

Inclusive Education and the Pandemic – Aiming for Resilience

Key European measures and practices in 2021 publications



EUROPEAN AGENCY
for Special Needs and Inclusive Education

INCLUSIVE EDUCATION AND THE PANDEMIC – AIMING FOR RESILIENCE

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publications**



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GLOSSARY

Definitions in this report are aligned, whenever possible, with those used in the European Agency for Special Needs and Inclusive Education's *Inclusive Digital Education* publication (2022). Throughout this document, terms such as digitisation, digitalisation, digital divide, etc., are used in line with the *Inclusive Digital Education* report definitions.

Blended learning

Blended learning in formal education happens when a school, educator or learner takes more than one approach to the learning process:

- Blending school site and distance learning environments
- Blending different learning tools that can be digital (including online) and non-digital (European Commission, 2021a, part 2/5, p. 12) (See also Council of the European Union, 2021, p. 12).

This is the design and facilitating of learning both on the school site and in other physical environments away from the school site (distance learning) and the use of different learning tools (digital, which can be online, and non-digital) (European Commission, 2021a, part 2/5, p. 37) (See also Council of the European Union, 2021, p. 12).

Online learning

Online learning is defined as learning that takes place using digital technology to connect different devices and to facilitate interaction between the learner and teachers, trainers or other educational staff, or other learners, aimed at obtaining learning content or other information to achieve the objectives of learning programmes (Council of the European Union, 2021, p. 12).

Remote learning

Remote learning occurs when students, educators or information sources are not physically present in a traditional classroom, and information is relayed through technology or other physical means. It can happen synchronously with real-time interaction, or asynchronously, with self-paced learning activities that take place independently of the instructor (Soo Boon, 2021, p. 5).



EXECUTIVE SUMMARY

This report is an output of the [Building Resilience through Inclusive Education Systems](#) (BRIES) project by the European Agency for Special Needs and Inclusive Education (the Agency). It provides the Agency's Representative Board and interested readers with an overview of current issues discussed in research and international and national publications. Furthermore, it provides information on developments in the BRIES project.

BRIES aims to map how the COVID-19 pandemic has affected inclusive education systems in Europe, the lessons learnt, and how to turn the crisis into an opportunity to build resilience. The project encompasses a first phase of information collection and analysis that provides content to support the second phase of countries' peer-learning exchanges. While the project's literature review, [The Impact of COVID-19 on Inclusive Education at the European Level](#) (European Agency, 2021a), covered 2020 publications, this report extends the review to 2021 publications and focuses on European countries' education measures and practices.

This work analyses articles and documents published in 2021 that provide insights into current developments in inclusive education in the context of the COVID-19 pandemic. The focus is on the following questions:

- What impact has the COVID-19 pandemic had on inclusive education systems in Europe?
- What lessons can be learnt from this?
- How can these lessons be used for future developments?

This report aims to provide insights into the changes that occurred during the COVID-19 pandemic and to contribute to the future development of more inclusive, equitable and resilient education systems. To accomplish this, it focuses on the measures and practices countries implemented in their education systems during the pandemic, among other developments and changes. In this report, **measures** refers to countries' general actions (policies, strategies, plans, etc.). It can be understood as 'how countries reacted' to the crisis.

After a detailed literature search and a thorough selection process, the resulting documents were examined in more detail and included in the analysis. This report's key findings complement the thematic areas of the project's literature review (ibid.) and relate to six aspects:

1. Transformations in learning and teaching

During the COVID-19 pandemic, all those involved in the education process faced difficulties of various kinds due to the associated school closures and the shift to remote learning. Vulnerable learners were confronted with greater problems, as existing inequalities within the education system were further reinforced. In particular, promotion of the necessary competence development for remote learning, on the part of both teachers and learners, is required. Overall, comprehensive counselling services must be



established, training courses implemented, existing curricula adapted, and individual assessment methods developed in this area.

2. Technology and accessibility

In the context of school closures, there has been an increased use of digital media and resources to shape the learning process. However, the lack of equipment in schools and learners' limited access to devices and the internet represented major problems. Vulnerable learners in particular were therefore excluded from certain aspects of the learning process during the COVID-19 pandemic due to existing digital barriers. Poor digital literacy also made it difficult to move to online learning during the school closures. Future education policies in this area must focus on schools' technical equipment, the acquisition of digital competences and the general accessibility of all the resources necessary for all learners' learning processes.

3. Learning loss and remedial measures

The shift to remote learning in schools has sometimes led to significant learning loss among learners. In this area, too, the pandemic has exacerbated existing inequalities in the school system. To counteract this learning loss, a new understanding of the content to be learnt and an increased focus on the acquisition of competences rather than content are needed. Appropriate assessment and support measures must be established to recognise and appropriately address learning loss.

4. Mental health and well-being

The COVID-19 pandemic and the changes within the school system have also had a clear impact on the mental well-being of teachers, learners and parents/families. Increased stress, excessive demands and loss of motivation are some of the issues recorded. In the future, mental health counselling services must be available to all teachers and learners free of charge, both inside and outside the school. In addition, specific competences need to be acquired to improve one's own well-being on the one hand and to enable teachers to better respond to their learners' well-being on the other. Mental health must also become part of educational monitoring and quality assurance processes.

5. Communication and collaboration

Communication and collaboration play a central role in the context of changes within the education system. Firstly, there is a need for both national and international networking to exchange information and findings and to learn from each other. For this purpose, networks must be expanded and exchange opportunities must be made available. In addition, co-operation within countries must be emphasised and, above all, actors in the school system must be involved in establishing these measures. Furthermore, communication between teachers and parents/families must be strengthened and expanded.

6. Governance and finance decisions in the education system

Education policy decisions have been essential in coping with the COVID-19 pandemic in the education system. It is important to emphasise that policy measures and guidelines are needed, but flexibility and autonomy at the school and teacher level must be maintained. Furthermore, policies must not stigmatise specific groups, as was seen several times during the COVID-19 pandemic. Instead, all learners' needs must be considered



equally. Financial investments must also be made in the education system in the future, to improve school equipment, expand learners' access to necessary learning resources and implement remedial measures. There is a need to develop recovery and action plans, which must also be implemented at all education system levels.

The report examines each of these areas in detail: it outlines developments, describes implemented measures, provides examples, and discusses future developments and recommendations.



1. INTRODUCTION

The COVID-19 pandemic has been one of the most challenging crises for European education systems in recent decades. Studies already demonstrate that school closures have revealed new vulnerabilities among learners (Costa, Baptista and Carvalho, 2021). The pandemic has exacerbated existing inequalities within education systems, and new inequalities are emerging (UNESCO, 2021a). Future policies and resources are needed to implement inclusive and equitable education for all learners (ibid.).

The experience of the COVID-19 pandemic within the education system clearly shows that schools must be prepared for crises of this kind in the future, as well as for possible further school closures (Blaskó, Da Costa and Schnepf, 2021). The experience gained can be used as a basis for future developments, insofar as it is important to learn from it:

The COVID-19 crisis provides lessons on how to build a transformational and resilient education system through forward-looking policies that will produce the skills needed in the future (Arcia et al., 2021, p. 17).

Seeking to return to a pre-pandemic era must therefore be avoided at all costs. Even before COVID-19, education systems did not meet the requirements of inclusive and equitable education. It is therefore urgently necessary to finally push developments in this direction and to see the pandemic as a reason for change.

The literature review on publications from 2020 (European Agency, 2021a) and a questionnaire on the impact of COVID-19 on inclusive education that was sent to Agency member countries revealed that well-being and learning loss were critical aspects of the pandemic crisis to be followed up on in the future. This report builds on these previous findings and sheds light on other areas that could help education systems become more resilient and address future crises.

Icons used

Throughout this literature review, text boxes highlight relevant ideas and countries' examples. Different icons indicate the type of information. They are as follows:

Icon

Meaning



Quotation



Country example



1.1 Framework of this report

This report supplements the review of 2020 publications on the impact of COVID-19 pandemic on inclusive education (European Agency, 2021a). It focuses on 2021 publications with a special emphasis on measures in countries' education systems. It attempts to present current developments in the field of inclusive education due to the COVID-19 pandemic and related measures, based on an intensive examination of the literature published in 2021. Finally, it aims to contribute to the goal of future development towards an inclusive and equitable education system.

The central questions this report aims to answer are:

- What impact has the COVID-19 pandemic had on inclusive education systems in Europe?
- What lessons can be learnt from this?
- How can these lessons be used for future developments?

This report is intended to assist the [Building Resilience through Inclusive Education Systems](#) (BRIES) project in its further efforts. Therefore, the report particularly focuses on European countries and their experiences, measures and examples of practice. It will be used as a basis for focus group discussions among same-level stakeholders from different countries. Issues and recommendations identified in the report will be discussed in groups of either learners, parents, teachers or policy-makers. This will allow stakeholders from different levels and countries to reflect on issues that were presented in key publications and analysed in this report. The BRIES project benefits from these diverse perspectives and integrates resulting priority areas from the focus group discussions into the project's further development. The voices of the stakeholder groups will be revisited and invited again later in the project.

In striving for developments towards a more inclusive and equitable school system, it is central to reflect on promising practices and those that are already implemented. For this reason, this report, in addition to mentioning general experiences, presents concrete examples.

1.2 Report structure

This report is divided into 10 sections, plus references and a bibliography. Following this introduction in section 1, [section 2](#) describes the report's methodology, the literature search and the analysis process. [Section 3](#) focuses on general transformations in learning and teaching. It highlights problems on the part of learners, teachers and parents/families. In addition, it highlights certain areas of action, discusses future scenarios and thus provides recommendations.

The following sections then address core themes emerging from the literature sources. For this purpose, the report deals with existing problems or views of the involved people first, before discussing measures that are already implemented and future recommendations:

- [Section 4](#) deals with the first core theme of technology and accessibility.



- [Section 5](#) discusses the issue of **learning loss and remedial measures** taken to mitigate it.
- [Section 6](#) addresses the topic of **mental health and well-being**.
- [Section 7](#) looks at the area of **communication and collaboration**, both at teacher-parent level and at national and international levels.
- [Section 8](#) looks at **educational policies** and deals with measures implemented and future developments.

Finally, the report summarises and comments on the central contents:

- [Section 9](#) summarises the central statements and the most important recommendations for future developments.
- [Section 10](#) takes another look at the findings and relates them to the report's original research interest. In addition to those topics of particular interest, it discusses which topics were under-represented in the literature and where further research is needed.

Lastly, at the end of this report there are two lists of literature: the [references](#), which lists all the literature used to illustrate the contents of this report, and the [bibliography](#), which contains the details of all 147 documents that were found in the literature search process and used for the analysis. Finally, the [Annex](#) details the databases and search terms used for the literature review and the number of results found.



2. METHODOLOGY

This section provides an overview of how the documents for this report were obtained. It describes the search process, including the necessary search criteria, the selection process and the final analysis process.

2.1 Literature search

A systematic literature review, such as the one presented in this report, can be described as ‘a review with a clear stated purpose, a question, a defined search approach, stating inclusion and exclusion criteria, producing a qualitative appraisal of articles’ (Jesson, Matheson and Lacey, 2011, p. 12).

The [Introduction](#) outlined the research question, so this section will only discuss the search process and the search criteria applied.

The literature search covered databases, relevant journals, library catalogues and databases of international institutions and organisations (see the [Annex](#) for an overview). The search included grey literature as well as academic articles and books. Grey literature can be defined, according to Jesson et al., as ‘any document that is not an academic journal article ... [e.g.] [t]echnical reports, commissioned research reports, working papers, government policy reports’ (ibid., p. 54).

The search used the following criteria:

- texts had to have been published in 2021 – publications from 2020 were covered by the previous literature review (European Agency, 2021a);
- texts had to be available in English or German (the researcher’s known languages);
- texts had to relate to the research question by covering the areas of COVID-19 and inclusive education.

In addition, keywords were used in most databases, with the search covering the texts’ title, abstract and keyword tags. The simple keywords ‘COVID-19’ and ‘inclusive education’ were linked by the Boolean operator ‘AND’ to ensure that the results would cover both areas. In some databases, a hand search was carried out instead of using keywords (see the [Annex](#)). This involved manually searching publications which may not otherwise be indexed.

The literature data obtained in this search was then imported into the Zotero literature management program. The search process resulted in 1,473 texts that eventually had to be narrowed down further.

The initial selection process of the literature also took place in Zotero. The selection was based on the title and abstract. If no clear decision was possible otherwise, the text was read briefly.

During the selection process, texts were excluded based on the following criteria:

- year of publication other than 2021;



- a language other than English or German;
- no thematic fit with the research question, e.g. no reference to COVID-19 or no reference to the education system;
- lack of reference to Europe or lack of general validity.

To make this clear, texts were only included in the literature pool if they were directly related to countries in Europe or presented general findings or strategies that could also be of interest to Europe. It should be noted at this point that the proportion of literature examples available from different European countries is uneven. There are many reports from some countries, fewer from others and from some there are no reports at all.

Furthermore, a focus on compulsory education was adopted, so that both the pre-primary and higher education sectors were initially excluded. In addition, texts that merely referred to other future or existing publications (e.g. research descriptions or reviews) or were duplicated in the literature pool were excluded. Finally, the availability of the texts was another exclusion criterion. Often the title and abstract were available, but the full text was not free, due to restricted access to certain platforms and resources, so these documents had to be excluded.

Throughout the selection process and based on the research team meetings related to this process, the decision was made to broaden the field of relevant texts. In addition to resources that addressed the compulsory education sector, the fields of early childhood education and care and teacher education were considered. Thus, the relevant results of the literature research in these areas were added back into the literature pool.

Teacher education was added because this field provides important insights into what teachers need to learn during their training and their careers. It shows new challenges and opportunities that they faced during the pandemic, and how lessons learnt during COVID-19 can be used to better prepare teachers for their roles in schools.

Early childhood education and care was added because of its crucial part in every child's development and learning history: 'Early childhood education and care is the essential first step of the lifelong learning ladder for all children' (European Commission, 2021b, p. 5).

