



Recovery and resilience plans for education

Agile Collection of Information

Vol. 2





Recovery and resilience plans for education: Agile Collection of Information is created as a set of three documents in which you may find additional information and resources:

- Report
- [Country cards](#)
- [Presentation](#)

All documents are available at [European Schoolnet](#), and you may contact Lidija Kralj (lidija.kralj@eun.org) should you need one.

Publisher: European Schoolnet (EUN Partnership AIBSL)
Rue de Trèves, 61 – 1040 Brussels, Belgium

Author: Lidija Kralj

Editor: Patricia Wastiau

Design: Jonatas Baptista

Please cite this publication as:

European Schoolnet (2021). *Recovery and resilience plans for education: Agile Collection of Information*, Brussels, Belgium.

Published in February 2022.

Images: Visual Generation / Adobe Stock (cover)

Contents

Introduction	3
Professional development reform	5
Curriculum reform	8
Reform of initial teacher education	13
Reform of school organisation	14
Plans for innovation and/or research in education	17
Digital equipment and infrastructure improvement	19
Expected results in the next two years	23
Bright future ahead	25

Introduction

During the Steering Committee meeting in June 2021 topic of national recovery and resilience plans was suggested as of high interest for the second edition of “agile collection of information”.

[The Recovery and Resilience Facility](#) are loans and grants by the European Commission available to support reforms and investments undertaken by the Member States, with the aim to mitigate the economic and social impact of the coronavirus pandemic and make European economies and societies more sustainable, resilient, and better prepared for the challenges and opportunities of the green and digital transitions. Every national recovery and resilience plan includes some reform, investment, or measure for the education system either for a specific level of education, equipment procurement or even building schools. That makes recovery and resilience plans very interesting to all stakeholders.

In this agile information collection, we are focusing on the Recovery and Resilience plans in the area of Education, more specifically K12 education. We analysed Member states plans for reforms in areas of professional development, curriculum, initial teacher education, school organization, innovation, and research. We also compiled information about plans for equipment, infrastructure, and digital platforms improvement. At the end of this report, you may find excerpts about reforms, measures and investments in education from the national recovery and resilience plans of the countries that participated in this agile information collection.

With Steering committee members, we shared the questionnaire asking about different areas countries mentioned in their plans based on the information available on the page with [national recovery and resilience plans](#).

In the presentation of national recovery and resilience plans on the European Commission website, projects in the education from five Member states are explicitly listed as examples of digital transition or economic and social resilience.

[Belgium](#) – example project: Digitalisation in education

In the Flemish community, a digital device will be provided to all school students, effective learning tools and training will be provided to teachers to improve their digital skills, and schools will be supported in adapting their curricula to the digital transition by setting up a central knowledge and advisory centre. In the French- and German-speaking communities the plan will equip schools and higher education institutions with modern digital equipment and will train students and teachers with dedicated digital skills tools and methods.

[Czechia](#) – example project: Digital equipment for schools

In late 2020, schools purchased basic digital equipment – 74 000 laptops, tablets and smartphones – which allowed them to provide distance learning during the one-year school lockdown. In the coming years, schools will be equipped with advanced digital technologies which are necessary to implement the curricula reform, i.e. teach according to the new IT-focused curricula. In order to

ensure equal access to digital learning, at least 80% schools will buy digital equipment to establish mobile funds of digital devices for 70 000 disadvantaged pupils.

France – Example project: Digitalisation of the education and training systems

In order to improve the use of digital technologies in education, 45,000 classrooms should be equipped with new digital solutions and 1.4 million students in higher education should have access to hybrid learning by the end of 2022.

Slovakia – example project: Reform of the content and form of education

The objective of the reform is to create new learning curricula of primary and lower-secondary schools. By changing the content of education, this reform will help better develop pupils' critical thinking, soft skills, such as problem-solving, handling information and working in a team, and digital skills.

Spain – example project: Digitalisation in education

To ensure equal access to digital opportunities the plan will enhance access to digital learning through the provision of portable devices to at least 300 000 students from vulnerable groups in public or publicly subsidised schools. It will also install, update and maintain interactive digital systems (IDS) in at least 240 000 classrooms in public and publicly subsidised schools to enable distance and blended learning. The measure will also support the preparation or revision of a digital strategy in at least 22 000 public and publicly subsidised school centres and includes the digital training of 700 000 teachers. Vocational Education and Training will also be supported through a digital accreditation tool for professional skills acquired through work experience (which is expected to serve for accreditation of 3.5 million people).

Spain – example project: modernising VET to boost economic growth and social inclusion

Spain intends to make the Vocational Education and Training (VET) system more dynamic and flexible to respond to present and future skills needs of the economy, including through closer collaboration with businesses. It aims to situate VET as a standard recurrent element of professional development for all workers throughout their working life, as well as to adapt VET to support the transformation of the economy, in particular by reinforcing the provision of technical and digital skills. With a total budget of €2.1 billion, the investments funded by the RRP include the creation of 135,000 new VET places, among other targets.

Members from twelve countries answered our questionnaire in September 2021: Hungary, Belgium (Flemish Community), Croatia, Estonia, Finland, Slovakia, Lithuania, Spain, Sweden, Portugal, Czechia, and France so in the next chapters you may read more about their recovery and resilience plans for K 12 education. Besides reforms and investments financed by the Recover and Resilience Facility instrument, Member states are already implementing different activities in the education system financed by other instruments and funding, like Comprehensive curricular reform in Croatia, decentralised actions on the local level in Sweden, or major national K12-Education projects in Finland.

Professional development reform

Professional development of teachers is part of recovery and resilience plans in almost all countries, and it is connected with other investments or measures, the most often with curriculum reform (as a support for the implementation of new curriculum) and procurement of digital devices (as pedagogical guidance for the use of devices). New ways and models for teachers' professional development are also planned. France suggests offering greater flexibility, combining onsite, hybrid and distance learning possibilities, and innovative "immersive" modules. Belgium (Flemish community) will be organizing bootcamps for teachers and Portugal is going to involve teachers in communities of practice supported by collaborative and interdisciplinary work that stimulates reflection, sharing and critical use of digital in an educational context.

