

**DIRECTORATE FOR EDUCATION AND SKILLS
EDUCATION POLICY COMMITTEE**

Teacher policies to support the use of digital resources in the classroom

Draft Policy Brief

20-21 March 2025, OECD Conference Centre, Boulogne, France.

This document contains the draft policy brief “Teacher policies to support the use of digital resources in the classroom.” This draft will be presented at the 10th meeting of the Group of National Experts on School Resources (GNE-SR) on 20-21 March 2025 as part of Item 4.

Delegates to the GNE-SR are invited to:

- PROVIDE FEEDBACK on the draft Policy Brief “Teacher policies to support the use of digital technologies in the classroom”.
- PRESENT and SHARE relevant examples from their jurisdiction of teacher policies and initiatives supporting the effective integration of technologies in the classroom.

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Teacher policies to support the use of digital resources in the classroom

Abstract

The digital transformation of education is increasingly shaping the future of the teaching profession. The COVID-19 pandemic has contributed to a significant increase the use of digital education resources and many teachers have greatly enhanced their capacity to integrate digital technologies in their work. Yet, many educators continue to face barriers that prevent them from realising the full potential of digital resources to enhance teaching and learning. As digital technologies transform how education administrators, school leaders and educators perform their work, teacher policies need to be adapted to reflect this new reality and to provide continued support to the profession. This policy brief discusses how teacher policies can support and incentivise the effective use of digital technologies in the classroom. Drawing on insights from PISA 2022 and comparative data collected through the Policy Survey on School Education in the Digital Age, this policy brief presents evidence and policy examples addressing the following questions:

1. Which barriers do teachers face when integrating digital resources in the classroom?
2. What forms of central guidance and support can help teachers in working with digital resources?
3. Do professional standards and appraisal systems reflect the digital transformation of teaching?
4. Can working time arrangements be restructured to facilitate teachers' engagement with digital resources?
5. Which career structures reward innovative teaching and the effective use digital technologies?
6. How can teachers be assisted in integrating digital technologies in the classroom?

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Addressing barriers to the integration of digital resources in the classroom

1. In 2024, education ministries responding to the OECD Education Policy Outlook Survey considered digitalisation to be the second most important global trend to impact the teaching profession in 2025-30. 88% of ministries expected the integration of digital technologies into daily life and work to be of high or very high importance for attracting, retaining and nurturing teachers over the coming years (surpassed in importance only by demographic change) (OECD, 2024, p. 30^[1]). 84% of the responding ministries also reported that they were already taking policy actions to address this trend to a large or very large extent (OECD, 2024, p. 31^[1]).

2. Since the COVID-19 pandemic, schools' preparedness for the use of digital technology has improved considerably and countries have made significant investments in their digital infrastructure. Data from the OECD Programme for International Student Assessment (PISA) shows that the percentage of 15-year-old students whose principal believed that teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction has increased by 24 percentage points to 88% on average across OECD countries (OECD, 2023, pp. 409, Table II.B1.5.32^[2]). Over the same time period, the proportion of students whose principals agreed that their teachers have effective professional resources to learn how to use digital devices has increased from 64% to 76%, on average across the OECD (OECD, 2023, pp. 409, Table II.B1.5.32^[2]).

3. Despite these improvements in the digital preparedness of teachers and the more widespread use of technologies in schools, the potential of digital resources (especially of more complex and novel technologies), to improve teaching and learning remains far from exhausted (OECD, 2023^[3]). Drawing on insights from PISA 2022 and comparative data collected through the Policy Survey on School Education in the Digital Age (hereafter "the Policy Survey", see Box 1), this policy brief discusses policies that may help countries to overcome some of the barriers that may hold back the effective use of digital technologies in practice. Specifically, it focuses on the role of the following teacher policies:

1. Guidelines, strategic planning and central supports to promote teachers' use of digital resources;
2. Updating professional standards and appraisal frameworks to reflect new ways of working with technology;
3. Managing teachers' work to facilitate their engagement with digital resources;
4. Adapting career structures to facilitate and reward the effective use of digital resources in teaching;
5. Providing teachers with technical support and assistance in maintaining digital technologies.

Box 1. The Policy Survey on School Education in the Digital Age

The Policy Survey on School Education in the Digital Age was administered to collect international comparative evidence on digital school education policies. The survey was completed by 37 jurisdictions (26 OECD member countries, 7 sub-national entities and 4 non-member economies).¹ The Policy Survey and its associated outputs were designed to inform the OECD umbrella project *Resourcing School Education: Policies for the Digital Transformation of Education and Future-Readiness of Teachers*. The Policy Survey was administered over the course of 2024 and reflects the policies of participating jurisdictions in January 2025. The Policy Survey covers primary and secondary education (ISCED 1-3). The survey's complete results are presented in OECD (forthcoming), *"Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age"*.

Source: OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

Strategic plans, guidelines and central supports to promote teachers' use of digital resources

Many countries have included the use of digital resources for teaching in their central policy strategies and require schools to develop corresponding strategic plans

4. Given the central role of teachers in bringing about the digital transformation of schools, many OECD countries have made it a strategic priority to strengthen teachers' capacity for digital education and to promote the effective use of digital technologies. Results of the Policy Survey show that the use of digital resources for teaching is mentioned in all but one of the 32 central-level strategies guiding digital education policy in the participating jurisdictions. Of these systems, 7 include specific time-bound goals on the use of digital resources for teaching in their strategic documents and 19 describe specific policy initiatives on the subject (see Figure 1.2 in OECD [forthcoming]²).

5. For central-level strategies to lead to meaningful changes in the classroom, they need to be translated into practical actions at the school level. In line with this principle, responses to the Policy Survey suggest that the majority of responding jurisdictions require schools to engage in strategic reflections on their approach to digitalisation. 8 of 37 systems require schools to develop dedicated plans or strategies concerning digital education. An additional 15 of 37 systems require schools to cover the use of digital resources for teaching in more general plans or strategies they develop (Figure 1). The extent to which such school-level strategies can support teachers in the effective use of digital technologies will vary in

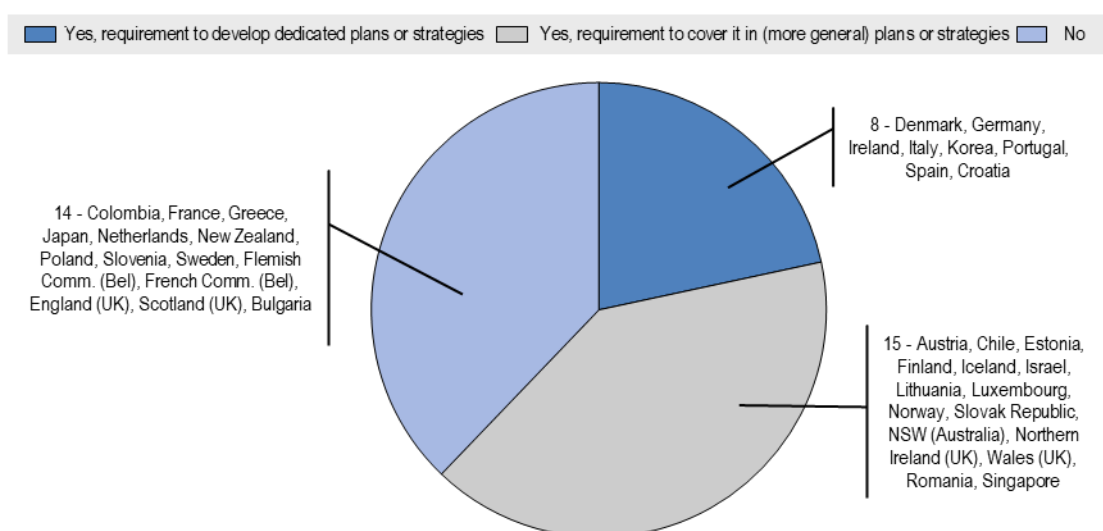
¹ The following jurisdictions responded to the Policy Survey on School Education in the Digital Age: Austria, Chile, Colombia, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Israel, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, New South Wales (NSW) in Australia, the Flemish Community of Belgium, the French Community of Belgium, England (United Kingdom), Northern Ireland (UK), Scotland (UK), Wales (UK), Bulgaria, Croatia, Romania and Singapore. Throughout this document, the terms "jurisdictions" and "systems" are used interchangeably to refer to the respondents to the Policy Survey.

² OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

practice, but they can be an important lever to align school-level practices with system-wide objectives and stimulate reflections on how they can be applied to each school's specific context (OECD, 2023^[4]).

Figure 1. School-level strategies for digital education

Number of jurisdictions with requirements for schools to develop plans or strategies concerning the use of digital technology for teaching



Note: Number of jurisdictions with available data = 37. See Annex Table A.1 for further details and individual jurisdictions' responses corresponding to this figure.