It would be valid to argue that everyone's entire educational career, including their adult years, should or could be considered. However, due to the limited number of pages, this report has to set a focus. Looking more closely at the structural set-up of education systems, groupings can be made: early childhood education, primary education and secondary education on the one hand, and higher education on the other. As such, this report could not consider the findings and recently published research in the field of higher education.

After the completion of this first selection phase, 200 texts remained, which were further examined in the analysis process.



2.2 Analysis

The text analysis took place in three steps. The first step was part of the selection process described above. Here, tags were assigned in Zotero, which provided an initial overview of the texts' main topics.

The second analysis step was carried out in the MAXQDA 2022 program, which supports the qualitative analysis of a wide variety of data. The data, files and assigned tags (hereafter referred to as codes) were transferred from Zotero to MAXQDA. Within this step, the 200 texts remaining after the selection were read in depth and some texts were excluded, based on the aforementioned exclusion criteria. These were mainly texts where there was no thematic fit after all, or which lacked general validity after closer reading. Finally, a total of 147 texts were included in the analysis. They were read thoroughly, and new codes were assigned to them.

The third step of the analysis involved a mapping process in which the codes were summarised, generalised and abstracted so that the most important categories emerged. This mapping took place using the creative coding function in MAXQDA, which allows the user to move, arrange and structure codes on a working surface.



3. TRANSFORMATIONS IN LEARNING AND TEACHING

With the outbreak of COVID-19 and the spread of the virus across the world, all countries were forced to respond to the pandemic at some point. This led to changes in all countries' education systems in the 2019/2020 school year, with many countries closing schools and switching to remote learning. The forms of remote learning implemented in this process range from worksheets, to watching TV programmes developed especially for education, to teaching via digital learning platforms, both asynchronously and synchronously (see, for example, Yazcayir and Gurgur, 2021). [Section 4](#) will discuss online learning in more detail.

A study by Harvard University, which was carried out in 36 countries, including some European ones, makes clear that collaborations were initiated with regional educational media, such as television or radio, during the COVID-19 pandemic (Bhan and Julka, 2021). Portugal, for example, established a special educational programme on television at the time of school closures and remote learning, and France worked in partnership with radio and television to reach as many children as possible (ibid.). As can be seen, television and radio can sometimes be described as inclusive and accessible learning media, as learners' access to them is much higher than to forms of digital media, especially the internet (European Commission, 2021a).

The different forms of remote learning described above should not necessarily be understood as different countries' approaches. There are often major differences within countries. For example, in Turkey, parents of learners with special educational needs were asked about the use of different learning opportunities: the offer of TV programmes was frequently used, online lessons were only attended in exceptional cases, and a high number of parents reported that no forms of remote learning were available or used (Yazcayir and Gurgur, 2021).

However, some initiatives that existed before COVID-19, such as *iScoil* in Ireland and *Schule für Circuskinder* in Germany, show that forms of remote learning can indeed be successful. Here, learners can participate in learning processes from home, detached from the physical location within a school building (European Commission, 2021a).



As will become clear later in this report, the design and shape of schools prior to COVID-19 has a significant impact on the design of the transition to remote learning during the pandemic (OBESSU and Open Society Foundations, 2021). Learners are not used to working independently and autonomously, the necessary resources are not available, or at least not to a sufficient extent, and there is a lack of the necessary skills, not only among learners, but also among teachers and parents or families.

The lessons learnt during the COVID-19 pandemic, the associated school closures and remote learning must, therefore, lead to changes in traditional teaching practices in the



future (Beattie, Wilson and Hendry, 2021), in order to be better able to respond to future crises and to design more inclusive and resilient education systems.

An inclusive education system is based on a number of key components (see European Agency, 2021b). This section will focus on three of these components that were of particular interest in designing learning scenarios during the COVID-19 pandemic: an inclusive pedagogy, an inclusive curriculum and an inclusive assessment system (Schleicher, 2021). [Section 3.1](#) will first address the area of pedagogy by examining the problems and challenges encountered during the COVID-19 crisis. It will consider the positions of learners as well as of teachers and parents or families. [Section 3.2](#) addresses the special situation of vulnerable learners. Next, the areas of assessment ([section 3.3](#)) and curricular changes ([section 3.4](#)) are addressed. [Section 3.5](#) then looks at blended learning and its significance for the future of inclusive education processes. Finally, [section 3.6](#) summarises the most important key statements and recommendations in section 3.

3.1 Particular challenges that have been identified

A report published by the United Nations Educational, Scientific and Cultural Organization (UNESCO) focuses on the impact of COVID-19 on learners with disabilities, their parents and their teachers (Bhan and Julka, 2021). Although this data focuses on learners with disabilities, it can still provide clues to issues that arise more generally, as Bhan and Julka (2021, pp. 11–12) explain:

- Educational challenges faced by children with disabilities
 - lack of peer interaction
 - lack of therapies
 - lack of diagnostic assessment
 - break in routine
 - lack of teacher support
 - lack of access to meals
- Challenges experienced by parents of children with disabilities
 - poor internet connectivity
 - lack of support from family members
 - time constraint
 - lack of digital literacy
 - economic constraint



- household responsibility
- Challenges experienced by educators while coping with changes due to pandemic
 - overburdened
 - under parental scrutiny
 - lack of diagnostic assessment
 - lack of digital literacy
 - lack of gadgets
 - salary cut.

3.1.1 Problems experienced and expressed by learners

The list above focuses on learners with disabilities. This view needs to be expanded. In a survey, Austrian learners reported additional changes during remote learning that they considered problematic:

- reduced contact with other people and especially with classmates;
- the organisation of a learning day;
- lower motivation;
- an inadequate learning environment at home;
- technical difficulties;
- conflicts within the family;
- difficulties in establishing an appropriate school-life balance (Pelikan et al., 2021).

Learners' low motivation plays a central role in many surveys (see, for example, Shaw and Shaw, 2021). There are a few reports of targeted initiatives to address this lack of motivation. For example, the fatigue caused by online learning and the often monotonous design of remote learning can be addressed by establishing project-based learning (OBESSU and Open Society Foundations, 2021).

Looking more closely at the learners' learning processes, certain challenges arise:



Remote learning requires a high level of autonomy and competence from learners. Studies show that competences of autonomy and self-regulation must not be assumed in the context of remote learning. These must first be taught to the learners in order to enable successful remote learning scenarios (Carretero et al., 2021).



Learners also report the difficulty of reaching teachers outside of synchronous online lessons, and therefore often being unable to get additional explanations from teachers (Pelikan et al., 2021). They also reported receiving insufficient feedback from teachers on their learning process and outcomes (ibid.). Feedback processes in the phase of remote learning generally took place with a time delay. This can have negative effects on learners' performance (Carretero et al., 2021). In addition, surveys showed that forms of self- and peer-assessment were not used, or at least only rarely, in the changed learning processes during the COVID-19 pandemic (ibid.). It is important to consider other forms of feedback in the future and to test their possible implementation in the context of remote learning (ibid.).

Even though these problems present a rather negative picture, it must be emphasised at this point that learners' perceptions of remote learning varied greatly. Not all learners perceived remote learning negatively. On the contrary, more than 60% of 10–16-year-olds in Finland, for example, reported that remote learning was enjoyable and that they learnt the same amount or even more than in regular classes (Sahlberg, 2021).

3.1.2 Problems experienced and expressed by teachers

The remote learning implemented during the COVID-19 pandemic is not located in schools, so teachers' sphere of action and responsibility can no longer be defined spatially. Instead, it must be defined in relation to learners' learning process, even if this takes place in the home environment (European Commission, 2021a). Furthermore, there is a change in teachers' roles in remote learning scenarios. Teachers now function less as presenters of the content to be learnt. Instead, they should or must act as supporters of the learners' independent learning processes (Soo Boon, 2021).

In questionnaires, teachers describe several problems. These include providing appropriate and differentiated learning materials and adapting remote learning to each individual learner's needs, which teachers perceived as major challenges (Beattie et al., 2021). Teachers also highlight monitoring learners' learning processes during periods of remote learning as a major challenge (Carretero et al., 2021).

The ability to reach learners also became a major problem in the context of school closures. For example, in France, teachers reported that they were unable to contact an average of 8% of learners during this period (Thorn and Vincent-Lancrin, 2021a).

It can be generally assumed that teachers need more support during such challenging periods. Support can be provided, for example, by schools or governments implementing policies or action plans (Costa et al., 2021). In-service training is important to support teachers and ensure high-quality teaching that is differentiated to meet learners' needs (OECD, 2021a). Teachers also highlight peer support within the school as helpful. This aspect can, for example, also be linked to teacher training, as teachers who have completed training become multipliers in the teaching team (European Commission, 2021a).



The issue of teachers monitoring the learning process can be overcome, for example, through the use of digital technologies, as they provide insight into what learners are doing and real-time interaction, although mediated through technology:

There are things that are difficult to achieve without an interaction with the student ... and the use of the platform was good for giving feedback instantly, and seeing the difficulties, accompanying the student (...) in synchronous classes it is easier not to leave students behind, it is not the same as the face-to-face classes, but we have managed to minimize inequality situations and we know that they are in class and have access to the materials (Costa et al., 2021, p. 216).

3.1.3 Problems experienced and expressed by parents and families

The COVID-19 pandemic has made it clear that all environments involved in a learning process need to be functional to positively support the learning process rather than negatively restrain it (European Commission, 2021a). This means that the home environment is just as important as the school environment in learning processes, in the context of remote learning.

The literature clearly shows that the changes in learning processes and organisation during COVID-19 had a strong impact on the learners' home environment. For example, due to the loss of regular contact with teachers, parents took on a new and special role within their children's learning process as a central support person (Shaw and Shaw, 2021). Parents thus play a key role in the learning processes transformed through COVID-19, especially for lower school levels or learners with special needs (Carretero et al., 2021). The absence of parental support, as well as the absence of teacher support, increases the risk of exclusion from the learning process implemented through remote learning (ibid.).

During remote learning, language barriers played a central role. Many learners with a first language other than the language of school instruction faced the problem of not understanding class assignments or being unable to access a learning platform due to language barriers (ibid.). In addition, some parents did not have the necessary language skills to support their children. Communication with the school and teachers also often failed due to language barriers (ibid.). In Greece, for example, this was represented by a high absence rate from online lessons among learners with an immigrant background (ibid.). In Belgium, for example, an attempt was made to compensate for this challenge by using a multilingual communication app that allowed translation into the parents' languages (ibid.).

Parents mentioned other problem areas, apart from language barriers. In a study conducted in the United Kingdom (England), parents mentioned three problems:

- inadequate materials or materials not adapted to children's needs or learning levels;
- lack of accessibility to the materials and to the learning platforms in use;
- lack of teacher support (Shaw and Shaw, 2021).



Many of the materials offered were not designed inclusively, insofar as parents found that differentiation was lacking within the materials (Smith, 2021).

Lack of support is confirmed by an Italian study, where only about 16% of the interviewed parents reported that their children received the necessary support from the school during school closures (Pastori, Pagani, Mangiat and Pepe, 2021). In contrast, about 38% of parents reported partial support, while about 45% reported that their children received no support at all (ibid.).

Smith (2021) illustrates the general situation of parents of learners with special educational needs and disabilities (SEND) very well: ‘Many parents feel that their children have fallen off the radar and are not being educated with – or to the same standard – as their peers who do not have SEND’ (p. 175).

However, parents also made suggestions and recommendations within the literature. In particular, they mentioned better teaching materials, adapted to needs and developmental stage and equipped with solutions to support parents (Shaw and Shaw, 2021). Counselling centres were also mentioned as a possible future measure (ibid.). In addition, parents of learners with special needs want teachers to show more support and interest in their children’s learning:

Considering the purpose of this research, it can be said that teacher support and guidance regarding the education of students with special needs is crucial and vital and necessary (Yazcayir and Gurgur, 2021, p. 7).

A study conducted in Germany provides a somewhat different picture. It concludes that parents of learners with special needs received differentiated materials appropriate to their children’s learning level (Pozas, Letzel and Schneider, 2021). Remote learning was therefore not considered a barrier to the implementation of an inclusive school system, as no new barriers were identified through COVID-19 (ibid.).

3.2 The special situation of learners vulnerable to exclusion

School closures and the switch to remote learning as a result of the COVID-19 pandemic further exacerbated existing inequalities in countries’ education systems (see, for example, Carretero et al., 2021; Constantinescu and Dascălu, 2021). Vulnerable learners in particular were confronted with much greater problems as a result of the switch to remote learning (Yazcayir and Gurgur, 2021):

Findings showed that schools’ closure has exposed students to new vulnerabilities. Therefore, regardless of the cycle of studies they attended, students started to have less time on average dedicated to curricular learning, and were forced to stay at home, sometimes with little or no conditions to learn and without support for studying (Costa et al., 2021, p. 221).

These students at the centre of this discourse tend to have less access to relevant digital materials (e.g. laptop, computer, quality internet access), physical conditions to work at home (e.g. quiet space to study and/or a desk),



parental support (e.g. familiarity with digital resources, socio-cultural capital of families, nutrition) (ibid., p. 220).

A study by the Organisation for Economic Co-operation and Development (OECD) identified different groups of vulnerable learners in relation to the COVID-19 pandemic:

- students with special needs (cognitive, physical, social, emotional)
- students unable to access learning
- students who are disengaged with schooling, absent or have been considered at risk of dropout
- students with socio-economically disadvantaged backgrounds
- students at risk of domestic violence, child abuse and child neglect
- students with different linguistic/cultural backgrounds
- displaced students (OECD, 2021b, p. 74).



A study conducted in Belgium, Estonia, Greece, Italy and Poland also concludes that vulnerable learners are particularly confronted with problems due to the school closures (Carretero et al., 2021). The lack of autonomy of many learners, the lack of a workplace and the necessary silence and privacy to fully concentrate on a learning subject, as well as the lack of required technical equipment, or the simultaneous use of the equipment by several people living in the household, can be problem areas. According to the results of the study, these problems were more prevalent among children from families with a low socio-economic status or among children with a migrant background, i.e. especially among refugee children (ibid.).