Out of twelve countries that participated in the agile information collection nine stated they are planning the reform of professional development for teachers as part of their recovery and resilience plans. Reform of professional development for teachers is planned in: Hungary, Belgium (Flemish Community), Slovakia, Lithuania, Spain, Sweden, Portugal, Czechia, and France. Most of the countries are planning reforms for primary, and general secondary school teachers (9), eight of them for vocational school teachers and six of them for early childhood teachers.

Target level of education	Countries
Early childhood teachers	BEnl, SK, LT, ES, SE, FR
Primary school teachers	HU, BEnl, SK, LT, ES, SE, PT, CZ, FR
General secondary school teachers	HU, BEnl, SK, LT, ES, SE, PT, CZ, FR
Vocational school teachers	HU, BEnl, LT, ES, SE, PT, CZ, FR

Most of the countries are planning those reforms on the country level (HU, SK, LT, PT, SE), in BEnl on the regional level, while in Spain, Czechia and France reform will be simultaneously organized on the country, regional and school level.

When asked what the main specific purpose of the reform of professional development is, the most frequent answers were: enhancing the use of ICT in teaching and learning and updating teachers' digital competence, working with disadvantaged students, and providing equal access. Some of more specific areas countries mentioned were: The demand for tailor-made professional development for all teachers is not sufficiently catered for (BEnl), Adjust to current requirements for teachers, tackle the lack of teachers of some specific subjects (SK), Linking in-service training and teacher training systems (LT), Computational thinking (CZ).

Most of the countries are relying on the European reference framework DigCompEdu SELFIE and SELFIE for Teachers as guidelines for professional development reform. Spain is working on the update of the framework of Digital Competence for Teachers and planning teachers' certification aligned with it. Their objective is to certify the digital competence of at least 80% of all 700.000 teachers by 2024.

Many countries are planning the reform of professional development for almost all teachers in the next three years. Lithuania is planning the acquisition of additional IT teacher qualifications for 300 teachers, the acquisition of an IT master's degree for 200 teachers and improving 2200 teachers' digital competence. In Hungary, 30 000 teachers (around 25% of all teachers) will be involved in professional development with a complex program and incentives for participants. Czechia goal is to support at least 4000 schools with direct support and pedagogical training in the area of computational thinking and digital literacy until 4Q 2025. In France, teachers will be trained to master the new digital education tools and services as well as the new digital environment.

In **Spain**, the reform will also include the preparation of support, guidance, and teaching material, as well as training for teachers to ensure that they can effectively implement the new curriculum. The material will be published online for the use of all teachers together with the dissemination of good practices. At least 4 000 professionals are expected to complete training for the application of the new curriculum by September 2024. The measure Digital transformation of education will support the preparation or revision of a digital strategy in at least 22 000 public and publicly subsidised school centres, and it will include the digital training of 700 000 teachers.

Portugal has a component – Digital School, with indicators connected with the development of 2 MOOCs for Teachers and 2 MOOCs for Guardians by 2022, and the development of 12 MOOCs for Teachers and 12 MOOCs for Guardians, including the provision of tutorials and a Portal for Acquiring Digital Skills by 2025. They expect to train 6 500 teachers in Digital Skills by 2025.

In **Czechia** plan include measure: Implementation of the revised curriculum and digital skills of teachers which aims at supporting the implementation of the revised curricula and the Framework of Teacher's Digital Skills (DigCompEdu) in schools. The support will be demand-driven and reach at least 4000 schools. The support will consist of financial support for training of teachers in digital skills and IT literacy as required by the revised curricula, and guidance (workshops, webinars, individual counselling) for headmasters, school ICT coordinators, curricula coordinators and IT teachers with a view to helping effectively implement the curricula reform.

Belgium (Flemish community) Digisprong' investment consists of the three elements which shall be completed by the end of 2022:

- 1) provide all schools with a digital device for each student,
- 2) provide teachers with effective learning tools and training to improve their digital skills and

- 3) support schools in digitalising their curricula by setting up a central knowledge and advisory centre. The implementation of the investment

One of the indicators for their plan is “Digitally skilled teachers and teacher trainers” – all teachers and teacher trainers have the necessary digital skills and have the opportunity to specialise on their own initiative.

Lithuania is planning a measure: “Strengthening the competences of teachers, deputies and managers” with the aim to motivate and support teachers, deputies, and school leaders in strengthening their competences by linking the qualification and teacher training systems. In order to ensure the quality of national qualification development programmes for teachers, requirements will be developed for the design and implementation of the National Qualifications Development Programmes by the end of 2022. The flexibility of teacher training and training systems will be increased with the possibility of getting credits for acquiring higher qualifications, including a master degree, by the recognition of informally acquired competences and by studying a module of subject studies. The implementation of national professional development programmes will also be monitored.

Hungary is planning to develop a differentiated incentive system for 30,000 teachers. The aspect of differentiation is the level of digital knowledge of teachers, as well as giving priority support to teachers working with disadvantaged students. The incentive scheme expected elements include digital pedagogical competencies in addition to the bonus participation in appropriate further training and workshops. Procurement of devices will be accompanied with the preparation that goes beyond device knowledge; it will focus specifically on implementation in practical pedagogical work, teachers will participate in a unified methodological, real-life approach, and ready-to-use digital pedagogical solutions

Estonia is planning to create content, structure, and training materials to provide training related to digital skills. New curricula developed for these modules shall be registered in Estonia's Education Information System (EHIS).

Slovakia will implement reform of the concept of special educational needs of children and pupils, which also cover the participation of 10 000 teachers and specialist staff on trainings and other information activities. They are also planning the reform “Preparing and developing teachers for new content and forms of teaching (change in higher education training and strengthening the professional development of teachers)” with the aim to strengthen the quality of skills of teaching and professional staff and motivate them for lifelong professional development. A financial allowance shall be introduced to upgrade the teacher's skills. The focus shall be made on the new curricula, inclusive education, and the acquisition of digital skills. By the end of 2023, at least 60% of teachers of primary and lower secondary education will be trained. The respective legislative amendments shall regulate the competences and the range of teaching providers. The implementation of both reforms will be completed by the end of 2025.

France is planning training for teachers to master the new digital education tools and services as well as the new digital environment.