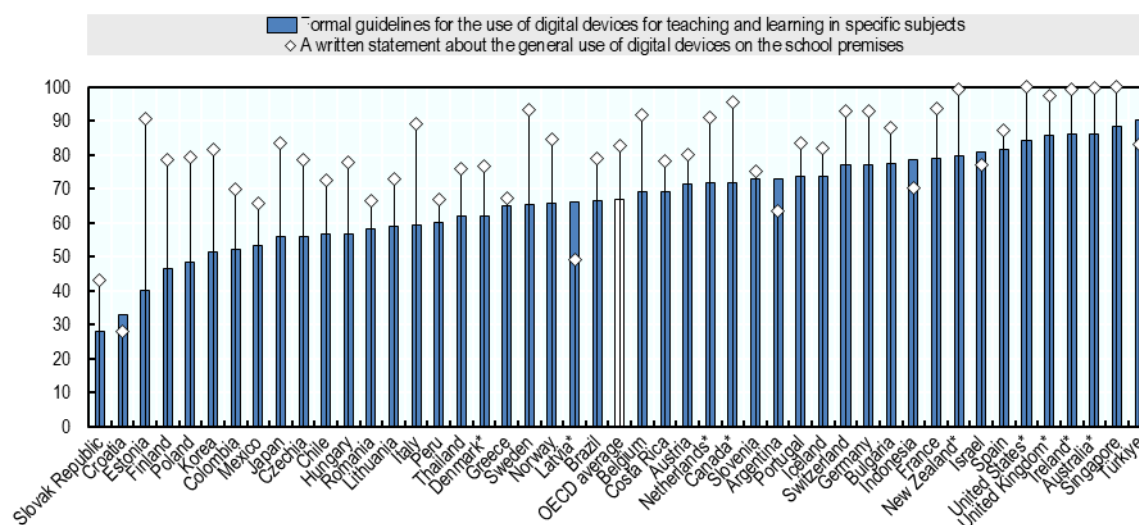
Source: Reproduced from OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*, Figure 1.4.

Many schools have written statements on the general use of digital resources, but pedagogical guidelines for digital education are less common

6. Issuing guidelines on the use of digital resources can be one means to spread best practices, to steer different actors' engagement with education technologies and promote their safe and effective use in the classroom (OECD, 2023^[3]). Guidelines on digital education resources can be issued at the central level or developed locally. They can cover both technical and pedagogical matters and be directed at a range of audiences, including teachers, students and other stakeholders. In PISA 2022, 83% of 15-year-old students across OECD countries attended a school with written statements about the general use of digital devices on school premises. In comparison, fewer students (67%) attended schools with explicitly pedagogical guidelines addressing the use of digital devices for teaching and learning in specific subjects (Figure 2). The presence of guidelines for digital education in specific subjects was positively and significantly associated with schools' preparedness for digital learning in 34 of the 81 countries and economies participating in PISA 2022, and across OECD countries, after accounting for the number of computers per student (OECD, 2023, pp. 184, Figure II.5.8^[2]).

Figure 2. School guidelines on the use of digital devices (2022)

Percentage of 15-year-old students whose school leader reported that their school has the following guidelines



Note: Entities marked with an asterisk (*) did not meet one or more PISA sampling standards and it is not possible to exclude the possibility of more than minimal bias based on the information available at the time of data adjudication.

Source: OECD (2023^[2]), *PISA 2022 Results (Volume II): Learning During – and From – Disruption*, Table II.B1.5.35, <https://doi.org/10.1787/a97db61c-en>.

Nearly all systems provide some form of central support for teachers' effective use of digital resources

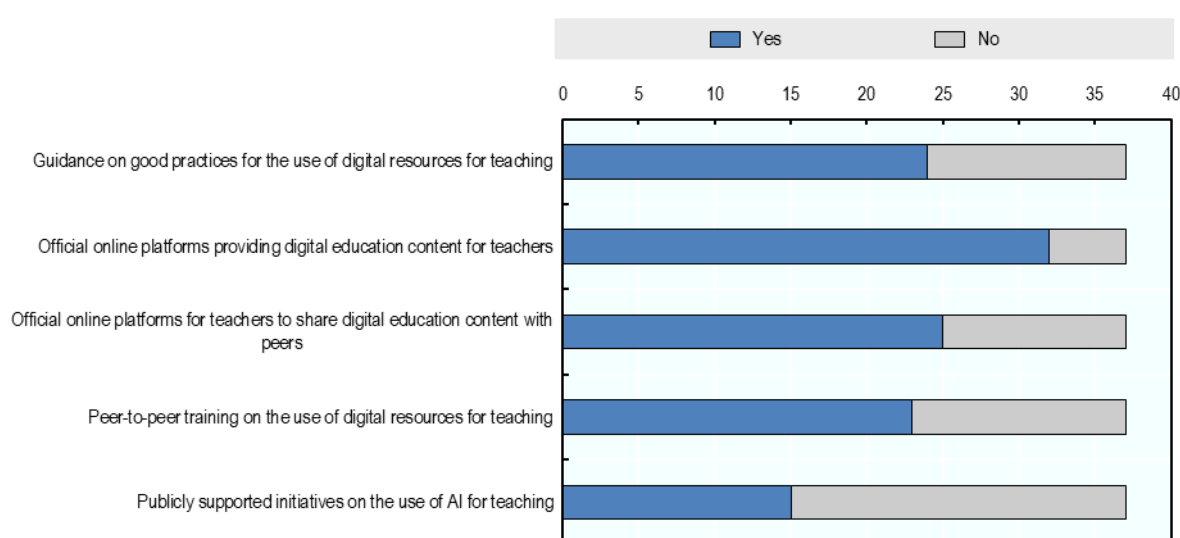
7. Even in education systems with a high degree of decentralisation or pedagogical autonomy, central authorities can use a range of policy levers or targeted initiatives to promote the effective use of digital technologies for teaching and learning. In fact, all but one of the 37 jurisdictions responding to the Policy Survey reported having some central initiatives in place to support teachers in their use of digital resources (Figure 3). Some of the most frequent initiatives involve the use of online platforms to provide teachers with materials to facilitate their work with digital resources or learn about their use. In 32 jurisdictions, teachers have access to official online platforms providing access to digital education content and 25 jurisdictions have platforms that allow teachers to share digital education content with their peers. Examples of such platforms include the following:

- In **France**, the Education Ministry's Digital Education Department operates *Édubase*, a national bank of digital educational resources. Designed for teachers, trainers and inspectors in primary and secondary education, *Édubase* provides streamlined access to pedagogical guides for all subjects, developed by teachers and validated by inspectors (Ministère de l'Éducation nationale, 2024^[5]; Ministère de l'Éducation nationale, 2025^[6]).
- In **Wales (United Kingdom)** the national teaching and learning platform "*Hwb*" provides universal access to bilingual resources, collaborative opportunities for educators and Microsoft Office software (Welsh Government, 2025^[7]). During the COVID-19 pandemic, *Hwb* played an important role in ensuring the continuity of education by providing free access to its virtual learning environment. Although engagement increased substantially, schools with higher proportions of students eligible for free school meals showed lower levels of participation (Sandu and Hampton, 2022^[8]).

8. In addition to these online platforms, 24 or 37 systems reported providing teachers with guidance on good practices for the use of digital resources and 23 systems support teachers' peer-to-peer training on the subject. In light of recent advances in artificial intelligence, 15 systems have also supported initiatives on the use of AI for teaching (Figure 3). In some education systems, these programmes are developed and co-ordinated by central-level agencies specifically dedicated to digital education and supporting teachers in the digital transition (OECD, 2023^[4]) (see Box 2 for examples).

Figure 3. Initiatives to foster the effective use of digital resources for teaching

Number of jurisdictions that reported having the following initiatives in place at the central level



Note: Number of jurisdictions with available data = 37. See Annex Table A.1 for further details and individual jurisdictions' responses corresponding to this figure.

Source: Reproduced from OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*, Figure 2.1.

Box 2. Central agencies providing teachers with guidance on digital education

The Knowledge Centre for IT in Teaching in Denmark

The Knowledge Centre for IT in Denmark (*Center for IT i Undervisningen*, CIU) aims to foster the use of digital resources in teaching. CIU offers professional development courses as well as networks for collaboration and knowledge exchange for pedagogical staff and school leaders. The centre also promotes the use of Virtual Reality (VR) technology in schools and in Vocational Education and Training (VET) (Digisprong Knowledge Centre, 2025^[9]).

The National Institute of Educational Technologies and Teacher Training (INTEF) in Spain

Spain's INTEF is responsible for promoting the integration of digital education technologies, co-ordinating professional collaboration and innovation among teachers, as well as developing and providing open educational resources and professional learning activities. For example, INTEF training opportunities on digital skills, guidelines on digital competences and other digital-related initiatives for a variety of stakeholders, including teachers, school leaders, students and parents (Ministerio de Educación, 2025^[10]).