Other studies showed that, for vulnerable learners, regularly completing assignments and consistently attending class was a problem (Yazcayir and Gurgur, 2021). Inequalities and disadvantages were particularly exacerbated by introducing digital technologies in the teaching-learning process. Individual learners who lacked access to these technologies could not participate in any online classes that might be offered (Carretero et al., 2021).

Some countries tried to overcome the problem of digital technologies and turned to more traditional methods. For example, in Hungary, paper homework was delivered to learners once a week and collected the following week (UNESCO, European Agency for Special Needs and Inclusive Education and Network of Education Policy Centers, 2021). In Montenegro, printed materials were used when learners did not have access to digital resources (ibid.).

Face-to-face education in schools before COVID-19 provided many learners with special needs with the learning materials and support they needed (Jesus et al., 2021). With the



absence of these conditions, many learners and their parents were forced to cope without these supports at home (ibid.). The design of learning processes for learners with special needs proved to be most difficult in the context of remote learning. Both parents and teachers noted in this context that an appropriate, differentiated design of the learning content was often lacking: ‘The assignments they get are not adapted to each student, for example special needs are not taken into account’ (Blikstad-Balas, Roe, Pedersen Dalland and Klette, 2021, p. 194).

In addition to the lack of differentiated materials, parents of learners with special needs cited the following problems with remote learning in a study conducted in Turkey:

- lack of co-operation between learners, teachers and parents;
- no access to the internet or a computer;
- lack of learner adaptation to the changed learning situation, e.g. lack of motivation;
- psychosocial problems (e.g. lack of contact with others; changed routines, etc.) (Yazcayir and Gurgur, 2021).

In the end, all participating parents considered remote learning as inefficient for their children (ibid.).

3.3 Adjustments to assessment

The following sections will highlight areas where COVID-19 has not only created challenges, but has also initiated or may initiate positive changes. The changed demands on the education system as a result of COVID-19 required the establishment of flexible framework structures, which are reflected in the areas of assessment, curricula and the adaptation of learning towards blended learning, among others.

The assessment of pupils’ learning outcomes is another problem in the context of remote learning (Carretero et al., 2021). Unequal access to materials, resources and to digitally-delivered lessons cause differences that need to be taken into account. An Italian teacher stated that ‘traditional assessment cannot work with remote teaching’ (ibid., p. 18). This highlights the need to develop alternative assessment methods, as a change in teaching and learning methods must result in a change of assessment standards and eventually in a change in the curriculum (OBESSU and Open Society Foundations, 2021) (see [section 3.4](#)).

Assessing learners’ performance is important in many countries and needed to be reconsidered in light of the pandemic. In countries such as Ireland and France, exam grades from the final year of schooling determine whether or not learners gain access to universities (ibid.). In such cases in particular, changes to the way examinations are conducted and to general assessment practices within schools have been the subject of much debate (ibid.).



Many countries changed their approach to and means of conducting examinations due to the COVID-19 pandemic and the resulting change in the educational situation (OECD, 2021a). In Estonia, for example, many teachers moved away from traditional assessment in the form of awarding grades and instead established a pass/fail system (Mägi, 2021). In Spain, on the other hand, all learners were allowed to progress to the next school level at the end of the school year, without taking centralised examinations (OECD, 2021a). In France, too, those classes that would usually have taken a standardised test at the end of the year did not do so (ibid.). The extent to which this affects schools' final graduation rates is not clear. Countries such as France and Spain, but also Latvia, Italy and Norway, reported more graduations than in the years before the pandemic; Estonia, Lithuania and Sweden reported stable numbers. Only Russia reported decreasing numbers (ibid.).

Assessment has been used to determine educational progress and allow learners to complete compulsory education, but it is also an important tool to monitor learning processes and thus identify learning loss (OECD, 2021a). For example, in a survey, Estonian teachers emphasised the need for tools to analyse learning or to monitor learning activities and outcomes online in order to keep track of learners' learning (Mägi, 2021). While some countries, such as France, Germany, Denmark, Estonia and Italy, used standardised assessments at all school levels, in most other countries it was up to teachers to conduct such assessments within their classes (OECD, 2021a).

In general, examinations were often postponed or completely cancelled. When examinations were conducted, the content was often changed or the examination mode was adapted. In Lithuania, for example, some final examinations were conducted online (ibid.). Alternative forms of assessment and monitoring learning have also been introduced in France, Latvia, Poland, Russia and the Netherlands (ibid.). In Estonia, there is also a clear move towards formative assessment, where teachers assign a central focus to feedback and describe learner progress rather than simply giving grades (Mägi, 2021).

Standardised examinations should be avoided because of learner individuality, as the COVID-19 pandemic and the associated changes have once again highlighted (OBESSU and Open Society Foundations, 2021). The content of examinations should also be strongly questioned, as learners' autonomy and self-reliance do not play any role in this, although these are the competences they need in their further educational and professional life (ibid.).

3.4 Adjustments to curricula

Just as many countries reacted to the changed circumstances during COVID-19 by adapting assessments, many countries also adjusted their curricula. For example, the aforementioned study in Estonia identified a change in focus on some key competences



and subjects: ‘The emphasis is on language and hard sciences rather than humanities’ (Mägi, 2021, p. 12).

Changed learning conditions also need a changed curriculum, as many countries’ existing curricula could be considered ‘outdated’ in the context of the learning scenarios before COVID-19 (OBESSU and Open Society Foundations, 2021, p. 19).

The European Commission (2021a) recommends that school curricula be revised in three areas:

- **the structure:** away from year-based curricula towards, for example, a module system;
- **the indicated learning outcomes to be achieved:** focus on competences instead of subject content;
- **possible extension:** possibility to establish new courses in existing subjects.

The OECD (2021b) proposes a slightly different approach to curricular change. It identifies four ways in which curricula can be adapted to the COVID-19 pandemic:

- **Digital curricula:** to respond to the changing demands and challenges of digital learning
- **Personalised curricula:** to better address each learner’s individual needs
- **Cross-curricular content and competency-based curriculum:** to include equity in curricula and to address those competences that are not covered by classical learning content but are essential to learners’ later careers
- **Flexible curricula:** to better address specific situations and needs.

Flexibly-designed curricula allow teachers a certain degree of autonomy in decision-making to better respond to the needs of learners and especially to situations such as the COVID-19 pandemic (Sahlberg, 2021).

Cross-curricular content and competency-based curriculum are addressed, for example, in a World Bank-funded project in North Macedonia. This project aims to redevelop the primary school curriculum, focusing on teaching critical thinking and developing socio-emotional skills among learners (Arcia et al., 2021).

In all forms of curricular adaptation, it is always important to consider all learners and to avoid stigmatisation by only addressing a specific group of learners in the curriculum.

3.5 The future role of blended learning

This section discusses the blended learning approach, which is the education of children both in a face-to-face classroom setting and via remote learning, involving the use of a wide range of (digital) learning tools (European Commission, 2021a). [Section 4](#) focuses more precisely on the barriers and challenges posed by digital education.

Blended learning differs from the remote learning used during COVID-19 insofar as it combines both face-to-face and remote learning. Blended learning describes an expansion of learning spaces but does not focus exclusively on the home environment. The focus



during COVID-19 on using digital tools and the digital learning environment at home is therefore only one possible aspect of blended learning (ibid.). However, during the pandemic it also became apparent that nature can be used as an additional learning space, which could also be an extension to a blended learning approach. In some countries, such as Denmark, there are also efforts to shift the learning process outdoors (ibid.).

In vocational training and learning, opening the classroom through blended learning approaches also has a high potential for better, more practical learning experiences. The spaces used do not have to be real, but can be based on new computer technology. For example, *HandLeVR* is a virtual reality (VR) project in Germany in which trainee car painters experience and learn how to apply paint in a VR space (ibid.).

Blended learning can be understood as a vision for the future of a more equitable, inclusive and resilient school system (Council of the European Union, 2021).

Blended learning is defined as the combination of different learning tools and, as such, it is very conducive to the implementation of inclusive education:

The concept of blended learning supports the adaptation of the learning design for different groups of learners with different needs (European Commission, 2021a, part 2/5, p. 19).

Blended learning approaches can enhance broad competence development, due to the variety of learning tasks and tools they can encompass. The use of digital technology, including connecting devices online, can facilitate the interaction of the learner with other learners, learning programmes, and other sources of information, and can support face-to-face learning and learning in different environments. Acquisition of digital and data competences can be facilitated by blended learning approaches (Council of the European Union, 2021, p. 9).

In particular, the flexibility of blended learning makes it very beneficial for implementing an inclusive school system – it allows learners in rural areas or those who are prevented from attending school for other reasons to be more actively involved in learning opportunities (European Commission, 2021a). Finally, a blended learning approach could reduce existing discrimination in education systems. For example, in an interview, a Scottish mother reported that she was forced to withdraw her children from school a few months before the COVID-19 pandemic because she was told it was not possible to educate them online (Couper-Kenney and Riddell, 2021). A few months later, the seemingly impossible became the norm.

To implement blended learning in a truly beneficial way, and thus fulfil the vision of a more equitable, inclusive and resilient education system, access for all learners to the necessary resources must be ensured (European Commission, 2021a). This does not only mean digital resources and the internet, which [section 4](#) will discuss in more detail. Access to non-digital resources can often be a barrier in socio-economically disadvantaged families, too, e.g. a lack of painting equipment to complete an art task (ibid.).



A similar, possible future direction is to establish a hybrid learning mode, for example, the Hybrid Learning Curriculum Framework for Schools (HLCFS) (Soo Boon, 2021).



Hybrid learning is broadly understood as the educational model in which some students attend class in-person while others join the class virtually, or where each student undertakes a mix of in-person and online learning (ibid., p. 6).

These should not be understood as two separate spheres of learning, as was unfortunately often the case during COVID-19. Instead, the learning process must be understood as a whole (ibid.).

Implementing hybrid learning requires three fundamental pillars: ‘Coherence, flexibility and personalization’ (ibid., p. 15). Coherence addresses both the linear sequence of learning content and the need for interdisciplinary integration to promote the development of cross-curricular competences. A hybrid curriculum must meet these requirements and be designed in an interdisciplinary and integrative way. Flexibility addresses the need to adapt learning processes to specific needs or situations. A curriculum focused on competences and learning processes rather than on learning content would allow this flexibility, as teaching and learning methods can be freely chosen and learning goals can be set according to the situation. Personalisation of learning refers to moving away from generalised approaches and learning processes towards individualised processes adapted to each person’s needs. Hybrid learning could be a way to respond to the changing demands of educational processes in times of crisis (ibid.).

Hybrid formats also work particularly well for in-service teacher training. During the COVID-19 pandemic, many training courses were conducted digitally (OECD, 2021a). Hybrid training is easier to combine with teachers’ professional needs, can be less expensive and allows for the integration of external people or learning content into the training (ibid.).

3.6 Summary and key findings

This section shows that the analysis of texts published in 2021 has reconfirmed some consequences of the COVID-19 pandemic. The pandemic confronted education systems and all those involved in the education process, i.e. learners, teachers, parents and families, with difficulties. **Learners** had to deal with **less peer contact, lack of teacher support, lower motivation, difficulties in organising the learning process, technical barriers** or **unsuitable learning spaces**. In particular, **vulnerable groups of learners faced greater challenges** during school closures and remote learning caused by the COVID-19 pandemic.



Teachers faced problems of **changed roles** in the learning process, **overload, lack of resources, information and competences** and **difficulties in monitoring** learners' learning process.

Parents and families also faced challenges, such as having to take on an **important role in their children's learning process, lack of support** from schools, **language difficulties** in communicating with schools or **lack of competences**.

It is worth noting that, while school closures and remote learning can lead to challenges, they **also offer opportunities**, not least for school development. In particular, assessments and curricula offer opportunities for action in the education system during the pandemic. Learner assessment was a key issue in many countries, and the measures taken varied widely, e.g. alternative grading systems, postponement or cancellation of exams, changed exam content, changed exam formats. In addition, curricula were adapted to the changed conditions, e.g. by focusing on teaching specific core competences.

Based on the findings described, development areas identified in the analysed literature can also be considered as pivotal to build resilience in education systems. These areas can be classified into three categories:

Category 1: Support and competence development

Since both blended learning and hybrid learning represent possibilities to react to future changing demands on the education system, **support is needed to enable all those involved to successfully participate** in such learning scenarios. Learners must be supported by developing the necessary competences, by teachers and by the provision of individualised learning resources. Support is also needed for teachers and parents, for example, by establishing guidelines or offering counselling.

Category 2: Accessibility

Barriers of various kinds must be overcome in remote learning scenarios to enable learners to participate in the learning process and to **ensure communication between all participants**.

Category 3: Adaptation and flexibility

The framework conditions that determine the learners' learning process within the school system need to be adapted. **Flexibility is crucial** to establish a resilient school system that can better respond to future circumstances. In addition to **adapting the curricula**, it is also necessary to **establish formative types of assessment**.



4. TECHNOLOGY AND ACCESSIBILITY

In this section, it is important to mention that the Agency's [Inclusive Digital Education](#) report (European Agency, 2022) provides detailed information on terminology, developments (e.g. systemic change) and projects related to inclusive digital education and digital transformation. As the report was published in 2022, it was not considered in this analysis of 2021 publications. However, its content can serve as background information for this section. A central statement in the context of digital transformation indicates that:

The term 'digital transformation', however, refers to much more than applying suitably designed digital technologies in education. Digital transformation requires all levels – from the individual, to the educational institution, to the regional or national level, with inclusion and digitalisation as cross-cutting issues – to be involved. This involvement is crucial if inclusive digital education is not just to be implemented on a case-by-case basis but is to be permanently anchored in the education system's structures (ibid., p. 12).