Curriculum reform

Curriculum reform, either as a continuation of previously started reform or as a new reform is a common component in recovery and resilience plans. In some cases, curriculum improvement is planned for some subjects or areas, in some cases for some level of education and in some countries curriculum reform is the core reform around which are organized other measures and investments in education financed by recovery and resilience facility instrument.

Reform of curriculum development or improvement is planned in seven countries: BEnl, SK, LT, PT, EE, CZ, FR often on multiple levels of education at the same time and for all subjects (BEnl, SK, LT, PT, EE, CZ). In Czechia reform is targeting all subjects with a specific accent on computational thinking and implementation of digital literacy across all subjects/educational areas. In Estonia focus is on digitization of the curriculum that provides a base for constructing standards for learning goals, learning outcomes and sub-competencies across all digital environments.

France is improving the curriculum of physics-chemistry curricula of two vocational training programs. In France focus is also on Early childhood education because of the change in the law which makes education compulsory from the age of three.

Target level of education	Countries
Early childhood level	LT, FR
Primary school	SK, LT, PT, CZ, FR
General secondary school	BEnl, LT, PT, EE, CZ, FR
Vocational school	CZ, FR

In [Belgium \(Flemish community\)](#), and [Czechia](#) it is ongoing curriculum reform that started two years ago and it is developing in phases. In Slovakia complete reform of the curriculum and its reorganization is planned for the 2021-2025 period and the whole primary school system (grades 1 – 9), with all schools, students and teachers involved. Lithuania mentioned curriculum reform as one of the main indicators of their RRF program: Approved updated pre-primary, primary, basic and secondary education curriculum.

Improvement of the curriculum is usually accompanied by the development of new textbooks and other learning resources. Development of new textbooks is planned in Slovakia, in printed and digital format for different subjects on country level and in Estonia in digital format for different subjects on a national level. The development of interactive learning systems is planned on the regional or country level in Hungary, Belgium (Flemish community), Slovakia, Lithuania, Portugal, Estonia and France. Software development is planned in Belgium (Flemish community), Slovakia, Lithuania and France. Spain is planning the creation of open educational resources for digital teaching in artificial

intelligence and cybersecurity at various levels. Belgium (Flemish community) is developing single sign-on access for educational institutions to high-quality and innovative learning resources, learning platforms and digital assessment tools. France is planning, and already developing projects with artificial intelligence for personalized learning.

Spain is developing the New organic law on education covering early childhood education, compulsory primary and secondary education and baccalaureate. It will establish the basis for increasing educational and training opportunities for the entire population, including by improving the educational outcomes and early detection of difficulties and reinforcing the autonomy of schools. It will focus on reducing segregation by students' backgrounds and improving the inclusive capacity of the system. Moreover, the aim is to strengthen digital competences at all educational levels, thus responding to the increasingly digitalised economy.

The regulatory development of the Education Law is to be deployed by means of:

- a) the regulation of a new competency-based curriculum;
- b) evaluation, in particular, the general evaluation of the education system as well as the diagnostic evaluations;
- c) the development of the teaching profession; and
- d) the regulation of the recognition and validation of foreign non-university certificates and studies.

This reform also includes the adoption of decree-laws on minimum requirements for primary, compulsory secondary education and baccalaureate, and the introduction of methodological guidelines for teaching and learning based on a competency-based curriculum and incorporating soft skills. An evaluation framework will be developed in coherence with the curriculum and focused on the level of acquisition of the competences and on the assessment of the measures that favour the students' progress. The aim is to design a more flexible and open education model that promotes profound learning by applying collaborative methodologies, contributing to improving educational outcomes. The new curriculum will give attention to education for sustainable development and citizenship. The development of digital competences will be included at all levels, both through specific content and in a cross-cutting perspective.

Portugal is planning Reform for digital education with objectives embodied in the Action Plan for the Digital Transition, already published through the measure "Digitalization program for schools". Their goal is to transform learning through the diversification of means, methodologies, resources, and technological infrastructure, guaranteeing a school that encourages more inclusion, digital and information literacy, with new forms of interaction enhanced by new educational resources.

In addition to access to technologies, a transformation in the educational and pedagogical process is planned, as a new way of thinking about communication and teaching-learning channels, interpreting the digital beyond a set of tools, mechanisms, and technical support. In this sense, this reform allows leveraging the changes introduced by the most recent educational policies, namely

the regime of curricular autonomy and flexibility and the curricular organization around the Essential Learnings and consolidating the potential of these policies in transforming teaching-learning processes. On the other hand, the introduction of digital skills in schools will be strongly anchored in the production of educational content, improving, and updating both the didactic-pedagogical spaces of formal education and those of non-formal education, creating conditions for the improvement of school success and the reduction to early school leaving.

Czechia is planning the curricula reform and strengthening of IT education and innovation in education in the context of digitalisation which includes a revision of the curricula of primary, lower-secondary schools and upper secondary (*gymnázium*) schools with a view to promoting digital literacy and IT skills. The teaching of informatics will be reinforced in terms of hours taught. It will also be extended to new areas such as data processing and modelling, coding and programming, robotics and advanced digital technologies (augmented reality, virtual reality, 3D printing). In addition, the new curricula foresee that those digital skills shall be developed as a key competence across all educational areas, including non-IT subjects. The revision of the curricula for primary and lower secondary schools and *gymnázia* is expected in 2021, and schools will phase in the new curricula gradually from the school year 2022 to 2024. Reform will be supported by the creation of a digital platform providing teachers with access to existing databases with education content (such as online teaching material, webinars, e-learning courses) by March 2026.

Lithuania is planning the reform “Modern General Education – Background to Competitive Competences” with the aim to implement comprehensive measures to improve student achievement by reducing the achievement gap due to the social, economic, cultural environment of the student's family, the size of the educational institution, location, or institutional dependence. That reform is accompanied by seven sub-measures: 1. Improving the quality of education 2. Reorganisation of the school network 3. Millennium school programme, 4. Strengthening the competences of teachers, deputies, and managers, 5. Development of the STEAM ecosystem 6. Digital education transformation 7. Improving early childhood education and care.