Kennisnet in the Netherlands

Kennisnet is a central public agency in the Netherlands tasked with supporting the effective use of digital technology across the school sector, rather than in individual schools or school boards. Kennisnet is funded by the Dutch Ministry of Education, Culture and Science (OCW) (around EUR 13.5 million per year) and aligns its activities with the objectives and initiatives of the ministry. Its approach is based on the "Four in Balance" model, which emphasises balancing ICT infrastructure, digital learning materials, vision and expertise to align a school's approach to digital education with its overall pedagogical vision (Schouwenburg, 2022^[11]). Kennisnet offers an array of services for teachers, including professional development opportunities and a free platform to create, share and download digital teaching materials (*Wikiwijs*). Kennisnet is also facilitating networks of professionals involved in the implementation of education technologies (i-coaches and ICT co-ordinators) and in monitoring and evaluating the use of ICT in schools (Kennisnet, 2025^[12]).

Oide and its Digital Technology Division in Ireland

Oide is Ireland's comprehensive professional development service for teachers. *Oide's* Digital Technology Division supports teachers' use of digital resources through services such as online platforms with subject-specific educational contents, peer-learning and training opportunities, guidance and best practices for digital learning (Department of Education, 2025^[13]).

The Digisprong Knowledge Centre in the Flemish Community of Belgium

The Digisprong Knowledge Centre acts as a central hub for digital education in the Flemish Community of Belgium, providing expertise, guidance and resources for school leaders, teachers and technical support staff. For example, Digisprong offers teachers the *KlasCement* platform for open educational resources (Digisprong Knowledge Centre, 2025^[9]), as well opportunities for peer-learning and professional co-operation (Department of Education and Training, 2025^[14]).

Source: OECD (2023^[4]), *OECD Digital Education Outlook 2023: Towards an Effective Digital Education Ecosystem*, OECD Publishing, Paris, <https://doi.org/10.1787/c74f03de-en>, p. 200.

Updating professional standards and appraisal systems to reflect the role of digital resources in teachers' work

9. Professional standards or competency frameworks are used in many education systems to set expectations for high-quality teaching and specify the skills that successful teachers need. Professional standards can be used to integrate different elements of the teaching career, from initial teacher preparation and continuing professional learning to teachers' appraisal and career progression.³ They can also guide teachers in their self-evaluation and independent learning activities (OECD, 2019^[15]). Updating these professional standards to reflect the increasing presence of digital resources in schools is important to ensure that the profession remains future-ready and can help to incentivise teachers' effective use of digital resources .

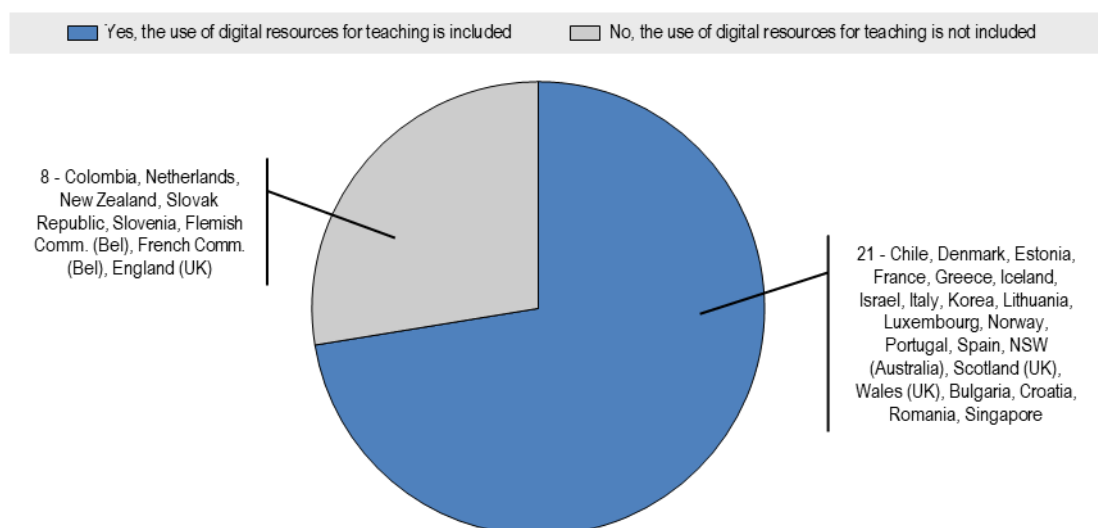
Most systems refer to the use of digital resources in teachers' professional standards

10. The great majority of jurisdictions participating in the Policy Survey (29 of 37) have professional standards or formal description of teachers' roles and responsibilities at the central level. Of these 29 systems, 21 included the use of digital resources for teaching in these professional standards, compared to only 8 systems that did not (Figure 4). To ensure that professional standards evolve and remain relevant amid rapid technological change, some systems have engaged in structured exercises to explore how teachers' roles may evolve (OECD, 2024^[1]). As part of the OECD's New Professionalism and the Future of Teaching project, for example, the **Flemish Community of Belgium** used "teacher personas" to explore how teachers might be affected by scenarios such as the increased use of AI and other digital tools in schools. The Community also engaged various stakeholders in "ambition loop" exercises to reflect on shorter-term improvements and the longer-term transformation of the teaching profession and to generate preferred future scenarios for the future of teaching and schooling (OECD, 2024, p. 29^[16]).

³ OECD (forthcoming), "Preparing teachers for digital education: Continuing professional learning on digital skills and pedagogies", *Education Policy Perspectives*.

Figure 4. The use of digital resources in teachers' professional standards or role descriptions

Number of jurisdictions that include the use of digital resources in teachers' professional standards or their formal role descriptions (ISCED 2)



Note: Number of jurisdictions with available data = 29. See Annex Table A.2 for further details and individual jurisdictions' responses corresponding to this figure. There were no differences between lower-secondary (ISCED 2), primary (ISCED 1) and upper-secondary education (ISCED 3).

Source: OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

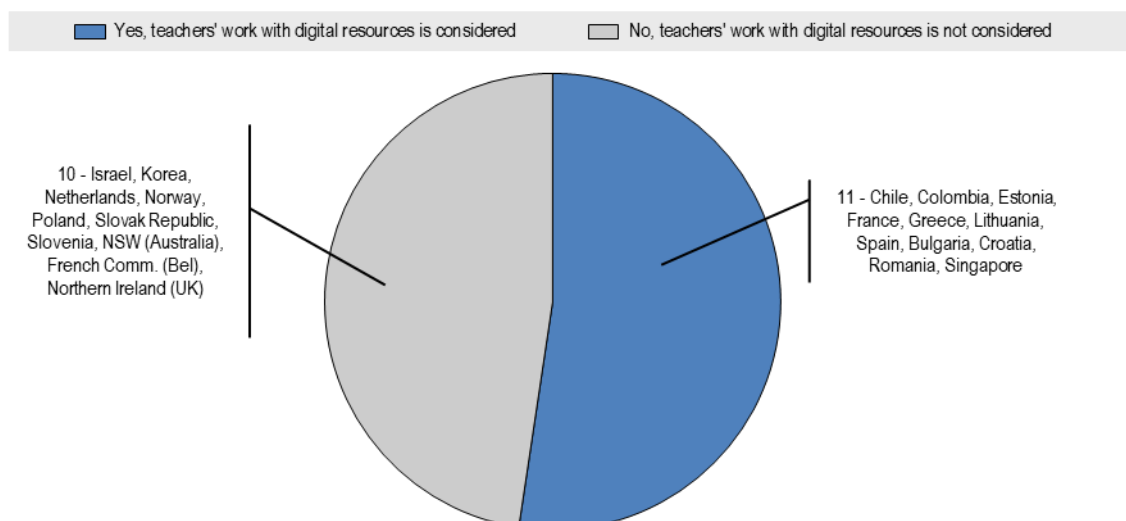
Teachers' work with digital resources is only considered in around half of the central teacher evaluation and appraisal frameworks

11. The impact of professional standards on teachers' work ultimately depends on whether they are accepted and used by relevant actors as a reference point in evaluating, developing and improving teachers' work, for example in the context of their regular appraisal (Boeskens and Nusche, 2021, p. 65^[17]). However, although the majority of education systems have integrated references to digital technologies in teachers' professional standards, results from the Policy Survey indicate that many do not systematically consider teachers' work with digital resources when evaluating their work. Of the 36 responding jurisdictions with available data, 21 reported having a central framework for teacher evaluation.⁴ Of these, only little more than half considered teachers' work with digital resources (Figure 5).

⁴ In some of the other education systems, the teacher evaluation process is organised at the regional or local level (e.g. in Spain and New South Wales [Australia]) or at the school level (e.g. in Portugal and Sweden).

Figure 5. The use of digital resources in teacher appraisal and evaluation frameworks

Number of jurisdictions that consider teachers' work with digital resources in their formal appraisal/evaluation frameworks



Note: Number of jurisdictions with central appraisal/evaluation frameworks = 21. See Annex Table A.2 for further details and individual jurisdictions' responses corresponding to this figure.