Digitalisation and digital transformation in education in general has been a central goal for several years (see European Commission, 2013), but the COVID-19 crisis has made it clear that most countries are still far from achieving this goal. This had major implications for the design of COVID-19-related remote learning. The use of technology during the pandemic was a common element in all European school systems, although the design of digital instruction varied widely from country to country and even within each school (OBESSU and Open Society Foundations, 2021).

One study found that, in those countries that were more advanced in their digitalisation efforts prior to the pandemic, learners ultimately had fewer difficulties in switching to digital learning formats. However, even countries that were thought to be prepared, such as Ireland, experienced regional difficulties and inequalities in terms of the availability of digital resources in schools, with the main difference reported between urban and rural areas (ibid.).

The pandemic also clearly highlighted the importance of expanding digital resources in school learning environments. In Germany, for example, measures were established before the start of the COVID-19 pandemic, but they were insufficiently implemented. As a result, school closures revealed that most schools lacked both the necessary hardware and software to switch to online learning (Cone et al., 2021). In Germany, private providers of technological learning solutions finally offered free options and therefore established themselves within the German school system. For example, while some federal states banned Microsoft products before the pandemic due to data protection concerns, the pandemic led to increased use of their services, because they were recommended by the authorities (ibid.). Accordingly, the pandemic led to progress in German schools' digital equipment that could be described as overdue.

The high importance of technical solutions in the context of remote learning ultimately led to the reinforcement of existing inequalities within society (see, for example, Beattie et al., 2021; European Commission, 2021a). Accessibility difficulties were identified,



particularly for learners from socio-economically disadvantaged households. Both a lack of technical resources, such as laptops, and a lack of internet access can have a significant impact on accessibility and thus participation in digital education (Beattie et al., 2021). In this context, research often speaks of a *digital divide*, *digital poverty* (ibid.) or a *digital gap* (Bhan and Julka, 2021).

Accessibility in the field of learning can cover two areas:

- access to learning materials, e.g. through accessible design, internet access, etc.;
- access to learning through learning opportunities, where the main issue is the organisation of learning (OECD, 2021b).

Moreover, digital learning materials are not equally established for all school levels and types of school. For example, in the context of vocational education and training, there is a lack of online materials tailored to work-based learning (European Commission, 2021a). In early childhood education and care, the use of digital learning tools has also been limited (Medina-García, Higuera-Rodríguez, García-Vita and Doña-Toledo, 2021). The use of technology must therefore be promoted in these areas and, in particular, included in teachers' and educators' training (ibid.).

To adequately address a lack of accessibility in the digital space, existing digital tools and offerings need to change. They must be examined in terms of their accessibility and, if necessary, revised. They should also be adjustable to individual needs (Shaheen, 2021).

The appropriate use of technology and especially the right accessible technologies can have a positive impact on learning processes and contribute to making learning processes more inclusive (Medina-García et al., 2021). Digital content can be used to implement inclusive and differentiated education: it is very well suited to being designed according to learners' needs, but this requires the necessary teacher competences (Arcia et al., 2021). Digital tools can also contribute to increasing learners' autonomy and responsibility, as well as increasing their motivation and promoting the development of digital competences (European Commission, 2021a).

In conclusion, many of the issues and challenges that emerged during COVID-19-related online learning have long been part of countries' education systems (OBESSU and Open Society Foundations, 2021). What is needed now, however, is a shift towards more inclusive and equitable systems (ibid.) and measures to reduce the digital divide in online learning, especially for vulnerable learners (Bhan and Julka, 2021).

4.1 Particular challenges

Whenever digital tools are used in learning processes, the European Commission (2021a) states that:

- learners' data must be protected in the best possible way;
- digital tools must be adaptable to the specific needs of learners with disabilities;
- digital tools must be adaptable to the specific linguistic needs of learners with a first language other than the language of instruction.



Learners, teachers and parents described challenges in these same areas during COVID-19 online learning. In addition, there is a fundamental lack of access to online resources, as previously described, and the extension to other groups of vulnerable learners is also missing. To best meet the Commission's requirements and the challenges of online learning, all those involved need the necessary competences.

The following sections discuss three challenges in more detail:

- Lack of access to resources and online learning settings
- Lack of digital skills
- Internet safety.

4.1.1 Lack of access to resources and online learning settings

In a survey, European teachers mentioned the lack of access to technology – both for teachers and learners – as central to the difficulties triggered by online learning (OECD, 2021a).

To enable effective online learning, every child must be equipped with the necessary technology. However, studies showed that during the COVID-19 pandemic, in some households several people used the available devices at the same time. In other cases, learners had to use smartphones to participate in online lessons. These devices have limited functions, so not all activities were possible, and learners were exposed to enormous physical strain from working on a screen that was far too small (Carretero et al., 2021).

Lack of internet access or an unstable connection can also have a significant negative impact on participation in digital education or make it impossible altogether (ibid.).



Thorn and Vincent-Lancrin (2021a) show that internet access is a common problem in the context of online learning. Their study states that 30% of learners in secondary education in France could not use a reliable internet connection, along with 12% of all learners in Ireland and 7% in the United Kingdom.

Furthermore, significant differences in families' socio-economic status also impact internet access. A study in 10 European countries found a significant difference in internet availability between socially disadvantaged families and socially advantaged families (Blaskó et al., 2021).

In addition, learners' access to information is also highlighted as central. Tools other than learning platforms, such as WhatsApp, email, SMS or phone calls, can sometimes be used to reach as many learners as possible (Costa et al., 2021).

Learners with special needs face particular barriers in the context of online learning, including 'inaccessible formats, a lack of access to adequate support to access instruction, and a lack of available assistive technology' (Hanreddy, 2021, p. 1). Such barriers can eventually lead to learners' exclusion from online learning and thus to isolation (ibid.).



Bhan and Julka (2021) also report that, due to barriers and exclusions, learners with special needs did not have the same opportunities as other learners during online learning, for example, in socialising with classmates.

4.1.2 Lack of digital skills

The switch to remote learning made digital media a fundamental requirement to appropriately implement the new teaching and learning scenario. However, it must be emphasised that digital competences were not only required by teachers to enable them to design lessons – learners also required digital competences to enable them to participate effectively in online lessons (Beattie et al., 2021). Moreover, in the context of online learning, parents' digital competences play an enormous role, as they are more involved in supporting their children in their learning processes, especially in lower school levels (Carretero et al., 2021).



Teachers were faced with the great challenge of suddenly redesigning their teaching completely to digital educational formats as a result of COVID-19 and school closures. In the process, they were offered hardly any guidelines or support from an educational policy level. As such, teachers reported feeling overwhelmed and abandoned. These feelings were mainly countered through peer support within the teaching community (ibid.).

Teachers often had to test a variety of resources before finding the appropriate one, due to the lack of guidelines and recommendations. This also affected learners, as they often had to use several platforms at the same time, which increased their strain (ibid.).

Teachers who had already acquired digital competences before the COVID-19 pandemic experienced a certain relief in the phases of online learning. They could draw on what they already knew, even though the situation was completely new to them. Teachers must therefore continue to develop their digital skills (ibid.).

However, a comprehensive study suggests that the lack of teachers' competences must always be considered from a systemic perspective:

... much of the teachers' lack of skills for online learning is to blame on the systematic neglect of their needs and rights as workers: lack of support and guidance, little to no paid and quality Continuous Professional Development, precarious and underpaid working conditions. Therefore, improving teachers' working conditions is a prerequisite for effective upskilling and teachers' training (OBESSU and Open Society Foundations, 2021, p. 43).

Learners' competences, i.e. how they have been taught to use digital tools, vary widely among countries but also, and especially, among schools (Sahlberg, 2021). In general, however, it can be said that learners hardly have the necessary digital competences to follow lessons in a digital setting (Carretero et al., 2021). Their competences are mostly limited to using digital media for communication or leisure purposes. Using it for school



purposes requires a set of different, and sometimes more complex, learner competences (ibid.). Learners must acquire these competences to be prepared for future online learning scenarios.

Digital competences do not only include using digital media and tools to create or, for learners, as learning materials and resources. They also include knowledge about online safety and data protection (ibid.), which the following section discusses in more detail.

4.1.3 Internet safety

It can be generally stated that privacy and security must always be protected in the digital space (ibid.). Schools and teachers must therefore always consider online risks when using online learning environments.

In a survey of 11 European countries, 59% of children in Italy and Ireland reported experiencing cyberbullying. The lowest rate was reported by Slovenia, with a nevertheless alarming number of 32% (Lobe, Velicu, Staksrud, Chaudron and Di Gioia, 2021). About half of the learners interviewed stated that this phenomenon had worsened during COVID-19-related online learning. In addition, learners' encounters with false information or even inappropriate content on the internet increased (ibid.).

Data security and protecting digital devices from viruses also gained a new relevance during the COVID-19 pandemic, although learners' negative experiences in these areas are disproportionately lower: on average, around one third of learners have experienced them (ibid.).

As previously mentioned, internet safety and data protection should be understood as a part of digital competences. These competence areas were often poorly addressed and hardly taught to learners during the COVID-19-related shift to online learning (Carretero et al., 2021).

4.2 Realised measures and future developments

Inclusive, digital learning environments must enable participation for all learners:



A key feature of inclusive learning environments lies in the accessibility and usability of blended learning tools. Not only do students from lower socio-economic status need to have access and be able to use digital technologies, but this should also hold for other categories of disadvantaged students such as those with learning difficulties or special needs (European Commission, 2021a, part 5/5, p. 122).



To guarantee or achieve accessibility and thus inclusive education, many countries, including numerous European states, implemented measures to:

... improve access to infrastructure for learners in remote areas ... support learners with disabilities (e.g. sign language in online learning programmes)
... establish agreements with mobile communications operators/Internet firms to remove accessibility barriers ... improve access to infrastructure for learners in urban high-density areas ... or provide additional support to lower-income households, including economic support (OECD, 2021a, p. 17).

The OECD study also found that, while more than half of the responding countries implemented the measures above, measures to increase accessibility for migrant and displaced learners were less common, and materials and resources for learners with first languages other than the language of instruction were scarcely provided (ibid.).

Further efforts are therefore needed in this area. Approaches such as **universal design** can help. In the context of educational processes, universal design refers to the design of learning processes and materials that all learners can use (European Commission, 2021a).

4.2.1 Provision of digital resources

Access to technological devices and the internet were among the most common problems in the context of online learning during the COVID-19 pandemic. Many countries tried to address this issue by providing technological devices and internet access (OECD, 2021a). However, great difficulties were encountered in trying to close the gap in learner supply by distributing devices: 'delayed (Italy, Poland, Belgium) or missing delivery (Greece), insufficient and/or occasionally incompatible devices (Belgium), and uneven distribution (Belgium)' (Carretero et al., 2021, p. 11).

After the COVID-19 pandemic, it can also be stated for the education system organisation that schools should provide learners with all the materials they need to participate in learning, whether it is technical equipment or textbooks and pencils. This is not the case in all countries, as illustrated by the examples of Italy and Spain, where school supplies are not funded by the country but must be bought by the families themselves (OBESU and Open Society Foundations, 2021). Changes in this area could further reduce socio-economic inequalities, regardless of the mode of education, whether digital or on-site in schools. Each country should therefore ask itself whether education is actually free in their country, and if not, what disadvantages this entails (ibid.).

To return to technical resources, it is not only the distribution of devices to learners in remote learning situations that plays a role. School equipment in general must also be adapted to the changed conditions. A World Bank-supported project in Romania, for example, aims to increase the resilience of the country's education system in the face of future crises and create improved learning environments. The project aims to renovate 1,000 classrooms by establishing a technology-enhanced learning environment and by improving teachers' digital competences (Arcia et al., 2021).

Along with technical devices, online learning materials are of central importance for successful online learning. Romania's Ministry of Education has set up an online platform that provides teachers with resources, information and tutorials on online teaching



(Constantinescu and Dascălu, 2021). In France, teachers were given access to databases of online learning resources that they could use in a variety of ways (OECD, 2021c). In Poland, too, an online portal allows teachers to access a wide range of online learning materials free of charge. The materials have been adapted to different school levels and have undergone a pedagogical quality check (European Commission, 2021a).

One particular example worth mentioning here is the *KlasCement* digital platform used extensively in Belgium (Flemish community) during the COVID-19 pandemic (Cone et al., 2021). This platform stands in sharp contrast to the private technology companies' offerings used in many other countries during school closures, as *KlasCement* was founded by a single teacher and developed further by the government and ministries. It serves as a networking platform, as a wide variety of educational partners can share materials and information and learn from each other (ibid.). Carretero et al. state:

The sharing of good practices, especially in digital teaching and learning inspired less prepared school leaders and teachers who eventually were able to improve their teaching practices and developed new skills (2021, p. 13).

During the COVID-19 pandemic, *KlasCement* content was also provided in direct response to teachers' current needs, and the platform's target audience was expanded to include parents and other stakeholders. Accordingly, all stakeholders can participate in the platform: teachers, parents, non-profit organisations, commercial companies, etc. (Cone et al., 2021). The platform is also characterised by the fact that the materials are checked for quality and finally ordered by algorithms. *KlasCement* shows that governments do not necessarily need to rely on private technology companies to promote online education in the school system (ibid.).



Parents' and families' involvement in measures should be seen as important. In Estonia, parents have been involved in efforts to improve online learning. For example, they have been given access to their children's learning platforms and digital textbooks. In Ireland, a range of online materials have been made available to parents through the Department of Education, including documents that provide information on how best to support learners' learning in the home environment (OECD, 2021b).

4.2.2 Acquisition of digital skills

As [section 4.1.2](#) made clear, ensuring the effective use of digital media during phases of online learning requires the acquisition of digital competences and thus training of all kinds. However, training must not only be offered to teachers, but also to learners, parents and others involved in the learning process (Beattie et al., 2021; Bhan and Julka, 2021; Carretero et al., 2021). In particular, learners should be placed at the centre. If learners are taught the necessary level of digital skills to participate in the online classroom, it can compensate, to a certain extent, for any lack of support from parents (Carretero et al., 2021).