The objective of the sub-measure “Improving the quality of education” is to improve the quality of education. The content of pre-primary, primary, lower-secondary, and secondary education framework programmes will be updated by September 2022 to take into account the latest scientific knowledge, and developments. Minimum indicators for monitoring the quality of school education will be adopted and the procedure for the organisation and conduct of the external evaluation of schools carrying out school education programmes will be amended by June 2022 with a view to achieving better outcomes, greater inclusion, and efficiency and to reduce achievement gaps among pupils. The procedure for the organisation and conduct of the external evaluation of the activities of general education schools will be put in place. The updated general curricula for primary, basic, and secondary education will be approved by the Minister of Education, Science and Sport in 2022 and their implementation will start in all Lithuanian schools from September 2023.

Hungary will work on the integration of digital educational solutions into everyday educational practice. The most important goal of the intervention is providing up-to-date digital content in line with the development and supporting the pedagogical application of digital teaching tools and methodologies and implementing a program to encourage and motivate teachers. With the change of the National Core Curriculum, a new subject called Digital Culture appeared, thus replacing the previous Informatics subject. In addition to students' IT user knowledge, the Digital Culture subject aims to develop their general digital competencies, emphasising active digital citizenship related skills.

In the framework of the latter, building on the National Network of Specialists and Institutions of the Office of Education (pedagogical education centres), approximately 30,000 teachers will participate in the creation, implementation and share of – with each other and with the whole pedagogical society – a unified methodological, real-life approach, and ready – to – use digital pedagogical solutions (lessons and activities organised with the help of digital methods). The expanding pedagogical and digital methodological toolkit effectively helps the teaching and educational work of teachers and their daily work. The final digital pedagogy teaching aids (lesson drafts, lesson plans, assignments, syllabi) can be easily incorporated into teaching practice, thereby reducing the need for teachers to plan lessons tasks as well. At least 400 digital contents will be developed as part of the intervention.

The component Education for the 21st century of the **Slovak** recovery and resilience plan will introduce curricular reform of primary and lower secondary schools creating new learning content organised in multi-annual cycles. The aim is to develop pupils' critical thinking and soft skills as problem-solving, handling information, working in a team, narrative and asking questions, taking initiative and responsibility, creating, and implementing personal projects. This will require the provision of textbooks necessary to renew the current stock and a change in teachers' skills to apply these changes in everyday practice. At the same time, the component will strengthen the quality of skills of teaching and professional staff and motivate them for lifelong professional development. The focus shall also be on inclusive education and the acquisition of digital skills. The component includes two reforms and two investments.

The reform of the content and form of education (curricular and textbook reform) has the objective to create new learning curricula. Instead of delivering ready-made information, teachers will create situations in which pupils may interpret the information in confrontation with real life. The reform commences by the introduction of the curricula in the primary and lower-secondary level of education (on a voluntary basis) in the school year 2023 and end by an obligation to adopt the new curriculum in all primary schools in 2026.

The implementation of the reform will be supported by the creation of the 40 regional centres that bring support for schools in mentoring, counselling and consultation activities. The centres may

comprise of teachers, school directors, professionals of adult education, third sector experts and experts from faculties preparing teachers in the region.

The reform requires the provision of new textbooks. The preparation of textbooks will be supported through the work of the experts. The approval of textbooks, based on professional and educational quality, will be ensured by a uniform clause granted by the Ministry of Education. Strict and transparent peer review criteria will be put in place. Schools will receive an allowance to buy textbooks according to their preferences and requirements from the list of textbooks approved by the Ministry.

This reform also envisions the creation of an e-Test 2.0 e-testing platform that will make the digitalization of the education process more efficient and thus enable the central testing of pupils. The measurable effect of this reform may be the final examination of the upper secondary school carried out online in every school by the end of 2025.

Reform of initial teacher education

Answering the questionnaire, participants stated that reform of initial teacher education is not planned as part of their Recovery and Resilience plans but some small interventions in the initial teacher education are mentioned.

In the measure "Strengthening the competences of teachers, deputies and managers" **Lithuania** is aiming to support strengthening competences of educators by linking the qualification and teacher training systems. The flexibility of teacher training and training systems will be increased with the possibility of getting credits for acquiring higher qualifications, including a master degree, by the recognition of informally acquired competences and by studying a module of subject studies.

France is reviewing the content of "Master in teaching, education and training professions" in order to consolidate its quality as the degree best able to prepare and train for the teaching and education professions. Master in teaching, education and training professions/ Teacher training schools provides a professionalizing university education based on courses that combine theory and practice around experiences in a professional environment. Its content has been reviewed in order to consolidate its quality as the degree best able to prepare and train for the teaching and education professions. For each student, the entire training program includes diversified activities corresponding to at least the equivalent of 800 hours of teaching and pedagogical supervision, with:

For the first level:

- at least 55% of the training time devoted to fundamental knowledge (reading, writing, arithmetic, respect for others, including the knowledge and transmission of republican values);
- at least 20% of the time devoted to other disciplinary aspects, general pedagogy and classroom management.
- at least 15% of time devoted to research.
- 10% of the time devoted to the context, particularly territorial, and to the innovations specific to each teacher training school

For the secondary level:

- at least 45% of training time devoted to disciplines and mastery of fundamental knowledge;
- at least 30% of the time dedicated to effective teaching and learning strategies, evaluation, and classroom management.
- At least 15% of time is dedicated to research.
- 10% of time dedicated to the context and innovations specific to each teacher training school.

Reform of school organisation

School organization reform is planned in: BE_{nl}, LT, HR, PT, FR, ES and SK with a different focus and specific aims in each country. In **Belgium (Flemish community)** more emphasis will be on the school ICT policy and the creation of a knowledge and advisory centre for digital education.

Lithuania will implement their “Millennium Schools” program, which is aimed at consistent, gradual renewal of schools and creation of equal educational conditions for Lithuanian children, no matter where they live, what is the social, economic, or cultural environment around them. That program encourages municipalities to consolidate educational resources and strengthen existing schools; pay special attention to creating an inclusive education ecosystem in schools and the implementation of networking-based organization and management of education. The “Millennium Schools” program is planned to be implemented in at least 80% of Lithuanian municipalities over the next four years and reach about 150 general education schools across the country.

The objective of the sub-measure “Reorganisation of the school network” is to amend the rules on the creation of the network of schools carrying out formal education programmes with a view to set new requirements for municipalities concerning the size of the school, the rules for joined classes and further reorganization procedures and funding requirements. The criteria shall include the elimination of the possibility to merge grades 5-8 and a requirement to reorganise state schools with 60 or fewer pupils. The new rules shall result in reducing the number of joint classes; the number of small gymnasiums and the number of small schools (with less than 200 pupils). The sub-measure will be completed by the end of 2021.