Source: OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

12. Evaluating teachers' digital competences and use of digital resources as part of their regular appraisal can be a means to provide recognition for successful practices and to support teachers in strengthening their digital skills (OECD, 2023^[4]; OECD, 2019^[15]). Evaluation criteria can also encourage educators to engage in innovative practices and proactively explore the integration of digital resources, particularly if evaluations are linked to opportunities for professional advancement or other incentives (OECD, 2023^[4]; OECD, 2023^[3]). For example, in **Croatia** and **Romania**, teachers' engagement with digital education resources is considered as part of their evaluation (Ministry of Science and Education, 2019^[18]; Ministerul educației și cercetării, 2020^[19]) and taken into account for career progression opportunities and awards, like Romania's "Diploma for Innovation and Digitalization in Education" (Ministry of Science and Education, 2023^[20]; Parlamentul României, 2023^[21]).⁵

Managing teachers' workload and making time for their engagement with digital resources

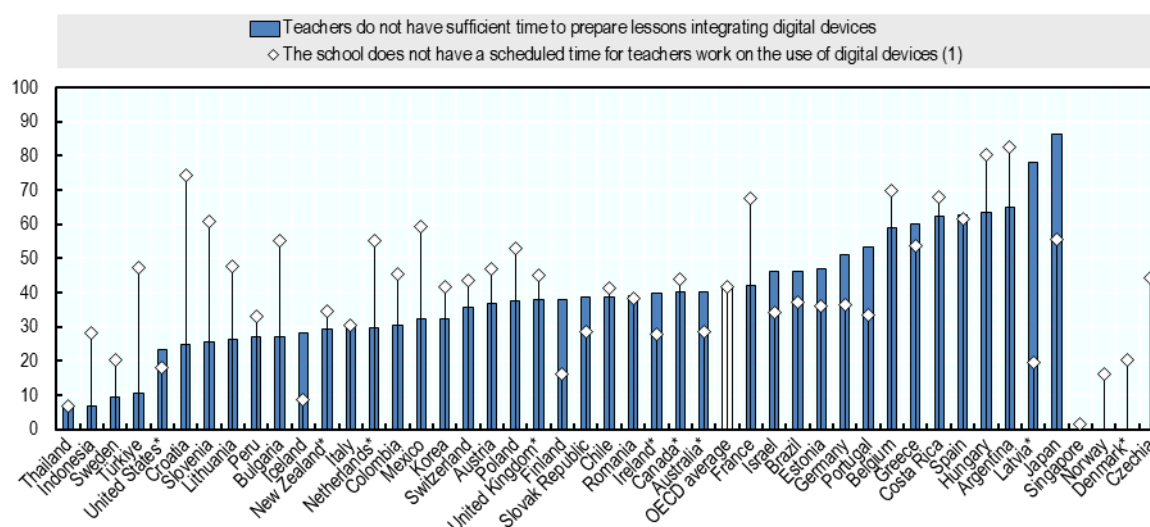
13. Digital tools have the potential to make teachers' work more efficient, for example by automating repetitive and time-consuming tasks. At the same time, teachers require time to learn about and evaluate new digital technologies, to build their digital capacity and to adapt their teaching practices to take advantage of the digital transformation. In practice, many schools report that teachers lack the time to familiarise themselves with digital tools and integrate them into their work. In PISA 2022, 41% of 15-year-old students across OECD countries attended schools whose principal reported that teachers do not have

⁵ See Table 9.2. in OECD (forthcoming) for an overview of the criteria and processes behind teacher career structures.

sufficient time to prepare lessons integrating digital devices. This proportion varied widely, ranging from less than 10% in Thailand, Indonesia and Sweden to more than 70% in Latvia and Japan (Figure 6).

Figure 6. Teachers' time to work with digital devices for education (2022)

Percentage of 15-year-old students whose school leader reported the following about their school



Note: (1) School leaders were asked whether the school has "a scheduled time for teachers to meet to share, evaluate or develop instructional materials and approaches that employ digital devices".

Source: OECD (2023^[2]), *PISA 2022 Results (Volume II): Learning During – and From – Disruption*, Tables II.B1.5.32 and II.B1.5.35, <https://doi.org/10.1787/a97db61c-en>.

14. Teachers' reported lack of time underlines the significant investments that teachers need to make to adapt their work to digital resources and points to a barrier that policy needs to take into account. Adapting teachers' schedules to provide them with more time to engage in professional learning and to collaborate with peers on the use of digital resources is one strategy. In PISA 2022, 58% of students were in schools whose principal reported to schedule time for teachers to share, evaluate, or develop instructional materials and approaches that employ digital devices (Figure 6). Across countries, however, scheduling time for work on digital resources was only weakly correlated with the perception that teachers have sufficient time for this work. Other factors play a role in enabling teachers to make time to engage with digital resources, which are discussed in the following (OECD, 2024^[1]; OECD, 2019^[15]; OECD, 2023^[3]).

Adapting teachers' schedules or encouraging schools to make time for work on digital resources

15. In many OECD countries, local authorities or school leaders have some flexibility in adapting teachers' schedules (Boeskens and Nusche, 2021^[17]). This can allow school leaders to balance local demands and staff needs with central-level goals as they advance the integration of digital resources (OECD, 2023^[3]). At the same time, central authorities can encourage schools to allocate time for specific teachers to advance the implementation of digital resources, encourage peer-learning and share their knowledge with other staff. An example of this practice can be seen in the Netherlands:

- In the **Netherlands**, schools can designate teachers to serve as ICT co-ordinators or i-coaches and assume responsibilities in developing the school's ICT policies and vision for digital education,

supporting the professional development of staff and focusing on the pedagogical use of digital resources. Kennisnet, the central agency for digital education (see Box 2), facilitates training and professional networks for ICT co-ordinators (*kennisgroep ICT*) and i-coaches (*Kenniskring i-coaches*) in partnership with the primary and secondary education councils (*PO-Raad* and *VO-raad*). Schools have wide-ranging autonomy over the use of their resources and no earmarked budget is provided for i-coaches or ICT co-ordinators. However, some schools allocate resources or targeted funding to free up teaching time (e.g. an hour per week) for staff with responsibility for ICT to work on the use of digital resources in schools (OECD, forthcoming).

Facilitating or automating repetitive and administrative tasks

16. The digital transformation of schools not only places new demands on teachers; it can also save them time by facilitating repetitive or administrative aspects of their work and thereby increasing the time they can dedicate to exploring the use of digital education resources. Just like support staff can reduce the burden of technical or maintenance tasks associated with digital resources (see further below), technological innovations can reduce the time that other non-teaching tasks occupy in teachers' schedules. Examples of such initiatives include the following:

- In **Korea**, the “National Education Information System” (NEIS) incorporates student information, administrative functions and a digital credential system in a centralised web-based platform (Ministry of Education and Human Resources Development, 2025^[22]). The NEIS' objective is to digitalise or automate administrative tasks and reduce the time teachers spend, for example, on data entry, record keeping or verification procedures. This system processes data from over 12 000 public and private schools and 17 regional education offices, which has resulted in annual savings of an estimated USD 237 million when a cost-benefit analysis was undertaken in 2010 (OECD, 2023, p. 25^[4]).
- In **England (United Kingdom)**, the Department for Education (DfE) launched the “School Workload Reduction Toolkit” in 2018, which provides schools advice and digital tools to streamline a range of processes, including administrative tasks, lesson planning, data management and marking (Department of Education, 2023^[23]). A 2020 evaluation of the toolkit found its initiatives to have had a positive impact on teachers' wellbeing and reduced the time spent on the targeted tasks while having no negative impact on student outcomes (Richard Churches, 2020^[24]). In 2024, the DfE transitioned to the “Improve Workload and Wellbeing for School Staff” service, which places greater emphasis on staff wellbeing and incorporates evaluation frameworks and innovative AI tools (Department for Education, 2024^[25]). The DfE has invested between GBP 1-4 million in AI tools to assist teachers with curriculum development, grading, feedback, student records and lesson planning (Department for Education, 2023^[26]; Department for Education, 2025^[27]).