Teachers should be supported to acquire digital competences at all levels through appropriate training, so that technologies can be used and applied in the best possible way within the learning process (ibid.). Accordingly, in-service training for teachers is an important measure to ensure high-quality teaching that differentiates according to learners' needs (OECD, 2021a). In an OECD study (ibid.), more than 70% of countries stated that they plan to establish new in-service training programmes for teachers and to use self-learning tools, especially for developing digital skills.

Teaching digital competences to teachers should not only include handling digital resources and tools, but also their specific pedagogical use and the design of pedagogical processes, with the help of digital tools and within an online learning environment (OBESSU and Open Society Foundations, 2021). In an interview, a teacher said:

I've learned that 1) teachers and learners can adapt to any environment when in need. 2) technology is an integral part of our daily lives and of education as well. 3) when we learn to use new methods of e-teaching, we have a great tool in our hands. Teaching can be motivating, interesting, pleasant, free of stress (European Commission, 2021a, part 5/5, p. 83).

Data protection and online security knowledge is part of digital competence. Therefore, teachers must also acquire extensive knowledge in this area through further training, to be able to teach learners the necessary competences in this field (Carretero et al., 2021).

Furthermore, the measures must not stop at in-service training for practising teachers, but must also address initial teacher education. Over 80% of the countries questioned in an OECD study (2021a) plan to include more content on remote or hybrid learning and the use of digital tools in training future teachers. Teacher education curricula need to be rethought and brought into line with the profession's constantly changing demands (ibid.).

In addition to a lack of digital skills, there are so many possible technical resources that it is extremely difficult for teachers to select certain platforms and materials.



Using a standard platform could reduce teachers' and learners' workloads. It would also facilitate the provision and exchange of ready-made materials (Carretero et al., 2021). For example, Ukraine is implementing its own online platform for all children. The All-Ukrainian Online-School platform should facilitate the provision of materials and the accessibility of online learning (Arcia et al., 2021).

Finally, the need for information technology (IT) support in every school should be highlighted here. Help from experienced colleagues was useful during the pandemic, but the extra workload for these colleagues should not become permanent (Carretero et al., 2021). Therefore, each school must employ an IT specialist.



4.3 Summary and key findings

During the COVID-19 pandemic and school closures, there was an increased use of digital media to shape the learning process. Difficulties emerged during this switch to online learning formats, such as a lack of technical resources or internet access, or a lack of digital competences on the part of learners, teachers and parents/families. In addition, internet dangers, such as cyberbullying or lack of data security, play a central role in online learning scenarios.

Learners from socio-economically disadvantaged families, learners with special needs and learners in rural areas faced more barriers. Nevertheless, online learning resources, if used correctly, can also help to create a more inclusive learning environment.

Factors influencing the successful implementation of technology-based learning environments during COVID-19 and overcoming difficulties were, on the one hand, **the digitalisation efforts of individual schools and countries prior to COVID-19**, and, on the other hand, **private technology companies' offers to help deal with the new challenges**.

To address the technology and accessibility challenges caused by COVID-19, the literature-based analysis suggests the following areas of development:

Provide resources and support

Schools need to be fully equipped with digital devices and to offer IT support. In addition, providing learning materials and resources, and publishing guidelines and uniform solutions, e.g. uniform learning platforms, can support the establishment of digital learning scenarios.

Build necessary skills

Everyone involved in the learning process needs relevant digital competences to enable them to act appropriately in an online learning environment. Teachers can acquire these competences through in-service training, for example.

Ensure access to essential resources for all

All learners must be able to access free digital learning resources and all remote learning processes. Approaches such as universal design can help to better serve vulnerable groups of learners and to design inclusive learning materials and environments.

Create safe online learning environments

To ensure safe online learning environments, data protection and internet security must be guaranteed at all times.



5. LEARNING LOSS AND REMEDIAL MEASURES

Learning loss refers to ‘the loss or reversals in academic progress among those in education or training’ (OBESSU and Open Society Foundations, 2021, p. 32).

The necessary changes in education systems in response to the COVID-19 pandemic frustrated, slowed and paused learning processes. Learning loss is therefore to be interpreted as a direct consequence of the COVID-19 pandemic and urgently needs to be addressed with remedial measures. After all, learning loss has a lasting impact on learners’ educational paths and subsequently on the global and national economy (ibid.). Overall, a European Commission report estimates 0.3 to 0.9 years of learning loss for learners due to the COVID-19 pandemic (Algan, Brunello, Goreichy and Hristova, 2021).

In the United Kingdom (England), assessments were conducted to identify learning loss in 2020. They assumed a loss of 1.8 months for reading in secondary education, and a loss of 2.2 months for disadvantaged learners. Similar data was found in primary education, with a loss of 1.7 months in reading and 3.7 months in numeracy, rising to 2.2 and 4.5 months for disadvantaged learners (OECD, 2021d).

As the data suggests, the pandemic and the associated shift to remote learning increase existing inequalities in the education system, leading to greater learning loss, particularly among vulnerable learners. In countries where certain socio-economically disadvantaged learners were already provided with fewer resources before COVID-19, the risk of learning loss due to the pandemic is increased enormously (Blaskó et al., 2021).

Results show that children, who are the least likely to have access to the right learning resources for following online teaching properly, were already clearly and massively lagging behind in school before the pandemic started. Their lag will further increase, as these resources have an increased importance when schools are closed (ibid., p. 12).

Blaskó et al. (2021) transfer these findings to the country level, as they assume that COVID-19 ultimately led to increased learning loss in exactly those countries that had already underperformed on average in Europe before the pandemic. ‘As a consequence, between-country educational inequalities within Europe are very likely to grow’ (ibid., p. 10).

According to Blaskó et al. (2021), the extent of learning loss is largely determined by the country’s remote learning design and, in particular, the implementation of online learning. Some European countries were better prepared for this due to better technical equipment in schools and higher digital competences on the part of teachers (ibid.). For example, countries such as Belgium and Norway have relatively low learning loss because they were already equipped with the necessary technical and human resources, i.e. technical devices and digital competences, for online learning before the COVID-19 pandemic. These resources were lacking in countries such as Cyprus and Greece before the pandemic, at least according to the data collected in primary education (ibid.). Other countries, such as Austria, Bulgaria, Ireland, Poland and Romania, also report a higher percentage of learners



at primary level in poorly equipped schools with comparatively longer school closures due to COVID-19. As such, a greater learning loss can be assumed here (ibid.).

Finally, learning loss is usually associated with a certain form of learning that is seen as the norm and that needs to be implemented. In other words, it is about learning certain content using very specific methods. The assessment of learning loss thus only reflects how far education systems have succeeded in meeting this learning norm (Ludgate, Mears and Blackburn, 2021). In particular, changed, alternative forms of teaching and learning or an increased focus on creative expression could ultimately lead to a changed perception of recent developments. A fluid approach to curricular requirements can eventually contribute to new forms of learning in times of crisis (ibid.). Ludgate et al. clearly emphasise that this change in perception should also be reflected, or at least taken into account, at the educational policy level:

Creative and inclusive learning practices embraced by parents and enjoyed by children during the pandemic must be valued by educators and policy-makers so that parents feel confident to support their children during future lockdown situations (ibid., p. 74).

5.1 Influencing factors

Well-functioning learning environments are central to successful remote learning. This means that, although lack of access to technical resources and digital competences can influence learning loss, learners' home environment is of particular importance in determining learning loss during the pandemic (Blaskó et al., 2021).

The home factors that have a significant impact on learning loss are:

- no internet access at home;
- no learning room/personal space for learning;
- no books or reading devices;
- hunger in the morning;
- little parental support (ibid.).

The last point is central here. It has been shown that pedagogical and educational policy measures only have a limited effect if learners do not have any support at home to make use of these offers (Costa et al., 2021).

However, a lack of parental support does not mean that parents are unwilling. In a survey in April 2020 in the United Kingdom, for example, 65% of parents reported no confidence, or at least a lack of confidence, in their ability to support their children with their schoolwork (Thorn and Vincent-Lancrin, 2021a). In Ireland, this number rises to 85%, of whom 51% were extremely worried (ibid.).



A higher learning loss can therefore be assumed for learners from socio-economically disadvantaged families. This is confirmed by surveys in Belgium (Flemish community) and the Netherlands. The Netherlands estimates 60% more learning loss for learners from households with low educational attainments (ibid.).

Financial aspects also play a significant role in coping with the changed learning situation. For example, one study found that children whose parents can pay for extra tutoring experienced less learning loss during school closures (OBESSU and Open Society Foundations, 2021).

In addition to the home environment, other factors influence the extent of learning loss experienced by learners. Of course, schools, teachers and the design of learning processes play an important role. Learning loss caused by COVID-19 increased particularly where teachers offer no support, as shown in a study conducted in Turkey for learners with special needs (Yazcayir and Gurgur, 2021). Learning loss is also directly related to the duration of government-mandated school closures (Blaskó et al., 2021).

Geographical differences also impact learning loss during remote learning. Blaskó et al. (2021) found that, especially in Eastern European countries such as Bulgaria, Hungary, Latvia, Lithuania and Slovakia, learners' place of residence, i.e. urban vs rural areas, correlates with learning loss. Aspects of socio-economic status probably also play a role here.

Nevertheless, it should be noted that the transition to remote learning did not result in learning loss for all learners. For example, a teacher in Greece described a case in which a learner performed significantly better during remote learning (Carretero et al., 2021). In particular, the home environment and a potential improvement in the learner's mental state could explain these cases (ibid.). [Section 6](#) will discuss this aspect in more detail.

5.2 Efforts to reduce learning loss

Due to its impact on learners' education and the global and national economy, countries have made various efforts since the beginning of the pandemic to remedy learning loss (OBESSU and Open Society Foundations, 2021).

An OECD study (2021a) shows that after the first school closures in 2020, many countries, including many European countries, had already developed specific measures to address learning loss. Some countries, such as Finland, carried out assessments and then offered support to all learners who needed it (ibid.). Other countries, however, focused primarily on individual vulnerable groups in their provision of support. Hungary, for example, focused on disadvantaged learners and those at risk of dropping out or having to repeat a grade (ibid.).



The concrete measures implemented can take a variety of forms. In Belgium, establishing measures to minimise learning loss was delegated to individual schools. Many schools chose to avoid teaching new content during remote learning (OBESSU and Open Society Foundations, 2021).

In other countries, alternative measures can be identified. For example, in a survey, an Italian learner reported a continuous increase in online hours to enable them to study more learning content (ibid.).

In France, the existing *Devoirs Faits* initiative, which provides learners with special support to complete their homework, was further expanded after school closures (OECD, 2021a). In the United Kingdom, the government introduced a tutoring programme to help learners catch up on their learning (Thorn and Vincent-Lancrin, 2021a).

In general, schools' re-opening after the COVID-19 closures can also be seen as an important step to counteract learning loss (Arcia et al., 2021). Although many measures have been taken to improve remote learning, opening schools compensates for the lack of teacher competences and necessary adaptations and changes in the curricula, and, often, the lack of learners' resources (ibid.).

Remedial measures can also be provided through digital media, such as educational software that both measures learners' current learning and provides adapted materials to identify and address learning gaps (European Commission, 2021a).

Even with a special focus on online learning, a number of measures can be identified to largely prevent, or at least minimise, learning loss. During the United Nations 2020 Mobile Learning Week, several measures that were implemented during the COVID-19 pandemic were discussed:

- enabling broadband internet access for schools;
- providing teachers with laptops and professional development;
- providing students with low-cost equipment;
- online Learning Management Systems;
- developing new educational content, especially Open Educational Resources;
- using national terrestrial and satellite television and radio channels;
- cooperation between different ministries and departments;
- using project-based and collaborative learning activities; and
- using social media (UNESCO, 2021b, p. 18).



5.3 Summary and key findings

Schools' transition to remote learning as a result of COVID-19 has, to a large extent, led to significant learning losses on the part of learners, although not all of the examined studies confirm learning loss for all learners. However, it is clear that **existing inequalities in the school system have been exacerbated by COVID-19**, the related school closures and the switch to remote learning.

A variety of factors influence **individual students' learning loss**:

- the **digitalisation of schools and countries** that took place even before COVID-19;
- **the number and duration of school closures** during the pandemic;
- **the home environment** (parental support, resources, learning space);
- **the support provided by schools and teachers.**

In addition, **learners from socio-economically disadvantaged families** in particular **experience higher learning loss**.

Many countries tried to **address learning loss by adjusting the learning content**, either by not teaching any new content or by increasing the learning content to minimise the loss.

The literature analysis found some areas of development and identified possible future actions:

Identifying learning loss

In addition to developing test processes to determine learners' learning loss, it would also be conceivable to **discuss the concept of learning loss more intensively and to attach more value to alternative learning processes**.

Establishing remedial measures

Individual remedial measures tailored to learners, for example, homework support or tutoring programmes, offer the possibility of addressing learning loss.

Support for learners, parents and families

As parents and families played an active role in their children's learning process during the pandemic and school closures, focused support is needed. In addition, schools and teachers must **intensively support the learners themselves during phases of remote learning**.



6. MENTAL HEALTH AND WELL-BEING

This section will examine ‘the role of schools as a provider of emotional support’ (Beattie et al., 2021, p. 7) in more detail. This role has undergone some major changes as a result of COVID-19. The pandemic has had a huge impact on the mental well-being of people working in the education system. Schools have been given the new responsibility of paying more attention to the mental health of the individuals working within them.

The factors causing changes in mental health in the context of crisis situations such as the COVID-19 pandemic, the associated school closures and the shift to remote learning can be very diverse:

- Potential loss of immediate contact with friends or colleagues;
- Increase of workload and responsibility caused by the change in approach (e.g. more project-based, more preparation) or by ‘adding on’ distance learning tasks, rather than co-ordinating between the environments;
- Concerns about how work will be assessed, and efforts recognised;
- Concern about the impact on university (final year students) or career prospects (learners and teachers) if the distance learning aspects are not embedded or valued;
- Loss of structure that school can provide – and equally the stress of changes to familiar rules and routines;
- Loss of a ‘safe’ place away from difficult or dangerous home environments for some children;
- Extended exposure to digital screens or stress caused by cyber-bullying (European Commission, 2021a, part 5/5, p. 112).