In **Croatian** primary and lower-secondary education will be introduced whole-day school by 2Q 2026 which will mean that students will spend more time at school and have more different activities. Schools' buildings will be extended and if needed, new buildings for the schools will be built. Fewer parents' involvement is planned since the students will be spending more time at school. The goal is all primary and lower secondary schools, but this programme will cover costs for 30 % of the schools.

The aim of the reform is to increase the quality of teaching and learning outcomes, especially for children from disadvantaged socio-economic backgrounds, by implementing single shift, full-day teaching in primary schools and increasing the number of mandatory teaching hours. The reform also aims at supporting continuous teacher development and systematic external evaluation of learning outcomes in primary schools. The reform shall amend the Education Act to introduce the new full-day teaching model in primary schools, amending the minimum number of mandatory teaching hours and the curriculum for primary schools, and shall be accompanied by systematic teachers' development programmes. This sub-set of measures of the reform shall be completed by the end of 2023.

The reform includes measures: “Construction, upgrading, reconstruction and equipping of primary schools for single shift full-day teaching” and “Construction, upgrading, refurbishment and equipping of secondary schools”. That is covering the construction of new primary and general secondary (“*gimnazija*” programmes) schools and the upgrade of existing ones. Objectives are that all primary school pupils may be provided with full-day teaching and to increase students’ enrolment in general secondary education.

The construction and renovation of primary schools shall be based on the assessment of infrastructure investments needs, considering the schools’ capacities and demographic developments. The construction and renovation of schools running secondary education programmes shall be based on the assessment of existing capacities and needs for additional physical infrastructure ensuring a place for 9 000 additional students. Both investments shall be completed by June 2026.

Portugal has an integrated plan for the recovery of learning, called [Plan 21 | 23 Escola+](#) which, among others includes the possibility of adopting a flexible semester organization of the school year. It is intended that this measure, along with others that are adopted, such as the realization of weeks or days with specific activities aimed at strengthening the areas of intervention considered to be priorities, are constituted as a global measure, promoting the quality of learning and success of all students, pursuing the goals of leveraging change in pedagogical practices and assessment for learning, as well as the distribution, in a more balanced way, of school periods and school break periods. Also, a document “Contributions to the implementation distance learning in schools” was produced to clarify concepts associated with the implementation of distance learning and contains a set of suggestions and examples of activities regarding methodologies and forms of distribution of class time between synchronous and asynchronous activities. The plan also includes the promotion of better communication between schools and families, through diversified, clear, and simple channels, available to all families.

- Involve parents in school activities – from the knowledge of families, involve them in daily activities.
- Involve parents in learning activities outside the school space – clearly explain the role of families in supporting learning.
- Involve parents in decision-making – enable parents to participate in school management bodies, but also listen to them and involve them in issues that arise in daily school life.
- Supporting parents of the most vulnerable groups of students – supporting families in understanding the development of children and youth and their needs.

Pillars of the “Territoire Numérique Educatif” project in **France** are computer equipment, training, resources, digital solutions and strengthening co-parenting. The project was launched after the lockdown to reduce the digital divide, meet the challenges of transforming the education system and promote equal opportunities. It aims to train teachers, the dedicated platform was created for them, and support the parents in their use of digital technology. One of the axis is to enrich pedagogical practices (e.g., hybridization) and improve student performance, strengthening their autonomy and engagement. The other axis is to strengthen the resilience of the education system,

especially in times of crisis. There is also a focus on parental involvement, aiming to introduce parents to the challenges of digital education and encourage their involvement in their child's education.

Spain is planning the Program for orientation, progress and educational enrichment ("PROA+") with a view to providing support and guidance to low performing pupils and reducing both dropout and early school leaving rates and fostering mainstreaming of special education need students into regular schools.

This program focuses on activities that ensure the minimum conditions of the educability of all students, introduce reinforcement measures for those who have more learning difficulties, mainly in basic skills, seek new forms of organization and management at the educational centre, and provide additional support and training for teachers. These activities should be aimed at improving the success of all students at these schools. The program shall target schools with particular educational complexity, including in rural areas, with a significant percentage of vulnerable students who present learning difficulties in regular classrooms. The selection of the centres shall be carried out by educational administrations. The targeted schools are located in particular in areas made up of pupils and families of a low socioeconomic and educational background. In total, at least 2 700 schools shall obtain support.

Slovakia will invest in removing barriers in school buildings, completion of the school infrastructure and implementation of tools to prevent early school leaving and adapt F-type study programme.

The objective is to remove physical, information and technological barriers in school in 252 large secondary schools to enable disadvantaged children to carry out education in a pleasant environment. The investment shall be preceded by: 1) complex analysis in order to map the needs for barriers removal and providing the manual. The manual shall define standards for removing barriers to meet the real needs of children, pupils and students with health disadvantages and to respect the principles of universal design. The implementation of the investment is expected to start by 31 March 2022 and shall be completed by 30 June 2025.

The reform consists of changes to the relevant legislative provisions aimed at increasing the possibility for young people, without completing lower-secondary education, to achieve a higher level of education by providing for the possibility of completing lower secondary education in secondary vocational schools (NSOV) in a two- and three-year combined programme – F-type study programmes.

School infrastructure investment aims to eliminate all the two-shift schools in Slovakia which may contribute to better integration for pupils from disadvantaged backgrounds. The investments may take the form of expanding existing capacities, renovating, and building new premises in 49 schools that currently pursue the two-shifts classes. Renovation of buildings shall be subject to achieving on average at least 30% of primary energy savings. Also, it targets schools with an enrolment of children from socially disadvantaged backgrounds where it shall establish the new libraries or renovate the existing ones and turn them into modern education centres in schools. School libraries shall provide a space for teaching subjects, research, and group work, writing homework, carrying out projects or spending leisure time. The implementation of the investment shall be completed by June 2026.

Plans for innovation and/or research in education

In Slovakia, Lithuania, Portugal, Finland and France recovery and resilience plans include plans for innovation and/or research in education. **Slovakia** will do the research about the participation of disadvantaged students in after-school clubs.