Adapting career structures and allocating responsibilities to promote teachers' use of digital resources

17. Over the past decades, an increasing number of education systems have introduced roles such as “digital champions” and created formal staff positions in schools to foster innovation and advance the integration of digital technologies into teachers' work (OECD, 2024, p. 88^[1]). This trend has not only allowed schools to take a more strategic approach to digital education but also created new opportunities for teachers' professional growth and means to reward teachers' effective use of education technologies (OECD, 2023^[4]; OECD, 2023^[3]). Teachers' career structures can be both vertical, i.e. providing successive career stages with progressively increasing responsibilities, and horizontal, i.e. providing opportunities for functional or thematic specialisation. New roles with a focus on digital education can be integrated into teachers' careers vertically, e.g. as mentor or deputy school leader positions with a focus on the use of

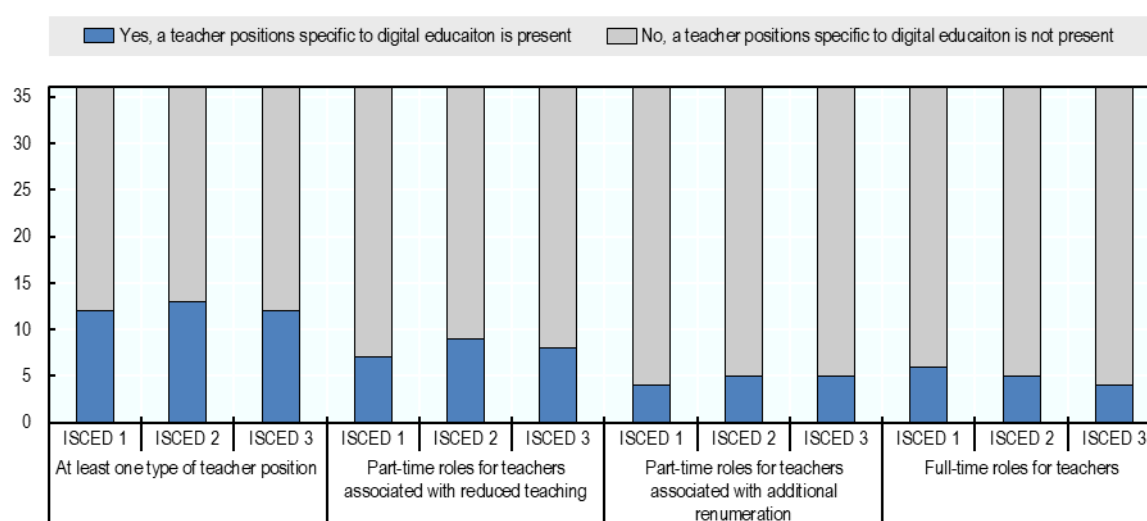
digital resources; or horizontally, e.g. by offering teachers to dedicate some of their time to serve as their school's digital co-ordinator (OECD, 2019^[15]; OECD, 2023^[3]).

Some systems assign responsibilities for the use of digital education resources to teachers, while others turn to technical support staff

18. Co-ordinating the use of digital education resources in schools requires a combination of both technical and pedagogical expertise. This is reflected in the different staff profiles that school systems entrust with responsibilities related to the use of digital resources for teaching. Results from the Policy Survey show that a sizeable proportion of systems (13 of 36 jurisdictions) assign these positions to teachers. In 5 systems, these positions are full-time roles but more frequently (in 11 systems), teachers assume these positions part-time (at ISCED 2) (Figure 7). In practice, these roles are often assigned to ICT teachers in schools or staff with a particular interest in digital education (OECD, 2023^[3]). Among the 11 jurisdictions with part-time positions, 9 compensate teachers for their additional work with a reduction in teaching hours, while 5 provide teachers who assume the role with additional remuneration (at ISCED 2) (Figure 7). In some cases, more than one of these models coexist (see Annex Table A.3 for a detailed overview).

Figure 7. Dedicated teacher positions related to the use of digital resources

Number of jurisdictions that reported having dedicated staff positions for teachers with responsibilities related to the use of digital resources for teaching



Note: Number of jurisdictions with available data = 36. See Annex Table A.3 for further details and individual jurisdictions' responses corresponding to this figure.

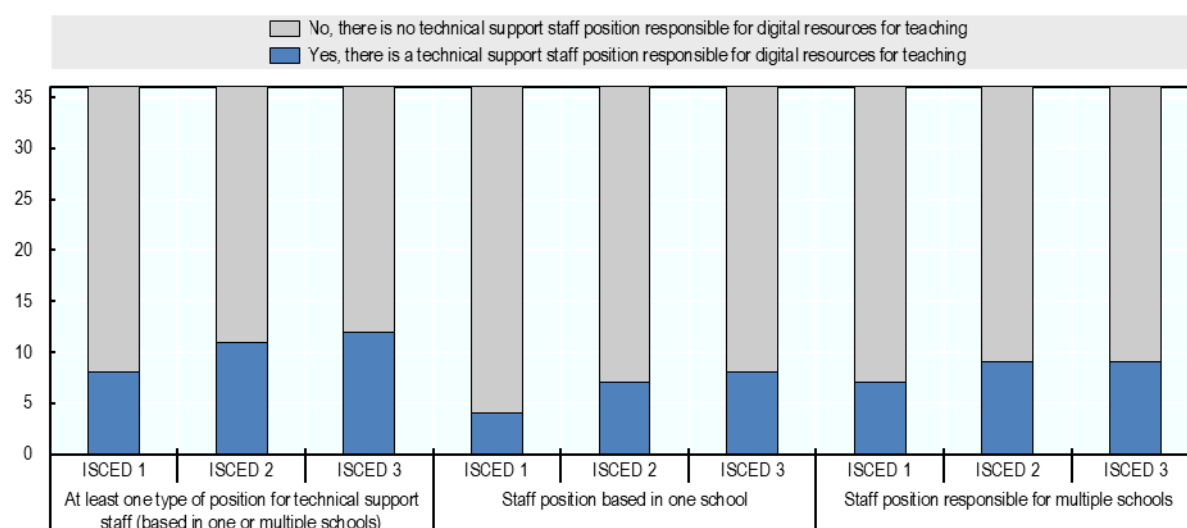
Source: OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", OECD Education Working Papers.

19. A similar number of education systems reported assigning responsibilities for the use of digital resources for teaching to technical support staff, rather than (or in addition to) teachers. This choice could suggest a greater emphasis on technical, rather than pedagogical aspects of teaching with digital resources, or efforts to complement teachers' expertise with external technical capacity. Technical assistant staff assumed these roles in 11 of 36 responding jurisdictions (at ISCED 2). In 7 systems, these positions were assigned to a single school and in 9 systems, they were assigned to multiple schools and

several systems relied on a combination of school-based positions and staff responsible for multiple schools, depending on the context (Figure 8).

Figure 8. Technical support staff positions for the use of digital education resources

Number of jurisdictions that reported having dedicated staff positions for technical support staff with responsibilities related to the use of digital resources for teaching



Note: Number of jurisdictions with available data = 36. See Annex Table A.3 for further details and individual jurisdictions' responses corresponding to this figure.

Source: OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

Creating staff positions dedicated to the use of digital resources is often at the discretion of schools or local authorities

20. In many of the jurisdictions participating in the Policy Survey (26 of 36), schools or local authorities have some discretion in assigning staff to dedicated positions with responsibilities for the use of digital resources. Furthermore, in 9 jurisdictions (at ISCED 2) the presence of such roles depends on school characteristics (e.g. their size or educational offer). Systems also frequently use different approaches, depending on the roles in question, or define staff positions at the central level but leave it to schools to decide whether to fill them (see Figure 7.2. in OECD [forthcoming]).⁶ Examples of such approaches include the following:

- In 2015, **Italy's** National Digital School Plan (PNSD) established the role of *animatori digitali* (digital animators) in each school. The animators are designated teachers who receive training to work with the school management team to promote digital innovations aligned with the PNSD at their school. Schools receive an annual budget of EUR 1 000 to fund activities led by digital animators, which can include internal trainings, workshops involving the wider school community engagement, or the implementation of innovative digital solutions (Ministero dell'Istruzione e del Merito, 2015^[28]; Ministero dell'Istruzione e del Merito, 2025^[29]). The community of digital animators now comprises over 8 200 teachers (Ministero dell'Istruzione e del Merito, 2025^[30]). In a 2022 evaluation of the

⁶ OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

PNSD, 95% of the surveyed digital animators reported feeling that their work increased teachers' digital skills and 26% felt that their work had significantly increased the adoption of innovative teaching methodologies (Agasisti et al., 2023^[31]).

- In 2022, the **Slovak Republic** created the role of digital co-ordinators (defined in the Slovak Act no. 138/2019), who are employed in schools to provide teachers with support, guidance and training on digital education (UNESCO, 2025^[32]). Digital co-ordinators also create, curate and share digital education materials, manage digital resources and ensure cybersecurity in schools (Ministersrva Spravodlivosti Slovenskej Republiky, 2024^[33]). Digital co-ordinator positions can be funded with schools' own resources or with central funding from a national project supporting various teaching and non-teaching positions in schools.
- In the **French Community of Belgium**, teachers can assume the role of digital delegate (*délégué-référent au numérique*, DRN) to promote the effective use of digital resources in their schools. DRN receive targeted training and the schools' providers (*pouvoirs organisateurs*) are provided with central resources to reduce the DRNs' teaching time (Fédération Wallonie-Bruxelles, 2019^[34]; Gouvernement de la Communauté française, 2019^[35]) (Wallonie-Bruxelles Enseignement, 2021^[36]). In 2021/22, 30% of primary schools decided to provide DRNs with reduced teaching hours (2.6 periods on average), compared to 64% of secondary schools (7.1 periods on average) (Cour des Comptes, 2024^[37]).