These factors are partly valid for learners and teachers. When examining mental health within the education system, it is important to look at all the people involved: learners, teachers, others working within schools, and learners’ parents or families (European Commission, 2021a).

6.1 Learners’ perspectives and emotional needs

Remote learning significantly increased what was expected of learners. In some European countries, for example, learners reported that their workload increased significantly and homework became much more demanding (OBESSU and Open Society Foundations, 2021). In a study conducted in 2020, an average of 24%–43% of all learners surveyed expressed concerns that they might get lower grades because of online learning



(European Commission, 2021a). The changed situation ultimately affects learners' motivation and mental well-being (OBESSU and Open Society Foundations, 2021).

In a survey in the Netherlands, learners responded almost uniformly (90%) that COVID-19 had somehow had a negative impact on their lives (Thorn and Vincent-Lancrin, 2021b). They mentioned:

1. missing contact with friends,
2. not being allowed to go to school,
3. missing freedom,
4. not being allowed to participate in sports,
5. missing joyful activities (e.g., birthdays, holidays, parties, shopping),
6. difficulties with home-schooling,
7. missing extended family, and
8. boredom (ibid., p. 64).

In particular, the loss of social contact within the school community can impact learners' mental health (Beattie et al., 2021; Thorn and Vincent-Lancrin, 2021b).



A survey in Germany shows similar results, with about two thirds of the interviewed learners stating negative effects. They mentioned less social contact, difficulties in the remote learning process and negative impacts on their close friendships. Signs of depression were also described, such as difficulties concentrating, lack of motivation and joy, and feelings of sadness (Thorn and Vincent-Lancrin, 2021b).

In their study, Yazcayir and Gurgur (2021) conclude that, in addition to the problems already mentioned, changed routines can lead to altered sleep rhythms or weight gain, for example.

Increased time in front of the computer can also have a negative impact on children's mental well-being. For example, in a survey of 11 European countries, almost half of parents expressed some concerns about their children's increased screen time. Up to 50% of learners also expressed concern about overusing computers (Lobe et al., 2021).

In the United Kingdom (England), on the other hand, the picture is more balanced. Slightly less than half of learners reported negative effects, about one third reported no changes at all, while 27% reported positive influences (Thorn and Vincent-Lancrin, 2021b). This shows that the COVID-19 pandemic does not only have negative effects on learners' well-being.



Nevertheless, in general the availability of medical and therapeutic services during the COVID-19 pandemic and school closures can be described as inadequate.

School closures, for example, have prevented learners with special needs from accessing certain medical or therapeutic services, as many of these were provided through schools (Jesus et al., 2021).

Learners also identified lack of access to mental health counselling services as a major problem. Few professionals are available in schools, learners fear a lack of privacy in front of parents and teachers when consulting them, and therapy outside schools is unaffordable in most countries (OBESSU and Open Society Foundations, 2021).

6.2 Parents' and families' perspectives and needs

The changed conditions during the transition to remote learning not only affected learners' mental health, but also influenced their home environment.

Parents' health status also changed as they were confronted with increased demands due to the sudden change in their assigned roles (Ludgate et al., 2021). The necessary and appropriate support from the school was often missing, further increasing the challenges for parents and families (ibid.). In addition, there are conflicts within families, such as between siblings, due to the shift of learning to the home environment (Yazcayir and Gurgur, 2021).

Numerous studies also investigated parents' views on their children's learning processes during remote learning:

The findings show that, according to their parents, secondary school students' basic psychological needs for autonomy, competence, and relatedness with teachers and classmates were less fulfilled during home-schooling than at school. This explained students' decreased motivation and well-being (Hornstra, Van den Bergh, Denissen, Diepstraten and Bakx, 2021, p. 7).

The remote learning phases were especially challenging for vulnerable learners, as demonstrated in previous sections of this report. Couper-Kenney and Riddell (2021) conclude that these challenges also have an impact on the mental well-being of vulnerable learners.

Interestingly, Shaw and Shaw (2021) describe opposite or at least mitigated results in their survey of parents of children with special needs. Only one third of the parents surveyed reported a negative impact on their mental health. A clear majority of almost 80% reported positive changes in their parent-child relationships.

Ludgate et al. (2021) also emphasise the positive aspects of remote learning for learners with special educational needs (SEN) and disabilities. In particular, they report a less stressful everyday life and less pressure at school, which ultimately had a positive effect on learners' mental health and on intra-family relationships. In addition, they report reduced feelings of anxiety, changes in behaviour and generally a better state of mental well-being for their children. Furthermore, the parents reported a better understanding of their children's needs and that they have made progress in teaching their children (ibid.).



However, these findings are very heterogeneous. While over 80% of parents reported mostly positive developments, about 40% also described challenges or even negative developments, such as deterioration in their children's behaviour and mental health (ibid.).

Nevertheless, taken as a whole, the results suggest that:

... for some children with SEN, the home environment may be more conducive for their development and well-being than the school context, which may not always fit their specific educational needs (Hornstra et al., 2021, p. 8).

The hypothesis that vulnerable learners are most affected by school closures and suffer the most from them may be wrong. Hornstra et al. (2021) found that school closures and the associated remote learning reduced the existing differences between learners with and without special needs. The changed learning conditions seemed to affect learners without special needs more than those with special needs (ibid.). This finding can be seen as highly critical of the intention to implement inclusive and equal education: rather than better considering the requirements of learners with special needs, the requirements of learners *without* special needs are now *less* considered. In addition, it clearly highlights the existing inequality in schools, as learners with special needs seem used to a lack of attention being paid to their needs.

6.3 Teachers' perspectives and needs

Changed teaching conditions increase teachers' stress factors and can eventually affect teachers' psychological well-being (Beattie et al., 2021). Effects have been identified, for example, in less face-to-face contact with others and increased screen time (Carretero et al., 2021). The risk of burnout or other psychological consequences of these changed demands must be considered (ibid.) and teachers must receive additional support (Beattie et al., 2021).

However, as well as teachers, school leaders must be considered. They are confronted with new challenges, a changed work form and increased stress levels (Charalampous, Papademetriou, Reppa, Athanasoula-Reppa and Voulgari, 2021).

Teachers also express some concerns regarding learners' mental well-being. Teachers often lack the necessary knowledge to assess, monitor and ultimately act positively on learners' emotional well-being. They therefore need to be given the necessary knowledge to recognise learners' problems more quickly and to act appropriately (Carretero et al., 2021).

Contact between learners has become more difficult due to remote learning and the shift of teaching into the online environment. Teachers are therefore required to actively address learners' development of social and emotional competences in online teaching scenarios, such as through activities that promote social competence in the classroom. However, teachers often lack the necessary skills to do this (ibid.).

Teachers also expressed concerns about learners' psychological stress in the process of returning to schools. Special and close supervision of learners by trained staff could help (Beattie et al., 2021).



6.4 Realised measures and future developments

Individual countries implemented a wide range of measures to secure and improve the mental health of everyone involved in the school system.

Luxembourg established an online platform called *Schouldoheem*. The platform offered advice and guidance to teachers, learners and parents on how to address and improve their own mental health (European Commission, 2021a).

In Greece, schools supported families facing great difficulties during remote learning with individual assistance:

In these cases, special attention was paid to the organisation of individual support, allowing for personal assistance to students, individual contact or frequent telephone calls with peers/management/psychological services (Carretero et al., 2021, p. 19).

In Portugal, during the school closures, some schools continued to serve meals to learners from socio-economically disadvantaged families (Costa et al., 2021). In-service training courses for teachers in the United Kingdom (Scotland) helped them to promote learners' mental health in their classes (Couper-Kenney and Riddell, 2021). Denmark sees rebuilding a sense of class community after repeated school closures and remote learning as central (Lundtofte, 2021).

There is an overall need for more help and information on supporting the mental well-being of both learners and teachers in times of crisis (European Commission, 2021a). For this purpose, a temporary European Union (EU) Health Policy platform network of non-profit organisations has been established. This network will eventually produce information and guidelines on dealing with changes and challenges in the context of mental health during the COVID-19 pandemic (ibid.).

Changes due to COVID-19 and remote learning have shown the extensive impact on learners' mental health. A successful blended learning approach, as discussed in [section 3.5](#), can also positively address learners' mental health. However, for this to happen, it is necessary to consider:

- Encouraging schools to provide adequate opportunities for social learning in different environments and with different tools in order to enhance learner well-being.
- Including student well-being in school objectives, monitoring and quality assurance processes; developing guidance material on supporting mental health and wellbeing at schools.
- Assigning dedicated staff to support student and teacher well-being and facilitating access to qualified mental-health professionals.
- Providing support to learners to develop their Personal, Social and Learning to Learn competence (one of the eight Key Competences for



Lifelong Learning) which can enhance the ability of learners of all ages to learn in different contexts.

- Ensuring that all schools and learners have access to well-functioning indoor and outdoor spaces and equipment for physical education (motor skills tasks, games, sports, dance) to be blended with other learning tasks (European Commission, 2021a, part 5/5, p. 161).

The following aspects are suggested for further debate:

- Comprehensive and free mental health services and counselling inside and outside schools should be made available to learners so that they can seek help at any time (OBESSU and Open Society Foundations, 2021).
- The risk of burnout or other psychological consequences for teachers must be taken into account. Teachers who received mental health training were found to be more resilient during the crisis. Together with support within the teaching staff, this is a key element in improving teachers' mental health (Carretero et al., 2021). However, professional support services must be made available to teachers, as well as learners, so that teachers also have the opportunity to talk to trained specialists (ibid.). These areas must be addressed and supported following the COVID-19 pandemic to build a resilient school system.
- Teachers often lack the necessary knowledge to assess, monitor and ultimately act positively on learners' emotional state. They therefore need to be given the necessary knowledge to quickly recognise learners' problems and be able to act appropriately (ibid.).
- Furthermore, relevant emotional competences must be taught to learners and become part of the curriculum. This would enable the development of competences such as 'emotional awareness, empathy, stress management, responsible decision-making, positive self-concept, and self-care' (Reimers, 2021, p. 47).
- Finally, the health-promoting-schools approach is a possible future scenario to specifically address and support the mental health of everyone in the school system (see World Health Organization and UNESCO, 2021a; 2021b; 2021c).

6.5 Summary and key findings

The COVID-19 pandemic and school closures had a significant impact on the well-being of learners, teachers, parents and families. Learners experienced increased stress levels (increased workload, anxiety about their learning and grades, etc.), reported a wide variety of negative effects of COVID-19 (reduced contact with others, loss of freedom, boredom, etc.) and showed signs of depression (loss of motivation, feeling of sadness, etc.). When considering learners' mental health, learners with special needs responded more positively to the effects of COVID-19.



Parents and families were also confronted with increased demands due to the changed learning conditions, which also affected family dynamics (e.g. increased family arguments).

Teachers were exposed to increased stress, which raised the risk of burnout and other psychological consequences.

The literature analysis has shown that mental health counselling services are rarely available at school and lack a certain anonymity to encourage learners to access them. Schools must therefore focus more on the mental health and well-being of all those who work and operate within the school.

The findings identified the following development areas:

Accessibility

It is important to ensure that all **learners and teachers have access to free and anonymous mental health counselling services**, both inside and outside schools, and that the needs of all within the school system are considered equally.

Knowledge and competences

Competence development is necessary on several levels. **Learners' social and emotional competences must be supported by appropriate pedagogical measures.** In addition, **teachers need competences to better observe and react to their learners' mental health**, and to improve their own mental health. This also applies to parents and families. Training and information provision could help.

Mental health as an essential element of the education system

Emotional and social competences must take a central place within the education system, and should become part of curricula. In addition, there is a need for monitoring and quality assurance processes that consider learners' well-being.



7. COMMUNICATION AND COLLABORATION

The COVID-19 pandemic clearly highlighted the importance of collaboration between different parties, for example to maintain an effective learning process or to learn from each other's experiences.

Assuming a future blended learning scenario as described in [section 3.5](#), the European Commission (2021a) emphasises the central role of different forms of co-operation, including with:

- parents and families to increase mutual understanding;
- businesses and employers in the area;
- different, extracurricular education providers;
- private organisations or public institutions that offer care for young learners after school.

While this list provides a good overview, it also misses some key areas. In general, it is important to establish a participatory school policy, to enable co-operation between teachers and parents and give learners more rights of co-determination (Kovács Cerović, Mičić and Vračar, 2021). The COVID-19 pandemic experiences have shown that learners are able to take a more active and self-determined role in shaping their own learning processes. This development needs to be encouraged, for example by establishing opportunities for regular exchange. In this way, learners' experiences and views could eventually be heard (*ibid.*).

Finally, the increased use of digital tools in school education also requires co-operation between schools and private IT service providers (e.g. Google, Microsoft, etc.). This co-operation can be profitable, enabling schools to receive digital tools specifically tailored to their needs and accessible to all learners. On the other hand, such co-operation always carries a risk of commercialisation and privatisation, which must be taken into account (OECD, 2021b).

Co-operation must also occur beyond the immediate school level. Collaboration at the political level and between countries can also be fruitful and is central to the future development of education systems (UNESCO, 2021c).

7.1 Co-operation between teachers and parents/families

As [section 5](#) made clear, parents play a central role in supporting their children during remote learning. Inequalities in this support can create major disadvantages.

Communication between teachers and learners' parents or families can counteract these inequalities and enable parents to receive advice and support (OECD, 2021a). Establishing good co-operation and a functioning communication structure between the school sector and the home environment is therefore one of the primary goals identified as a result of the COVID-19 pandemic and remote learning (Beattie et al., 2021). It can be argued that co-operation between schools and learners' home environments is ultimately a



cornerstone of more equitable and inclusive education where ‘no child is left behind’ (Shaw and Shaw, 2021, p. 11).