Portugal will research the production and use of digital textbooks and digital educational resources which aim to promote the student's autonomy. Monitoring Accompaniment and Research Project in Pedagogical Assessment (MAIA Project) is also going on in Portugal. MAIA is a multidimensional project that focuses on theoretical and conceptual dimensions, training, monitoring, monitoring and research in the field of pedagogical assessment. The MAIA project was conceived with the purpose of contributing to improving the pedagogical practices of schools and their teachers in the field of the assessment of learning and, consequently, the learning of their students.

Portugal is also planning the implementation of a training project for young people with high leadership potential, often from social exclusion contexts, with the objective of developing their personal skills, so that they can better intervene in these contexts and strengthen the relationships between the school and the families and the community, becoming more responsible students and citizens. The project will use the specific methodology for training students, which involves in particular the promotion of self-knowledge, self-confidence and resilience and, on a second level, skills relational ones, such as empathy and service. In a subsequent phase, a club is created that involves trained young people who will be able to intervene in their educational and local context.

Finland will work on the promotion of long-term growth by raising the level of skills/competences among both young people and adults and bringing opportunities for continuous learning e.g. in a location-independent manner.

In **France** National Digital Working groups continue to produce research on digital education, pedagogical practices, technology and impact or potential for teaching, teaching, context, and digital culture. They associate research laboratories and local education authorities to link current research and classroom practices. Four topics were defined including: Digital education and innovation (dealing with the renovation of pedagogical practices, the school model and training issues). Working groups reflect on the evolution of teaching practices, postures and professional skills and acts of teachers; teaching and learning in a hybrid face-to-face/distance situation: towards a reinvention of the school model; AI for new modes of interaction, new modes of evaluation and hybridization of learning environments. For example, this year, a group of biotechnology teachers is working on this subject: pedagogical hybridization, towards new ways of learning, evaluation, and certification of students.

France organized Innovation and artificial intelligence partnership (P2IA) – a public tendering process launched by the Ministry of Education to develop artificial intelligence-based solutions with companies (EdTech) and laboratories (Ed-Lab) with the aim to develop assistance and recommendation solutions based on artificial intelligence techniques for elementary school teachers to better support their students in their learning of French and Mathematics.

The envelope of the PIA4 (Investments for the future, Plan d'Investissements d'Avenir) aims at supporting innovation in the fields of teaching (from kindergarten to university) and research. The measure shall be dedicated to three calls for projects.

- The first one, "Excellence in all its forms", shall support the transformation projects of higher education institutions to reach the best international standards. Transformation is understood as any significant evolution of the institution or the site contributing to developing their potentialities in all of their missions, or in the missions, considered as the most important for the institution or the site, as part of their strategic project. The objective is to consolidate and strengthen French academic communities in all their diversity and help them achieve the ambition they set for themselves.
- The second one shall support the diversification of the funding resources of higher education and research institutions. It shall provide support in creating or transforming services dedicated to support in setting up projects and by supplementing the funding received by the institutions. It would constitute a lever to encourage institutions to diversify their resources (funds obtained from the European Union, in terms of training and funds raised within the framework of philanthropy and sponsorship).
- The third call for projects is dedicated to transforming school education by promoting innovation and new forms of organization and management. Several priorities shall be followed:
 - Educational emergency areas: identify pupils who drop out of school in target areas, to strengthen educational resources in order to bring them up to standard.
 - National platform "being a parent": offering, in particular via digital technology, a new approach strengthening the role, link and commitment of parents in school.
 - Zero dropout territories: set the ambition to totally reduce dropout in secondary and higher education through innovative interministerial, associative and regional intervention methods.
 - o Territories of learning paths: in conjunction with businesses, significantly increase work-study training by developing innovative solutions, promoting solutions for integrated care for young people (housing, mobility, employment contract), ensuring follow-up for young people to avoid ruptures.

France is also researching hybrid synchronous teaching Hysy (local education authority of Paris) about synchronous hybrid teaching where the teacher teaches simultaneously to the part of his class present in the classroom and to the rest of the students distant at home via videoconference. This solution is also suitable for teaching students who are temporarily away from the classroom for health reasons (absence due to ordinary illness, long period of hospitalization, educational care at home).

Digital equipment and infrastructure improvement

Many Member States took the opportunity to use financial support from the recovery and resilience facility instrument to improve digital technology conditions in schools or for disadvantaged groups of students. All countries that participated in our agile information collection are planning some level of digital equipment or infrastructure improvement.

Measure “Digital transformation of education” is planned in **Spain** with the objective to enhance access to digital learning through the provision of portable devices to at least 300 000 students from vulnerable groups in public or publicly subsidised schools. It also covers the installation, update and maintenance of the interactive digital systems in at least 240 000 classrooms in public and publicly subsidised schools to enable distance and blended learning.

Portugal plans to ensure that all students and teachers have the necessary equipment and conditions to use the technologies as a pedagogical asset as well as to promote more democratic and equal access to technologies for the educational community.

Czechia is planning the innovation in education in the context of digitalisation by promoting the digital skills of teachers and improving the level of digital equipment in schools. This component also aims at addressing the digital divide, exacerbated by the prolonged school lockdown, by setting up a fund for mobile digital devices at the disposal of disadvantaged pupils and students. The first step of investment in Digital equipment for schools was the funding of ICT equipment for distance learning in 2020 in order to allow for distance learning during the school lockdown, including for pupils from disadvantaged socio-economic backgrounds. As a second step, further funding will be provided to schools to set up a fund for mobile digital devices for disadvantaged pupils by the end of 2025. The funds will be allocated to schools based on criteria reflecting whether the school is located in a socially excluded area and the estimated number of pupils who need digital mobile devices to borrow. Schools shall acquire 70 000 devices supporting 70 000 pupils in need.

The second aim of the investment is to ensure that schools are adequately equipped with both basic and advanced digital technologies to support digital literacy and implement the revised curricula. Of the total of approx. 10 000 kindergartens, primary and secondary schools, at least 9 260 shall be equipped by 31 March 2024 with basic and advanced digital technologies (such as augmented reality, virtual reality, robotics and 3D printing). Provision of funding shall be accompanied by technical assistance for schools in order to ensure efficient spending of funds.