Team-based approaches and co-operation between staff at different levels of the system can strengthen the support for digital education in schools

21. Responsibilities for supporting the pedagogical use of digital resources in schools do not need to be assigned to a single member of staff or group of professionals. The approaches described above are not mutually exclusive in practice and a sizeable number of systems (5 in primary education and 9 in secondary education) reported that both teachers and technical support staff can assume roles with responsibilities for the use of digital education resources for teaching (see Annex Table A.3). Furthermore, co-operation between staff with technical and pedagogical expertise can strengthen the support for digital education in schools. Singapore provides an example showing how roles at different levels of the education system can work together to support the effective use of digital resources in schools (see Box 3).

Box 3. Co-ordinating teacher support for digital education at multiple levels in Singapore

In Singapore, the Ministry of Education's (MOE) Information Technology Division (ITD) oversees the deployment of IT services, systems and infrastructure to support administration, management and education at the central level. Its responsibilities include the provision of expert advice on the deployment of information technologies and their relevant application in both the ministry and in schools to support teaching and learning (Ministry of Education, 2022^[38]).

All schools are encouraged to appoint a Head of Department (HOD [ICT]) and a school-based ICT Manager/Associate (ICT M/A) at their own discretion, based on their local needs. In 2024/25, about 60% of schools had appointed a HOD (ICT) or equivalent, and 66% of schools had at least one ICT M/A. The role of HOD (ICT) is to lead in the use of digital resources in teaching and learning at their school and to develop the digital competency of teachers. The ICT M/A assume responsibility for the technical co-ordination of digital systems in schools and for safely and efficiently implementing digital applications and smart school systems. They also support the HOD (ICT) in training and supporting school staff on use of ICT provisions and assist them in identifying new ICT tools and resources to support teaching and learning activities in schools (Ministry of Education, 2024^[39]).

The school-based staff are supported by ICT Partners based in the MOE Headquarters (HQ) who serve as points of contact between schools and the ministry. ICT Partners communicate with schools, advise them on central-level ICT and security policies, provide technical advice on school-initiated ICT projects and support the development of school-based ICT M/A staff. Each ICT Partner is deployed to serve one or two clusters of schools.

Source: Singapore Ministry of Education (2022^[38]), *Information Technology Division (ITD)*, <https://www.moe.gov.sg/about-us/organisation-structure/itd> (accessed on 28 February 2025); Singapore Ministry of Education (2024^[39]), *Information and Communications Technology (ICT) Associate or Manager*, <https://www.moe.gov.sg/careers/non-teaching-careers/eas-schools/ict-manager> (accessed on 28 February 2025).

22. Other countries have embraced collaborative and team-based approaches to supporting the use of ICT in schools in order to avoid excessive responsibilities to be placed on single individuals or teachers with part-time roles. Collaborative models can help to distribute technical, pedagogical and administrative tasks related to the use of digital resources, to share the associated workload more evenly and to develop and attract professionals with complementary, more specialised profiles (European Commission, 2024^[40]). Allocating responsibilities for the use of digital resources in schools to a team can also foster professional exchange and opportunities for peer-learning between professionals with different sets of skills. Along these lines, the Flemish Community of Belgium has recently sought to promote a more team-based approach to ICT in schools (see Box 4).

Box 4. Promoting team-based approaches to ICT in the Flemish Community of Belgium

In 2003, the Flemish Community of Belgium created the school-based role of ICT co-ordinators and provided all primary and secondary schools with resources to appoint staff members to the role. Efforts to strengthen the effectiveness and capacity of ICT co-ordinators and to strengthen their profile have gained momentum since the COVID-19 pandemic and the Community's *Digisprong* ('Digital leap') initiative, leading to a European Commission-supported project to promote a more team-based approach to ICT support in schools (Flemish Parliament, 2023^[41]). The project recognised effective practices already implemented in some schools, where technical, pedagogical, and administrative ICT tasks were more widely distributed and ICT co-ordinators were supported by colleagues taking responsibilities for tasks such as learning environment management, social media co-ordination or media coaching. These team-based models were considered to be more effective and to be aligned with modern forms of distributive, team-based school leadership (European Commission, 2024^[40]).

To facilitate the wider adoption of such team-based approaches and provide greater coherence to the role of ICT co-ordinators, the Ministry developed a task profile for ICT co-ordinators that clearly defines their roles and responsibilities; led a study examining the characteristics of effective ICT teams; and developed guidelines for a more team-oriented ICT co-ordination in schools (European Commission, 2024^[40]). The study identified strong ICT teams to comprise managerial roles (dedicated to co-ordinating the team as well as elaborating and implementing ICT policy plans), pedagogical roles (focused on the didactic aspects of integrating ICT in the classroom) and technological roles (working on the quality insurance and maintenance of digital resources). The study also found strong ICT teams to be supported by administrative staff, to involve ICT-savvy teachers and co-operate with students, parents and external partners on ICT in schools (Desmedt, Sempels and Pauwels, 2024, p. 23 f.^[42]).

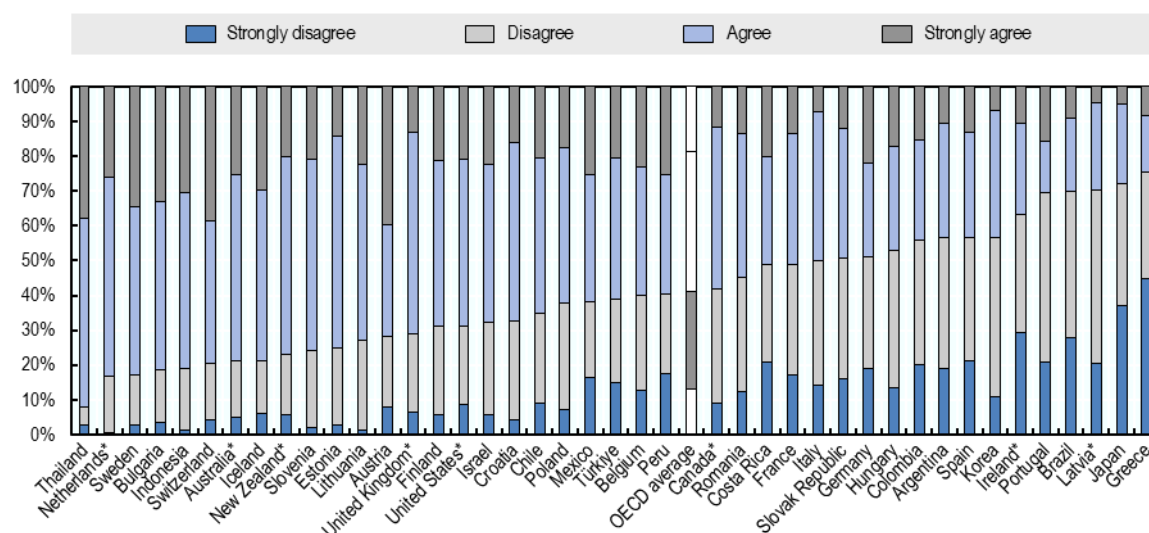
Sources: European Commission (2024^[40]), *Digital transformation in the Flemish education system: Reforming ICT teams at school*, https://reform-support.ec.europa.eu/what-we-do/skills-education-and-training/digital-transformation-flemish-education-system-reforming-ict-teams-school_en; Flemish Parliament (2023^[41]), *Report on the Hearing on ICT Co-ordination in Education* [Verslag van de hoorzitting over ICT-coördinatie in het onderwijs], [Verslag van de hoorzitting 1896 \(2023-2024\) nr.1 | Vlaams Parlement](#) (accessed on 28 February 2025).

Providing technical assistance to schools and ensuring the maintenance of digital resources

23. Providing teachers and students with a reliable digital infrastructure is not a one-time effort but requires the continuous maintenance of digital equipment and software (OECD, 2023, p. 145^[3]). Doing so requires expertise and school leaders in many OECD countries express concerns about a lack of technical support in addressing this challenge. In PISA 2022, 41% of 15-year-old students attended schools whose principals did not think their school had sufficient qualified technical assistant staff, on average across OECD countries (Figure 9) (OECD, 2023^[2]). Finding effective solutions for the maintenance of digital resources not only helps to ensure their safe and effective operation but can also help teachers to focus on the pedagogical applications of digital technologies.

Figure 9. Qualified technical assistant staff in schools (2022)

Percentage of 15-year-old students whose principal agreed or disagreed that the school has sufficient qualified technical assistant staff



Note: Countries are ordered in ascending order of the share of students whose principals disagreed or strongly disagreed that there were sufficient qualified technical assistant staff.