During the pandemic, many countries published communication guidelines for teachers, parents and learners, considering possible communication channels to be used (OECD, 2021a). In other countries, however, these decisions were made by local decision-makers or even at the school level. For example, in Finland, while national authorities made recommendations, local decision-makers made the actual implementation decisions (ibid.).

The communication channels countries used were therefore diverse. Some countries used online platforms and apps for communication between different learning environments, such as between the school and home. For example, in Latvia, the MyKOOB platform informs parents of school learning processes and facilitates communication between parents and schools (European Commission, 2021a). In Espoo, Finland, an app called Wilma ensured communication between schools and families during school closures. Smartphone apps are available to most families, while other technological devices may not be, and so the app allowed schools to maintain contact with socio-economically disadvantaged families (UNESCO, 2021d).

In addition to these platforms and apps, communication often took place via phone calls. In an OECD survey (2021a), Belgium and Ireland also reported that teachers occasionally made home visits to maintain co-operation.

During the COVID-19 pandemic, Ireland also made extensive use of the existing Home-School Liaison Scheme. This programme relies on co-operation between the school and the home environment to particularly support learners who face problems within the school system (European Commission, 2021a). Parents should be more involved in their children’s learning process to enable them to understand it and be supportive (ibid.).

In early childhood education and care, a model can be adapted to support the development of a partnership between parents and practitioners. The CAFE model (Collaborative/Communicative Active Friendly Environment) aims to build a partnership of trust and equity that eventually facilitates appropriate support for children, not only in crisis situations (see Kambouri, Wilson, Pieridou, Quinn and Liu, 2021).

7.2 Co-operation at country and international level

Co-operation and collaboration are not only needed between teachers and parents, but also need to be comprehensively established at higher levels.

UNESCO’s virtual 2020 Global Education Meeting (UNESCO, 2021c) discussed collaboration as a key element in restructuring education systems.



Communication is seen as an important core element, for example in developing new guidelines. The meeting emphasised that collaboration with key stakeholders, i.e. teachers, learners, parents and authorities, is needed to produce grounded and well-considered guidelines (ibid.).

Co-operation and collaboration must overcome the lack of co-operation with those directly affected by and involved in the COVID-19 pandemic in the future. It is therefore recommended that, at national level and within the EU, co-operation between relevant actors, both in educational institutions and from the private education sector and other youth organisations, is promoted by providing platforms and spaces for this kind of co-operation and partnership (Van der Graaf, Dunajeva, Siarova and Bankauskaite, 2021).

For example, Germany recognised the need for co-operation within the country to further advance the implementation of digital measures. As such, they established *Schulgipfel*, a meeting between the federal government and the individual state governments, to discuss further steps and measures (Cone et al., 2021).

However, the efforts should not end at national borders. On the contrary, there is a need for intensive exchange between countries, for example within the EU, to benefit from each other's experiences and insights (OBESSU and Open Society Foundations, 2021).

The [European Toolkit for Schools](#) focuses on this networking, with an additional focus on establishing inclusive education systems (European Commission, 2021a). The Toolkit is an online resource, where school leaders and teachers, as well as parents and other interested parties, can find information, resources, examples of practice and much more to support them on their journey towards inclusive education (ibid.).

7.3 Summary and key findings

The COVID-19 pandemic has highlighted the need for communication, co-operation and collaboration between different parties. Therefore, strengthening these areas can be identified as a future development field in this section.

Communication

Since the home environment particularly influenced learning processes during the COVID-19 pandemic, establishing functional **communication between schools and the home environment is essential**. Communication channels (e.g. phone calls, communication apps, online platforms) are of particular importance, as they must be chosen to ensure that all parties involved can access them.

Co-operation

Co-operation must be promoted at all levels, i.e. co-operation with parents and families, with companies, with other education providers outside the school, with organisations



offering after-school care for learners and with private IT companies **to implement online learning**. Furthermore, co-operation must also be promoted at national and international levels. Networking within the EU is important here.

However, the in-school environment must not be forgotten. A **participatory school policy must be established by giving a voice to all involved**, including the learners themselves. It is important that those who are directly affected by a measure are involved in its planning.



8. GOVERNANCE AND FINANCE

The COVID-19 pandemic has created an opportunity to reflect on and overcome challenges. While existing inequalities have increased, there is a consensus among the education community that improving equitable policies will help to overcome crises, whatever their nature (health, armed conflict, environmental, etc.). Among the various ways to improve equity, prevention policies are an efficient way to address crisis: ‘Prevention is always a smarter strategy than cure’ (Sahlberg, 2021, p. 16).

In this context, policy measures are needed to increase the resilience of education systems and to take positive implications from the crisis.

The COVID-19 crisis provides lessons on how to build a transformational and resilient education system through forward-looking policies that will produce the skills needed in the future (Arcia et al., 2021, p. 17).

8.1 Education policy measures during the COVID-19 pandemic

Before examining individual country measures during the COVID-19 pandemic, this section presents a brief look at the decision-making levels of education policy.

An OECD study (2021a) suggests that the allocation of decision-making power within education systems directly impacted the systems’ flexibility in individual countries during the pandemic. Most countries showed a consistent approach: for example, school closures were decided at the national level. In contrast, classroom management measures and other pedagogical issues were mostly decided at the school level (ibid.).

Often, central decisions are not made by national decision-makers but are delegated to individual states or municipalities.



In Spain, for example, a total of 17 autonomous communities are responsible for decisions in education (Valle and Olagüe-Smithson, 2021). In Finland, education system decisions, such as the transition from face-to-face to remote learning, are predominantly made by 310 local authorities (Sahlberg, 2021).

8.1.1 School closures

As a response to the COVID-19 pandemic, most European countries decided to temporarily close schools. Only Sweden and Iceland did not do so (Lindblad et al., 2021; OECD, 2021a).



Furthermore, in the context of school closures, certain groups of learners were given a special position.



In the Netherlands, for example, despite closures, key workers' children and vulnerable learners could still attend school (Hornstra et al., 2021). In the United Kingdom (Scotland), children of key workers and learners with additional support needs and disabilities could still attend school during the general school closures. However, only 1% of learners actually attended, mainly key workers' children (Couper-Kenney and Riddell, 2021). Poor definitions of children classified as having additional support needs and disabilities could be responsible for this. It may also be due to practical problems, such as lack of transport, or families' fear of their children's stigmatisation that could result from using this service (ibid.).

Special regulations also applied in special schools. In Latvia, for example, special education institutions remained open while other schools were closed (OECD, 2021a).

At the beginning of the COVID-19 pandemic in the United Kingdom (England), despite the school closures, 9 out of 10 special schools remained open, although with limited capacity and a focus on care rather than teaching (Skipp, 2021). As school places were highly sought after, the authorities were prompted to offer only part-time places and to enforce strict measures in allocating these places (for example, by excluding learners with certain behavioural problems) (ibid.).

On the one hand, it can be assumed that such special measures contributed to less of an impact of school closures on learners considered as vulnerable (Hornstra et al., 2021). On the other hand, it must be clearly emphasised that focusing on certain supposedly homogeneous groups of learners contradicts the basic idea of an inclusive and equal school system. There is no need for any special status, but rather for measures that are ultimately inclusive and equally adapted to all learners' needs and thus allow a school system supported by these basic pillars to continue to exist even in crisis situations such as the COVID-19 pandemic.

OBESSU and Open Society Foundations (2021) strongly criticise many countries' decision to close schools. School closures should always be a last resort and alternative ways of dealing with a crisis situation should be sought first. The search for alternatives in the COVID-19 pandemic was considered insufficient. The study notes that, in many countries, other sectors of society, such as shopping centres, were allowed to re-open earlier than schools. This decision should be questioned in relation to every child's right to an appropriate education (ibid.).

The situation was different with school closures in early childhood education and care. In many countries, these facilities closed for much shorter periods (e.g. in Poland and Turkey) or not at all (e.g. in Austria, Czech Republic, Estonia, Finland, Hungary and Latvia)



(OECD, 2021d). In Finland, although kindergartens remained open, only one third of children attended during the time of general school closures (Sahlberg, 2021).

Various reasons can be suggested for the lack of or shortened closures in early childhood education and care. These include the special importance of these early learning years in children's development, the increased problems of implementing online learning at this age, and the fact that these institutions support parents returning to work by providing childcare (OECD, 2021d).

8.1.2 Further measures to deal with the challenges of the COVID-19 pandemic

The policy measures implemented and the instruments used during the COVID-19 pandemic in Portugal show their diversity:

- The Ministry of Education launched a website for teachers with important information (e.g. examinations, use of learning platforms) and opportunities for networking.
- The Portuguese Directorate-General for Education published guidelines for implementing remote learning.
- Technological roadmaps were established to support teachers in setting up technical services such as Microsoft or Google.
- An implementation plan was published at the legal level to support schools in implementing remote learning.
- A Facebook page was established, designed to help schools network and share information.
- Guidelines were published for implementing inclusive efforts and establishing multidisciplinary support teams.
- A collaboration between the Ministry of Education and YouTube enabled the establishment of specific channels for delivering lessons to learners at all school levels.
- Webinars provided teachers with the skills needed for remote learning using digital tools.
- The Ministry of Education established a school television programme in co-operation with a state television station. The programme was created by teachers and attempted to cover a wide range of school years.
- A support brigade was established, i.e. an interdisciplinary team that could be consulted for support in implementing the remote learning plan.
- A co-operation between the Portuguese post office and Portuguese Scout groups was developed to guarantee delivery of learning materials to vulnerable learners (Costa et al., 2021).

These examples clearly show it is possible to reach vulnerable learners who may not have internet access, and thus counteract the risk of a digital divide, as mentioned in [section 4](#). In addition, establishing a television programme in particular clearly emphasises the need to implement measures that benefit all learners and do not focus exclusively on a specific



group (ibid.). Examples such as these also clearly show that school autonomy can be maintained, but guidelines can and must be set at a government level to support teachers, learners and parents in this situation (ibid.).

In addition to these exemplary measures, some general developments within education systems can also be identified. For example, the pandemic and the changing demands in the education system made it necessary in some cases to employ more teachers or other staff to cope with the new challenges (OECD, 2021a).

Moreover, in addition to measures that affect the learning process of all learners, some measures target specific vulnerable groups. Alongside the previously mentioned special regulations regarding the closure of schools, health measures, for example, were also introduced unequally in some cases. In the Czech Republic, for example, children with certain disabilities were not required to wear face masks, but they were mandatory for all other learners (ibid.). Such special arrangements can also be found in other areas. In Turkey, for example, after school closures, refugees and migrants received financial support or were exempt from school fees as an incentive to return to school (ibid.).

8.2 Education system funding

The allocation of funding according to certain redistributive criteria plays a role in alleviating the negative effects of a crisis. Therefore, this section focuses on issues around funding. First, it considers the special funding measures during the COVID-19 pandemic.

Many countries increased their education budgets during the pandemic to better respond to the period's challenges (OECD, 2021a). The investment areas were sometimes chosen very differently by countries. While Finland supported programmes to address and compensate for learners' learning loss, France invested in special payments to school staff and funding for a national centre for distance learning (ibid.). Investments were also made in physical equipment and school infrastructure, for instance in Czech Republic, France, Hungary and Poland, which involved acquiring hardware, software and internet access (ibid.). In addition, schools in the United Kingdom received a grant to upgrade digital devices and tools and to implement comprehensive internet access (UNESCO, 2021e).

The criteria used to distribute additional financial resources in the pandemic differ significantly between countries. While more than half of the countries surveyed by the OECD (2021a) indicated that the number of learners per class was used for allocation, other countries indicated that the particular needs of the schools or even the type of schools were used. Only in just over a third of cases was allocation based on socio-economic considerations or the number of learners with special educational needs in a school (ibid.).

While in some countries the education budget was increased during the COVID-19 pandemic to fund special support measures, as described, in other countries it remained the same or was even reduced (Arcia et al., 2021). Budget cuts in education can have negative consequences and should be avoided in view of the recovery of a functioning education system and its importance for a country's economy (ibid.).

At this point, it is important to consider future funding measures in the education system. The United Kingdom (Wales) funding plan can be used as an example. Additional funding



of GBP 150 million was provided in the 2021/2022 financial year, for example, to maintain special support measures for disadvantaged learners (Welsh Government, 2021). In addition, it will fund internships to enable future teachers to gain more teaching experience during their training, and increased IT equipment in schools. Programmes focusing on learners' health and mental well-being will also be funded (ibid.).

Wales also established the RRRS (Recruit, Recover and Raise Standards) programme (ibid.). As a part of this programme, thousands of individuals were employed in schools to meet the increased demands of the pandemic. The programme identified learners' needs and sought to address them with appropriate measures, such as:

- learning coaches;
- special support for Welsh-speaking learners;
- reduced class sizes;
- teacher training in emotional competences (ibid.).

Funding and expansion of the RRRS programme will continue throughout the 2021/2022 financial year. It will also pay special attention to addressing the needs of vulnerable learners (ibid.).



All measures, including the distribution of financial resources, should be regularly evaluated and, if necessary, adapted to changing needs. The evaluation should be based on the defined target areas: 'wellbeing for learners and practitioners, educational progression and attainment, equity, and stakeholder confidence' (ibid., p. 19).

8.3 Future governance and finance development and goals

The goal of all future efforts is to build more equitable and inclusive education systems, and to learn from the COVID-19 pandemic.

Arcia et al. (2021) state that three central pillars are needed to achieve this goal:

- distributing material and financial resources to learners in line with their needs;
- increasing school accountability through monitoring processes;
- increasing teacher competences.

Regular government evaluations are therefore needed. This is clearly illustrated by the example of Latvia, whose Ministry of Education conducts regular assessments of the learning process, in co-operation with a private company (OECD, 2021a). Based on these assessments, changes have been initiated, such as improving access to digital tools and the internet (ibid.).