French investment “Educational continuity: digital transformation of the school” shall support the installation of mobile digital equipment in the classrooms, which is a prerequisite for developing

hybrid education. It shall also support investments in video projectors, shared mobile equipment, equipment specific to the elementary school, as well as the network allowing both on-site and remote teaching via the loan of material to students. It shall also fund services and resources for the first-degree education as well as equipment allowing hybrid teaching in high school. The measure will be implemented through competitive calls for tenders, some of them already took a place in 2021.

One of the focal points in **Belgium (Flemish community)** DigiSprong plan is a future-oriented and safe ICT infrastructure with the aim that every school has a high-quality digital infrastructure that enables digital didactics and safe ICT use.

Hungarian reform “Creating a competitive public education based on the technological environment of the 21st century” is aiming to support the digital transformation of public education. Public education institutions will be equipped with modern digital infrastructure, digital tools will be integrated into education and training processes at the system level in order to support the development of students' digital competences and enable digitally supported education.

Primary and secondary schools will be equipped with state-of-the-art facilities: visualization tools (interactive dashboards) and student creativity and problem-solving thinking tools (e.g. robotics, programming skills development kits, drones). Approximately 560 000 devices in 4 years are planned for students in grades 5 – 12 which they can use in school and at home. At the same time, devices will be provided for the 55,000 primary and secondary school teachers. Procurement of devices will be accompanied by preparation that goes beyond device knowledge; it will focus specifically on implementation in practical pedagogical work.

Estonia is planning the construction of very high-capacity broadband networks to improve the access to very high capacity broadband networks, which offer a connection of at least 100 Mbps, for households and socioeconomically important institutions such as hospitals, schools, public services and businesses.

Slovakia is planning the investment: Digital infrastructure in schools with the objective to increase the number percentage of schools with full digital entry from 30% to at least 90% (according to defined ICT standards built on the “highly equipped and connected classroom”) by the end of 2024. To ensure transparency and value for money when purchasing digital equipment for schools, the procurement shall be centrally coordinated. The investment envisages maximising the life cycle of digital equipment in order to reduce negative environmental impacts. Investment is divided into the main areas:

- inclusion: the investment shall cover the software or hardware of the compensatory aids for disadvantaged pupils.
- skills for the digital transformation: The investment shall cover one IT classroom in proportion to 300 students.

In the table below you may see the summary of the information about digital connectivity and equipment from the questionnaire.

Country	Improving digital connectivity (infrastructure) areas?	Digital equipment for?	What kind of digital equipment is planned?
Hungary	Schools; Areas not covered by internet providers (no market interest);	Students (homes); Students (schools); Teachers ;	Laptop computers; Interactive panels and/or creative tools;
Belgium (Flemish Community)	Schools;	Students (schools); Teachers ;	Tablets; Laptop computers; Network equipment – wireless, hotspots (schools or local community); Network equipment – stationary in schools;
Slovakia	Schools with students from socio-economic disadvantaged background; Schools;	Students (schools); Teachers ; Schools with students from socio-economic disadvantaged background; Rural areas (including homes or schools);	Tablets; Laptop computers; Desktop computers; Network equipment – stationary in schools; Complete digital infrastructure for schools – projectors, speakers, micro computers, headsets, visualisers, software, etc.;
Lithuania	Home/family;	Students (schools); Teachers ;	Equipment for hybrid/blended learning;
Spain	Schools; Schools with students from socio-economic disadvantaged background; Rural areas (including homes or schools);	Students (homes); Students (schools); Schools with students from socio-economic disadvantaged background; Rural areas (including homes or schools);	Network equipment – wireless, hotspots (schools or local community); Network equipment – stationary in schools; Desktop computers; Laptop computers; Tablets;
Croatia		Higher education institutions;	
Sweden	Every school owner is responsible for this and are encouraged to have a plan. From the national level there is a strategy that most school owners follow. The national strategy does not include Home/family but there is only a very limited number of families that are not connected.;	The number of schools that provide digital equipment to the students is very high, even before the pandemic. Almost all students in upper secondary and a high number in primary and secondary	Tablets; Laptop computers; Network equipment – stationary in schools; Its a local responsibility and addressed mostly b the fact that digital national tests will be introduced in a couple of years.;
Portugal	Schools;	Students (schools); Teachers ; Students (homes);	Laptop computers; Network equipment – wireless, hotspots (schools or local community); Network equipment – stationary in schools;
Estonia	Schools;	Students (homes);	Laptop computers;
Czechia	Home/family; Schools; Schools with students from socio-economic disadvantaged background;	Students (homes); Students (schools); Teachers ; Schools with students from socio-economic disadvantaged	Tablets; Mobile phones; Laptop computers; Advanced digital devices (VR/AR/3D printers etc.);

	Rural areas (including homes or schools); We hope it will be possible for schools to buy digital devices together with pre-paid SIM cards with connectivity. We understand it is important to make sure the devices that schools will be able to land to disadvantaged students to be also connected to the internet. ;	background; Rural areas (including homes or schools);	
Finland	Rural areas (including homes or schools); A broadband-internet -program that improves the availability of high-speed connections to the areas where they would not be built on market terms.;		
France	Home/family; Schools; Schools with students from socio-economic disadvantaged background; Rural areas (including homes or schools);	Students (schools); Schools with students from socio-economic disadvantaged background; Rural areas (including homes or schools); Teachers ;(not for teachers at home but in classrooms);	Tablets; Laptop computers; Network equipment – wireless, hotspots (schools or local community);

All previously mentioned reforms, measures and investments are also accompanied by the development, procurement, or promotion of a different kinds of educational software: interactive learning systems, learning resources database, assessment systems, learning management systems etc.

By answering our questionnaire participants mentioned some of their development plans in the area of software or digital infrastructure:

- Belgium (Flemish community) is planning a single sign on infrastructure for teachers and pupils, several programs for innovative learning resources will be subsidized especially in the field of extended/mixed reality.
- Slovakia is developing digital tools for teachers to help them with paperwork and with sharing of information, innovations and continuous professional development.
- Lithuania is implementing a database of digital learning resources, acting as a "National distance school", based on updated curricula linked to existing and new digital learning tools, digital content developed by public and private publishers, testing and assessment systems, libraries.
- In Sweden some development is planned in connection with the introduction of digital national tests i.e. federated SSO, provision of users etc.
- Estonia is developing digital admission tests for upper-secondary schools
- Finland is planning actions to promote investment in digital, data and technology.
- France is planning development of national platform "being a parent" offering via digital technology, a new approach strengthening the role, link and commitment of parents in school. Also, they are planning development of nation-wide platforms: virtual classroom, webinar, distance exams, learning management system.