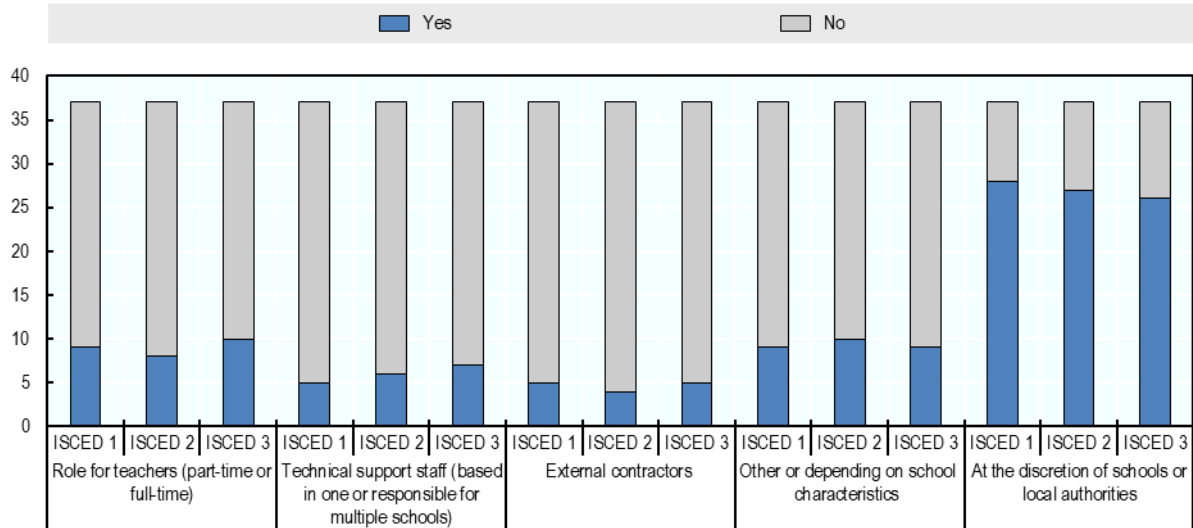
Source: OECD (2023^[2]), PISA 2022 Results (Volume II): Learning During – and From – Disruption, Table II.B1.5.29, <https://doi.org/10.1787/a97db61c-en>.

The maintenance of digital devices is usually organised at the school or local levels, but in a third of countries, the responsibility is assumed by teachers

24. Data from the Policy Survey shows that responsibilities for maintaining digital resources in schools is usually assigned at the discretion of schools or local authorities (in 27 of 37 systems at ISCED 2) – as is the case for their pedagogical integration discussed above (Figure 10). Where responsibilities are assigned centrally, maintenance responsibilities are assigned to teachers with a part-time or full-time role in 8 of 37 systems and to technical staff in 6 of 37 systems (at ISCED 2). Among the latter, technical maintenance staff is based in one school in 4 jurisdictions and in multiple schools in 5 jurisdictions (see Annex Table A.3 for a detailed overview). Fewer systems (4 of 37 at ISCED 2) rely on external contractors to maintain digital devices in schools (Figure 10). These approaches are not mutually exclusive and some systems rely on more than one type of staff to assume responsibilities for maintenance duties.

Figure 10. Staff responsible for maintaining digital resources

Number of jurisdictions assigning responsibility for the maintenance of digital resources in schools to different types of staff



Note: Number of jurisdictions with available data = 37. See Annex Table A.3 for further details and individual jurisdictions' responses corresponding to this figure.

Source: Reproduced from OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*, Figure 7.3.

Key messages

Education ministries have identified the integration of digital technologies in education as one of the most important global trends that will impact the work of teachers in the coming years. Teacher policies will need to be adapted to the evolving roles of educators and results from the Policy Survey on School Education in the Digital Age show that many education systems have introduced reforms or initiatives to provide teachers with guidance, support and incentives to integrate digital resources in recent years. By drawing on the results of Policy Survey and promising country practices, this policy brief seeks to support these efforts and examine how teachers policies can be adapted to support the effective use of digital technologies and incentivise innovative digital practices.

Nearly all jurisdictions responding to the Policy Survey provide some form of central guidance and support to promote teachers' effective use of digital resources. Such initiatives frequently involve the dissemination of good practices or provision of online platforms that allow teachers to access materials to facilitate their work with digital resources or share digital education content with their peers. Around half of the participating jurisdictions have also launched initiatives specifically focused on the use of AI for teaching.

Professional standards and appraisal frameworks can be a powerful tool to set expectations for high-quality teaching and to guide teachers in developing the skills they need to be successful in the digital age. The use of digital resources is now reflected in teachers' professional standards in majority of jurisdictions participating in the Policy Survey. To ensure that professional standards evolve and remain relevant amid rapid technological change, some education systems have also engaged in structured reflections with stakeholders to explore how teachers' roles may evolve in the future. By contrast, only half of the countries systematically consider teachers' work with digital resources in their regular appraisal.

Digital tools have the potential to make teachers' work more efficient but also require them to spend time to learn about and evaluate new digital technologies, to build their digital capacity and to adapt their teaching practices. While setting aside time for teachers to work on digital resources can help them to familiarise themselves with new technologies, it is also important to consider how digital technologies can help teachers save time on repetitive or administrative aspects of their work. Some countries have used this strategy successfully to free up teachers' capacity to engage with peers and explore how digital resources can help them to enhance their pedagogical work.

Over the past decades, many school systems have created formal roles to foster innovation in schools and advance their integration of digital technologies. This trend has allowed schools to take a more strategic approach to digital education. It has also created new opportunities for teachers' professional growth and a means to reward teachers' effective use of education technologies. Schools or local authorities tend to be in charge of filling these positions and allocating responsibilities for both the technical and the pedagogical aspects of digital education, but central authorities play an important role in defining these roles and their responsibilities. Given the complex combination of skills and expertise needed to successfully integrate digital resources in schools, several countries have developed team-based approaches to address this challenge or fostered co-operation between staff at different levels of the system to strengthen the ICT support for schools.

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Annex A. Responses to the Policy Survey

This annex includes comparative tables presenting the data from the Policy Survey on School Education in the Digital Age referred to in this policy brief, including the individual responses of all 37 jurisdictions participating in the survey. The tables include detailed information (and contextual footnotes) for all question items covered in the figures and text of this policy brief. For the complete results of the Policy Survey, please refer to OECD (forthcoming), "Policies for the digital transformation of school education: Evidence from the Policy Survey on School Education in the Digital Age", *OECD Education Working Papers*.

Notes

The following symbols and abbreviations are used in the tables:

- a = Data are not applicable because the category or question does not apply.
- m = Data are missing because no response was provided.

Where footnotes are included on specific jurisdictions' responses, the cells that they refer to are marked with an asterisk (*)

Annex Table A.1. Policies on the pedagogical use of digital resources

Inclusion of digital education in school-level strategies and initiatives to foster the effective use of digital resources for teaching

	Requirements for schools to develop a plan or strategy concerning the use of digital resources for teaching (1)	Central initiatives to foster the effective use of digital resources for teaching					
		Official guidance on good practices for the use of digital resources for teaching	Official online platforms providing selected digital education content for teachers (2)	Official online platforms for teachers to share digital education content with peers	Publicly supported peer-to-peer training on the use of digital resources for teaching	Publicly supported initiatives on the use of AI for teaching	Other
OECD countries							
Austria	Yes (B)		✓	✓	✓	✓	
Chile	Yes (B)	✓	✓	✓	✓	✓	
Colombia	No	✓	✓	✓	✓		
Denmark	Yes (A)	✓	✓				
Estonia	Yes (B)	✓	✓	✓	✓	✓	
Finland	Yes (B)	✓		✓			✓
France	No	✓	✓	✓	✓	✓	
Germany	Yes (A)	✓	✓	✓			
Greece	No	✓	✓	✓			
Iceland	Yes (B)		✓				
Israel	Yes (B)	✓	✓			✓	
Ireland	Yes (A)	✓	✓	✓	✓	✓	
Italy	Yes (A)		✓	✓	✓		
Japan	No		✓		✓		
Korea	Yes (A)*	✓	✓	✓	✓	✓	
Lithuania	Yes (B)	✓	✓	✓	✓	✓	
Luxembourg	Yes (B)	✓	✓	✓	✓	✓	
Netherlands*	No			✓		✓	✓

TEACHER POLICIES TO SUPPORT THE USE OF DIGITAL RESOURCES IN THE CLASSROOM

New Zealand	No	✓	✓	✓	✓		
Norway	Yes (B)					✓	
Poland	No		✓		✓	✓	
Portugal	Yes (A)	✓	✓	✓	✓		
Slovak Republic	Yes (B)	✓	✓		✓		
Slovenia	No	✓	✓		✓		
Spain	Yes (A)	✓	✓	✓	✓	✓	
Sweden	No						✓
Other participants							
NSW (Australia)	Yes (B)	✓	✓				
Flemish Comm. (Bel)	No		✓	✓	✓	✓	
French Comm. (Bel)	No	✓	✓	✓			
England (UK)	No		✓				
Northern Ireland (UK)	Yes (B)				✓	✓	
Scotland (UK)	No	✓	✓	✓	✓		
Wales (UK)	Yes (B)	✓	✓	✓	✓		
Partners							
Bulgaria	No		✓	✓			
Croatia	Yes (A)		✓	✓			
Romania	Yes (B)	✓	✓	✓	✓		
Singapore	Yes (B)	✓	✓	✓	✓		

Notes: (1) Requirements to include digital education in school-level strategies: Yes (A) = Yes, schools are required to develop plans or strategies concerning digital education; Yes (B) = Yes, digital education has to be covered by (more general) plans or strategies developed by the school.