Sahlberg (2021) also speaks of three principles that need to be considered to build a more equitable and inclusive education system after the COVID-19 pandemic. However, the focus is somewhat different:

- addressing inequalities early;
- trusting teachers as professionals;
- building self-directedness (ibid., pp. 16–17).

To address inequalities as early as possible, more attention must be paid to early childhood education and care, to establish important foundations and to enable all children to have a good educational career (ibid.). Basically, it can be said that early childhood education and care was confronted with similar problems to the compulsory school sector during the COVID-19 pandemic. Nevertheless, this area may need special attention in implementing education policy measures. It seems that this area in particular was inadequately included in discussions and measures in many countries during the pandemic (European Commission, 2021b).

As there was much discussion during COVID-19 about promising practice in schools (e.g. focusing on core content, paying particular attention to mental health, etc.), Sahlberg (2021) concludes that trust in teachers needs to be fostered. Teachers have the necessary expertise to decide what is most important for their learners (ibid.). Thus, education policy should provide a wide range of options that can then be selected and used by schools and by teachers individually, according to their learners' needs (Costa et al., 2021).

Finally, autonomy and self-directed learning should be demanded and promoted (Sahlberg, 2021). This demand is not new, but remains poorly fulfilled in most education systems. Fulfilling this requirement makes it possible to deal more flexibly with crisis situations such as the COVID-19 pandemic (ibid.).

The following sections present some concrete recommendations for future measures in the education system.

8.3.1 The World Bank's learning recovery plan

To achieve a more inclusive, effective and resilient school system, the World Bank has formulated a Recovery Plan for Europe and Central Asia that seeks to deal with the impact of the COVID-19 pandemic (Arcia et al., 2021). It includes three stages: Coping, Managing Continuity, and Improving and Accelerating. These stages focus on health and safety issues, among other aspects.

The Coping stage refers to actions to be implemented when schools are closed and learners need to be re-engaged. Central to this are supporting teachers and families, reducing learner drop-out rates, and addressing learning loss through initial support programmes (ibid.).

The second stage of the plan should be implemented after the re-opening of schools, starting with the simplification of the curriculum, limiting it to fundamental skills. In addition, assessments must be implemented to determine each learner's current learning level and to then provide the appropriate remedial measures (ibid.). The World Bank



mentions other supportive measures, such as establishing tutoring programmes, reallocating educational tasks in favour of remedial programmes, and establishing hybrid learning systems (ibid.). Financial investments should be made primarily to improve hygienic conditions (ventilation systems, sanitary facilities), create larger learning spaces (to maintain distance) or upgrade schools' technical equipment (ibid.).

Ensuring learners' health must be the first focus when re-opening schools. In Romania, for example, schools opened subject to the compulsory use of face masks by everyone in the building. In addition, a zone system determined which learners returned to learn at the school and which remained in remote learning, depending on the current infection rates in certain geographical regions (ibid.). Austria, on the other hand, used a shift system, with an additional requirement to wear masks and undergo regular testing. In Hungary, primary schools opened, while secondary schools remained closed for a longer period (ibid.).

Finally, the third phase of the programme focuses on implementing long-term developments such as monitoring programmes. The authors propose a structured monitoring tool made of a set of learning recovery goals and indicators concerning school measures and teachers' training. For example, the 'schools' provision of services to recover learning loss and promote well-being' goal is monitored through the 'percentage of schools providing health and psychosocial services, by level of education' indicator (ibid., p. 17).

8.3.2 United Nations 2020 Mobile Learning Week recommendations

Participants in the United Nations 2020 Mobile Learning Week came up with a similar list of key points to consider in further developing systems after COVID-19. In it, development is based on exchange, further development of competences, resource development, addressing learning losses through remedial programmes, and support, including on an emotional level and especially for vulnerable groups (UNESCO, 2021b).

In addition, the list attaches great importance to the technological component, insofar as it views competence enhancement in online teaching and establishing hybrid learning as future possibilities (ibid.).

8.3.3 UNESCO strategy on technological innovation in education 2021–2025

UNESCO (2021f) published a strategy on technological innovation in education for 2021–2025, which ultimately intends to support member states in implementing technological innovation in education. The strategy sets out the following core functions: observation of existing trends, further development of solutions, and increase in competence, as well as the implementation of standardised solutions (UNESCO, 2021f). In addition to increasing competence and implementing technological solutions in the education sector, areas for action and development also lie, and this is central, in 'encouraging open, inclusive and sustainable technology solutions for education' (ibid., p. 3).

As is clear from a closer reading of these three frameworks, developing the education system in light of the COVID-19 pandemic is based on ensuring and supporting learning, building the skills of all actors, developing further resources and, importantly, establishing an inclusive digital infrastructure.



8.4 Summary and key findings

The COVID-19 pandemic has once again highlighted that decision-makers within the education system are central in responding to challenges of this kind. As the literature analysis has made clear, a wide variety of educational policies have been implemented during the pandemic to cope with the new challenges and demands. For example, most European countries decided to close schools, at least temporarily, or established special hygiene measures.

However, it is evident that there were differences in the scope of individual measures, not only between countries but also within individual countries, e.g. exemptions from the mask requirement or continued school attendance by key workers' children or learners with special needs during general school closures.

The analysis revealed interesting findings, especially in the area of the countries' financial policies, insofar as they reacted very differently to the pandemic, from increasing the education budget to cutting it. In addition, countries invested in different areas, e.g. in establishing remedial programmes, in salary bonuses for teachers, or in hardware and software for schools and learners.

In addition to these findings, the analysis also clearly highlights two principles of education policies with regard to future areas of development:

Equity and accessibility

Educational policy measures should correspond to an inclusive and equal school system. Measures should not contribute to the stigmatisation of individual groups of learners. Therefore, educational policies should be designed to be easily accessible and used by all, or at least as many learners as possible, e.g. by establishing educational programmes on television to counteract the digital divide.

In addition, the COVID-19 pandemic highlighted that **prevailing inequalities in the education system are best addressed at an early stage**, by paying more attention to early childhood education and care.

On-going development and flexibility

The COVID-19 pandemic has highlighted some areas for on-going development. Central efforts must be made to develop the education system, for example, through funding in the areas of learning loss, mental health, technical equipment and teacher education.

Developments in recent years have made it clear that flexibility is a key characteristic of education systems that can respond appropriately to changes such as those caused by the COVID-19 pandemic. Therefore, it is important to regularly evaluate measures within the education system, especially those of a financial kind, and to adjust them if necessary. In addition, **there is a need for both clear guidelines issued by the government and autonomy for individual decision-makers, such as schools**, to enable quick and appropriate reactions to changing conditions.



9. PROPOSALS FOR FUTURE DEVELOPMENTS

This section will attempt to situate the key findings presented in the previous sections and their implications for future areas of development within the Agency's ecosystem model of inclusive education systems (European Agency, 2017). The ecosystem model refers to four levels: individual, school, community and national/regional.

Future development areas at the individual level (micro-system)

To be better able to deal with future remote learning scenarios, all those involved in the education process need competences. These would enable, for example:

- learners to work more autonomously and practise self-regulation;
- teachers to perceive their changed role and design appropriate online learning materials and online learning spaces;
- parents and families to best support their children during remote learning.

Training, information and **integrating essential competences into the curricula** can help to build competences among all stakeholders, teachers, learners, parents and families.

Communication and co-operation must be promoted at all levels. Communication between the school and the home environment is crucial and must be accessible to reach all parents and families.

Future development areas at the school level (meso-system)

The COVID-19 pandemic has highlighted the need for increased attention to the mental health of all those working within the education system. Teachers, headteachers, learners, parents and families showed more signs of overwork, stress and depression.

Lessons need to be learnt from the experiences of the COVID-19 pandemic and the shift to remote learning. Hybrid or blended learning scenarios could play an important role in sustaining education in times of future crisis and in building an inclusive and equitable education system. This requires both the necessary digital resources and the corresponding competences to use them.

As a result, counselling structures need to be established in schools to support learners, teachers, and parents and families at various levels. For example, **counselling must be offered in IT and mental health**, to name two central areas.

In addition, **support networks** must be developed for all those involved. Teachers need support in changing situations through appropriate training and the provision of materials and ideas. Learners must receive remedial measures to better address possible learning loss. Parents and families need intensive support from the school to create a positive home environment that supports the learning process.

As the COVID-19 pandemic has shown, there are barriers within the school system that ultimately prevent learners from accessing learning processes and materials. These



barriers must be removed and learners must have free and full access to all necessary resources. No learner should be excluded from the learning process by barriers or a lack of accessibility, in any scenario, whether face-to-face or remote learning. As crises such as the COVID-19 pandemic reinforce existing inequalities within the education system, special countermeasures are needed.

To better address the needs of each learner and to better respond to each learner's individual situation, more flexible structures are needed within the school system. To enable inclusive teaching, **differentiated materials and assessments, and flexible curricula are needed**. The framework of pedagogical actions, i.e. curricula and assessments, must also be able to adapt to changing situations. Adaptations of existing systems are necessary to make them more flexible. In particular, a new view of the learning process and the content to be acquired must be adopted in favour of individuality, creativity and competence development.

Future development areas at the national/regional level (macro-system)

As shown, numerous measures are needed at the government level to better deal with future crises. Education policy measures must focus equally on all levels of the education system: early childhood education and care, the compulsory school sector, and vocational education and training. Furthermore, measures implemented at the national level must always be designed to address the needs of all learners equally and thus avoid stigmatisation and exclusion.

In this context, education policy must also ensure the **expansion of monitoring and quality assurance processes** to keep key development areas in focus and better adapt measures to current needs.

As mentioned, communication and co-operation must be promoted at all levels. Therefore, **co-operation between policy-makers and those directly affected by their policies is needed to implement more adapted measures**.

Governments need to provide a framework to support actors in the education system during crisis situations. This includes developing guidelines and recommendations. However, the **autonomy** of individual schools and teachers must continue to be respected to build a **flexible** education system.

National and international networking provides opportunities for mutual learning from experience and to advance new developments in the field of education. Networks between countries must therefore be established and expanded.

Funding in the education system is a key area for future development. Schools should be equipped with the necessary hardware and software to **support the movement towards digitalisation**. In remote learning phases, state funding of a wide range of resources could ensure access to the necessary materials for all learners. Expanding remedial measures could both minimise the learning loss caused by COVID-19 and offer individual support in the future. These exemplary areas of investment show that most countries should increase their education budgets in the coming years to meet these demands.



10. CONCLUDING COMMENTS

This report provided an overview of documents published in 2021 and identified key aspects relating to education systems and challenges posed by the COVID-19 pandemic. Based on the literature, the report attempted to determine the pandemic's influence on inclusive education systems in Europe. More importantly, however, it examined what lessons have been learnt and how they can be used for future developments.

According to this report's findings, focus areas in further developing and implementing inclusive education systems are: technology and accessibility, learning loss and remedial measures, mental health and well-being, communication and collaboration, and governance and finance. These areas experienced the most difficulties during the COVID-19 pandemic and the transition to remote learning. Increased measures are needed to counteract the effects of the pandemic, and to establish an education system that is inclusive, equitable and resilient. In this way, it will be better able to respond to future crises.

This report emphasised naming explicit examples to provide promising practice models and to illustrate the concrete implementation of measures. From these examples, necessary or potential actions and measures can be derived for the future. As already noted in the [methodology](#), an uneven proportion of examples is available in the literature between European countries. Some countries have many reports, others fewer, and from some there are no reports at all. Therefore, this report must emphasise again that international – and especially intra-European – dialogue and co-operation are important.

While the literature highlighted difficulties and problems within the education system during the COVID-19 pandemic, concrete visions of the future and plans for action are often lacking. They are often general and lack a certain concreteness. Here, examples can help. In addition, future research must move away from surveying the current situation towards creating a future desired situation.

The findings and examples within this report focus particularly on the compulsory school sector. As clearly described in [section 2.1](#), early childhood education and care was included in the literature pool, as were reports from the field of vocational education and training. However, the documents examined showed the same results as those in the compulsory school sector. Where they were different, the report cites them. It is important to note, however, that while there is little different evidence, these areas are still significantly under-represented in COVID-19 research. Moreover, this under-representation in research must not lead to these areas being forgotten in policy measures.

The pandemic has highlighted the interconnection between stakeholders and the opportunity to reflect and introduce changes. For an equitable and inclusive vision to be successful, the whole school community of learners, families, teachers and schools, together with governments, need to be involved in co-designing change.

Only when the society in general accepts this view and realises that equitable education can benefit all, not just some, of us, will there be significant and sustainable improvement in our school systems (Sahlberg, 2021, p. 17)



This report presented detailed insights into research and key publications from 2021. It highlighted countries' measures and practices in the context of the pandemic. This knowledge provides a basis for supporting the development of resilience in (inclusive) education systems in Europe. Inclusive education is an essential step towards reaching the goal of resilience.



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ANNEX

Table 1. Literature search outcomes

Database, etc.	Keywords (if used)	Number of results
ERIC	Covid-19 AND inclusive education	38
PROQUEST	Covid-19 AND inclusive education	125
SCOPUS	Covid-19 AND inclusive education	122
WOS	Covid-19 AND inclusive education	78
EBSCO	Covid-19 AND inclusive education	80
JSTOR	Covid-19 AND “inclusive education”	10
SAGE	Covid-19 AND “inclusive education”	37
Springer Link	Covid-19 AND “inclusive education”	278
Taylor & Francis	Covid-19 AND “inclusive education”	94
TRID	Covid-19 AND inclusive education	2
University of Vienna online library catalogue	Covid-19 AND “inclusive education”	248
Wiley	Covid-19 AND inclusive education	47
ZETOC	Covid-19 AND inclusive education	48
European Agency for Special Needs and Inclusive Education	–	2
Joint Research Centre (JRC)	–	9
OECD iLibrary	–	27
UNESCO	Covid-19 AND “inclusive education”	86
UNICEF	–	20
WHO	–	1
World Bank	Covid-19 AND “education”	94
Additional sources sent by colleagues	–	27
Total number	–	1,473

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