Expected results in the next two years

All national recovery and resilience plans, as well as annexes to the Council Implementing Decision on the approval of the assessment of the recovery and resilience plan, contains explicit deadlines for implementation of every reform, measure, and investment. Here are listed just some expectations that participants mentioned in their answers to the questionnaire.

What countries expect to achieve by the end of 2022:

- **HU:** 189 000 notebooks given to pupils (1:1); 3000 teachers involved in CPD program; 50 new digital content
- **SK:** Raise the number of digitally equipped schools, start piloting the new curriculum.
- **LT:** Updated general curricula for pre-school, primary, basic and secondary education have been approved
- **ES:** To publish the regulations to implement the different actions of the Mechanist (devices, digital interactive classrooms and digital competence)
- **SE:** The goals in the national strategy for digitalisation in schools are supposed to be achieved by the end of 2022. This includes infrastructure, access to devices and most importantly teachers and students' digital competence.
- **PT:** Complete the process of making computers available to schools for individual use by students and teachers; Modernize classrooms with the acquisition of new projection equipment; Install LEDs equipped with specialized equipment for projects in primary and secondary schools
- **EE:** Procurements for purchasing of devices are implemented and computers are allocated to the local government level. Agreed software developments are implemented
- **FI:** Legislation adopted for the broadband-internet -project, continuous/lifelong learning - project; Target architecture (digital services for continuous learning) introduced (2021); Open invitations for tenders of implementing training to strengthen digital and green skills (2022)
- **FR:** The results from twelve National Digital Working groups are expected in 2022. Those groups were set up a few years ago with aim to produce research on digital education, pedagogical practices, technology and impact or potential for teaching, teaching, context, and digital culture. Ten more "Territoires numériques éducatifs" are being deployed in 2022.

What countries expect to achieve by the end of 2023:

- **HU:** 324 000 notebooks given to pupils (1:1 setting); 11 000 teachers involved in CPD program; 14 new digital content
- **SK:** Almost all school are digitally equipped, new curriculum comes to primary schools.
- **LT:** Updated and effective pre-school curriculum criteria (guidelines)
- **ES:** To distribute 99.000 devices and equip 79279 digital classrooms
- **SE:** That the level of preparation, including infrastructure and competence, by the end of 2023 meet the requirements for participating in the digital national test at 4 levels in the school system – grade 3, 6 and 9 in the compulsory and in upper secondary
- **PT:** 1. Increase the population's digital skills, to respond to the progressive digitization of society, employment and the economy; 2. Modernize professional education and enhance the offer of double certification; 3. Extend the Ciência Viva Club Network to the entire school network, highlighting scientific literacy as a development engine; 4. Boost adult literacy, mobilizing more than 30 000 adults for the adult education and training system; 5. Encourage the practice of sports and the adoption of healthy lifestyles.
- **EE:** For 2021-2023 period 56 new digital tests are developed.
- **FI:** Continuous/lifelong learning -project: Model of forecasting the work and skills needed in Medium-term is in use; At least 80% of target architecture`s service prototypes have been developed
- **FR:** Certification of digital skills of 25 000 teachers with PIX is expected in 2023. Some teachers voluntaries take it in 2021, some are certified in 2022, and the objective is to have 25 000 in 2023.

Bright future ahead

The Recovery and Resilience Facility is part of a wide-ranging response aiming to mitigate the economic and social impact of the coronavirus pandemic on European economies and societies. The Facility budget of €723.8 billion (in current prices) in loans (€385.8 billion) and grants (€338 billion) is available to Member states for implementation of reforms and investments. Important category in all recovery and resilience plans is the education – around 47 % of the EU recovery and resilience budget is allocated to the reskilling and upskilling (education and training to support digital skills) category ([Bruegel datasets](#), [European Union countries' recovery and resilience plans](#)) with more than 26% on the digital transition. Those investments also manifest the dedication of Member States to the disadvantaged groups and student population who is significantly affected by pandemic crisis and who have to overcome learning and digital gaps as soon as possible.

Analysis in this report indicated common reforms and investments countries are planning for the next few years. As many countries have similar goals and will go through similar challenges, cooperation and collaboration could bring additional values and help the education system growth and empowerment.

The recent [European Schoolnet Eminent 2021 conference](#) highlighted the necessity of joint coordinated recovery and resilience action at the European level as it could bring more benefits to Member states than individual national activities and create better effects across countries. European Commission (DG EAC and DG CNECT) is already working on the development of ethical guidelines on artificial intelligence and data in education and training and guidelines for teachers and educators on tackling disinformation and promoting digital literacy through education and training which could also help cooperation among Member states. In October Commission launched a structured dialogue with the Member States on digital education and skills with a team of nine College members working on it. The structured dialogue will run until the end of 2022 inviting Member States to agree jointly on the key enabling factors to make digital education and training effective and inclusive. Based on its outcomes, the Commission will propose by the end of the same year concrete initiatives on enabling factors for digital education and skills.

Some development and news about implementation of recovery and resilience plans you can follow on the [Digital Skills and Jobs Platform](#), in the [section](#) that presents national strategies, policies, and nationwide initiatives in digital skills area.

We share the Member States hopes that planned reforms and investments will bring necessary enhancements and make education systems better prepared and more resilient to any future challenge. The implementation of those reforms will also offer opportunities to reinforce monitoring systems as a way to follow-up progress towards goals, detect unexpected challenges and possible needs for adjustment along the road. In other words, what will be learnt through the implementation of policy intentions will be as important as the reform's achievements themselves.



 www.eun.org

 [@eu_schoolnet](https://twitter.com/eu_schoolnet)

 facebook.com/european.schoolnet

 linkedin.com/company/european-schoolnet

 youtube.com/europeanschoolnet

European Schoolnet – EUN Partnership AISBL
Rue de Trèves 61, B-1040 Brussels
+32 (0)2 790 75 75