(2) Digital education content refers to data that is produced, structured, distributed and presented in a way that aims to meet an educational objective. This includes education content in different formats, such as webpages, digital textbooks, movies, applications, etc.

Korea: Only “research schools” and “leading schools” are required to develop school-level strategies / plans for digital education.

Netherlands: Following the implementation of an ongoing curriculum reform, it is expected that schools will be required to cover their approach to digital literacy in their school plans, starting in 2027.

Source: Questions B.1 and B.9 of the Policy Survey on School Education in the Digital Age.

Annex Table A.2. Teachers' professional standards and appraisal frameworks

Coverage of teachers' use of digital resources in professional standards and formal appraisal or evaluation frameworks

ISCED level	The use of digital resources for teaching is included in teachers' professional standards or formal descriptions of their roles and responsibilities (1)			Teachers' work with digital resources is considered in formal appraisal/evaluation frameworks at the central level (2)		
	1	2	3	1	2	3
OECD countries						
Austria	a	a	a	a*	a*	a*
Chile	✓	✓	✓	✓	✓	✓
Colombia				✓	✓	✓
Denmark	✓	✓	✓	a	a	a
Estonia	✓	✓	✓	✓	✓	✓
Finland	a	a	a	a	a	a
France	✓	✓	✓	✓	✓	✓
Germany	a	a	a	m	m	m
Greece	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	a	a	a
Israel	✓	✓	✓			
Ireland	a	a	a	a	a	a
Italy	✓	✓	✓	a	a	a
Japan	a	a	a	a	a	a
Korea	✓	✓	✓			
Lithuania	✓	✓	✓	✓	✓	✓
Luxembourg	✓	✓	✓	a	a	a
Netherlands						
New Zealand				a	a	a
Norway	✓	✓	✓			
Poland	a	a	a			
Portugal	✓	✓	✓	a	a	a
Slovak Republic						
Slovenia						
Spain	✓	✓	✓	✓	✓	✓

Sweden	a	a	a	a	a	a
Other participants						
NSW (Australia)	✓	✓	✓			
Flemish Comm. (Bel)				a	a	a
French Comm. (Bel)						
England (UK)				a	a	a
Northern Ireland (UK)	a	a	a			
Scotland (UK)	✓	✓	✓	a	a	a
Wales (UK)	✓	✓	✓	a	a	a
Partners						
Bulgaria	✓	✓	✓	✓	✓	✓
Croatia	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓
Singapore	✓	✓	✓	✓	✓	✓

Notes: (1) Jurisdictions without central professional standards or formal descriptions of teachers' roles and responsibilities were coded as "a" (not applicable); (2) Jurisdictions without central evaluation or appraisal framework for teachers were coded as "a" (not applicable).

Austria: The Federal Ministry of Education, Science and Research and some federal states recommend that school leaders use the digi.kompP framework (<https://www.virtuelle-ph.at/digikomp/>) to appraise the digital skills of their teachers, but the framework's use is not mandatory.

Source: Questions G.1 and G.2 of the Policy Survey on School Education in the Digital Age.

Annex Table A.3. Responsibilities for the use of digital resources and maintenance of digital devices in schools

	Dedicated staff positions with responsibilities related to the use of digital resources for teaching (1)															Staff responsible for maintaining digital resources in schools																	
	Teachers (Part-time role) (2)			Teachers (Full-time role)			Technical support staff (3)			Depending on school size or other school characteristics			Discretion of schools or local authorities			Other	Teachers (Part-time or full-time role)			Technical support staff (3)			External contractors			Depending on school size or other school characteristics			Discretion of schools or local authorities			Other	
ISCED level	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
OECD countries																																	
Austria	A	A	A					B	B													B					*		*				
Chile*																																	
Colombia																																	
Denmark*																																	
Estonia																																	
Finland																																	
France		A/B	A/B				B	A	A											B	B	A											
Germany																																*	
Greece																*																*	
Iceland													*	*	*																		
Israel	B	B	B				B	B	B																				*	*	*		
Ireland																																	
Italy																*																	
Japan							B	B	B																							*	
Korea							A*	A*	A*	*	*	*								A*	A*	A*				*	*	*					
Lithuania																																	
Luxembourg		A	A					A/B	A/B												A/B	A/B											
Netherlands																																	
New Zealand	A/B	A/B	A/B				A/B	A/B	A/B																								
Norway																																	
Poland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m																	

TEACHER POLICIES TO SUPPORT THE USE OF DIGITAL RESOURCES IN THE CLASSROOM

[illegible]

Notes: Cells shaded in blue = Yes; Cells shaded in white = No; a = There are no centrally defined staff positions with responsibilities related to the use of digital resources for teaching / for maintaining digital resources in schools at this level.

(1) Dedicated staff positions with responsibilities related to the use of digital resources for teaching include, for example, ICT co-ordinators supporting teachers with technical queries or helping them to integrate digital technologies into their practice; (2) A = Part-time roles associated with reduced teaching load; B = Part-time roles associated with additional remuneration; (3) A = Technical support staff based in one school; B = Technical support staff responsible for multiple schools.

Austria: For ISCED 1, municipalities are responsible for school maintenance, including ICT, and often hire external contractors for this. There are also teachers with reduced timetables providing IT support (e.g. for school management software) to several schools; For ISCED 2, responsibilities vary by school type (as at ISCED 1 for locally run schools, as at ISCED 3 for federal schools).

Chile: Although not a formal role, most schools (ISCED 1-3) have ICT co-ordinators with varying emphasis on technical and pedagogical aspects.

Denmark: Schools/municipalities decide whether to create roles for ICT advisors or co-ordinators, but part-time roles for teachers (with reduced teaching load) are a common practice.

Germany: Responsibility for ICT maintenance lies with the local school administration. Computer Science teachers usually serve as the “Head of the Computer Science Laboratory” and are responsible for all digital devices in the lab. They or other teachers with relevant knowledge usually also assume responsibility for the maintenance of other digital devices in the school.

Greece: School heads assign the responsibility for maintaining schools' computer science labs to a CS teacher. In addition, there are dedicated staff positions at the district level with responsibilities related to the use of digital resources. In each Directorate of Education, "PLINET" (IT and New Technologies) technical support staff are assigned to assist all schools within their district. At the national level, the Panhellenic School Network (*Πανελλήνιο Σχολικό Δίκτυο*) technically supports teachers and schools in matters related to web applications and digital infrastructure.

Iceland: Assigning responsibilities for the use of digital resources in schools is at the discretion of local authorities. Responsibilities are commonly assigned to teachers in the school on a part-time basis (ISCED 1-3), to teachers with increased remuneration (ISCED 3) or to technical support staff shared between several schools (especially at ISCED 1 and 2).

Italy: As part of the Digital Plan, each school (ISCED 1-3) has a teacher serving as “digital animator”. Digital animators are part of a national network and have undergone dedicated training. With the school management team, they promote digital innovation in their school by organising trainings and workshops for staff and the wider school community and identifying sustainable digital solutions to integrate in their school.

Israel: The Ministry of Education provides schools with a budget for computer maintenance, which they can use to pay for a service supplier selected by the ministry or through the local authority.

Japan: The school founder is responsible for maintaining digital resources in schools (as defined in Article 2(2) of the School Education Act).

Korea: Tutors (ISCED 1) and IT Support Specialists (ISCED 1-3) are provided. Local governments can decide on their deployment based on the size and characteristics of each school and schools can take their own decisions on staff positions.

Slovenia: At ISCED 1 & 2, every school has at least one ICT co-ordinator responsible for the maintenance of digital infrastructure. However, schools can decide to outsource these tasks.

NSW (Australia): Schools decide how to assign responsibilities related to the use and the maintenance of digital resources (e.g. teachers or technical support staff). However, the assignment must adhere to established roles, responsibilities and relevant awards.

Flemish Community (Belgium): Schools decide how to allocate responsibilities for their digital resources but, as part of its digital strategy, the Flemish Community is emphasising the importance and potential of ICT teams comprised of different roles (as opposed to single ICT administrators). For further information: [Towards team-oriented ICT coordination at school](#).

French Community (Belgium): By law, schools can employ a *délégué-référent au numérique* (a member of the teaching staff that benefits from a reduction in teaching load to do digital-related tasks). Creating this position is at the discretion of schools but this is commonly done.

Singapore: All schools receive IT support from a headquarter-based ICT partner responsible for 1-2 school clusters. In addition, schools are encouraged to create positions for a Head of Department (ICT) and a school-based ICT Manager/Associate to support teachers in the use of digital resources.

Source: Questions G.3 and G.4 of the Policy Survey on School Education in the Digital Age.