framework for digital education.
Norway	Digitalisation strategy for Basic Education 2017-2021 (expired) https://www.regjeringen.no/no/dokumenter/framtid-fornylse-og-digitalisering/id2568347/ Strategy for digital transformation in the higher education sector https://www.regjeringen.no/en/dokumenter/strategy-for-digital-transformation-in-the-higher-education-sector/id2870981/	Norway's digitalisation strategies for higher and basic education both expired in 2021. To the best knowledge of the author, no further comprehensive strategy for digital education has been published since. In 2023, Norway updated its previous Digitalisation Strategy for the higher education sector to take into account lessons learned during the pandemic
Poland	Outlook on the Strategy for Digital Competences https://www.gov.pl/web/cyfrizacja/kompetencje-cyfrowe	Poland is currently in the process of developing a new strategy for digital competences.
Portugal ^c	Digital Transition Action Plan https://portugaldigital.gov.pt/wp-content/uploads/2022/01/Portugal_Action_Plan_for_Digital_Transition.pdf	Portugal's broad digitalisation strategy touches on school digitalisation under its pillar for 'Capacity building and Digital Inclusion'.
Romania ^c	Government Plan 2021-2024 https://gov.ro/fisiere/programe_fisiere/Program_de_Guvernare_2021%E2%80%942024.pdf	Romania's broader digital strategy (Digital agenda) expired in 2020. No comprehensive plan for education digitalisation followed. However, the government's concern for digitalisation is reflected in the 2021 Government plan.
Slovak Republic ^c	Programme of schools informatisation until 2030 https://www.minedu.sk/data/att/23246.pdf	In 2021, the government of the Slovak Republic passed a specific strategy for digital education which is supplemented by concrete action plans, the first of which covers the 2021-2024 period. This comprehensive strategy covers both school- and higher education.
Slovenia	Digital education action plan	In a 2022 policy survey conducted by CERI (OECD) Slovenia indicated to have released a digital education action plan within the last two years which has been developed through more than 30 workshops with various stakeholders
Spain ^c	Plan for the Digitalisation and Digital Competences in the Education System https://intef.es/Noticias/plan-de-digitalizacion-y-competencias-digiales-del-sistema-educativo-plan-digedu/ National Plan for Digital Skills https://portal.mineco.gob.es/RecursosArticulo/mineco/ministerio/ficheros/210902-digital-skills-plan.pdf	The Spanish Ministry of Education has recently launched a specific strategy for digital education (Plan for the Digitalisation and Digital Competences in the Education System) which determines four lines of action for digital education. This plan was created as one of the measures set out in the 2021-2025 National Skills Strategy.
Sweden ^c	National Strategy for Digital education https://www.regeringen.se/4a9d9a/contentassets/00b3d9118b0144f6bb95302f3e08d11c/nationell-digitaliseringsstrategi-for-skolvasendet.pdf	Sweden's specific strategy for digital education covers the time frame between 2017-2022. The National Agency for Education have been given the task to come up with a proposal for a new strategy on digital education covering the period 2023 to 2027.
Switzerland	Strategy of the EDK for addressing the digital changes of the education sector https://www.edk.ch/de/themen/transversal/digitalisierung?highlight=b8356241084a43b7af610deadca98a0a&expand_listingblock=1892124769a446d4993fdfeb24a3106	On a national level, the EDK (Conference of the Education Directorates of the Swiss Cantons) has published shared goals for education digitalisation of all cantons with respect to school digitalisation in 2018. A further document was released to assign responsibilities among the Cantons and the EDK in achieving these goals.
Republic of Türkiye	Education Vision for 2023 https://planipolis.iiep.unesco.org/sites/default/files/ressources/turkey_education_vision_2023.pdf	Türkiye's broad education strategy contains a short section on digital content and skills-backed transformation of the learning process.
United Kingdom	Realising the potential of technology in Education https://assets.publishing.service.gov.uk/government/uplo	In the UK, the most specific analysis of digital education policies is offered by the 2019 strategy on 'Realising the potential of technology in Education'.

Country	High-Level Strategy or related documents	Notes on high-level strategy
	ads/system/uploads/attachment_data/file/791931/DfE-Education Technology Strategy.pdf UK digital strategy https://www.gov.uk/government/publications/uks-digital-strategy/uk-digital-strategy#s3	<p>More recently, the 'UK digital strategy' features a section on digital skills and talent that focuses, among other things, on the strengthening of digital skills through school and university education.</p>
United States	National Education Technology Plan https://tech.ed.gov/netp/ Reimagining the Role of Technology in Higher Education – Supplement to the National Education Technology Plan https://tech.ed.gov/files/2017/01/Higher-Ed-NETP.pdf	<p>In the United States, the National Education Technology Plan published by the Office of Educational Technology of the Department of Education represents a national strategy for digital education. While the latest version stems from 2017, the plan is currently under revision. A separate strategy document exists on the role of digital technologies in higher education.</p>

Note: As part of the data gathering process, the OECD reached out to the national officials in the Eurydice country units of all EU member states. Superscript "C" in the country column indicates that the information displayed was obtained from national officials. For non-EU member countries as well as for those countries where no response was obtained, the table relies on background research conducted by the OECD. In particular, information from Van der Vlies (2020^[3]) was used as a starting point for further enquiries.



From:
Shaping Digital Education
Enabling Factors for Quality, Equity and Efficiency

Access the complete publication at:
<https://doi.org/10.1787/bac4dc9f-en>

Please cite this chapter as:

OECD (2023), “Strategic visions and policy co-ordination for digital education”, in *Shaping Digital Education: Enabling Factors for Quality, Equity and Efficiency*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/849af8d0-en>

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