



Living conditions and quality of life
**Experiences with remote schooling
and addressing the learning gaps**

[Social services in Europe: Adapting to a new reality](#)

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Eurofound reference number: WPEF22033

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Abstract

This paper analyses factors contributing to whether parents/guardians have found online education a positive experience during the pandemic, for themselves, and for their children. It further looks into factors contributing to satisfaction with the quality of online schooling and draws on data from Eurofound's *Living, working and COVID-19* e-survey. Next, the paper maps measures taken by the EU Member States to address the learning backlog of the pandemic. These include for instance funding equipment and internet connections and outside school-hours learning (such as summer schools). It discusses findings and presents policy pointers.

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Introduction

School children across the EU have been affected by the impacts of the COVID-19 crisis, in particular by school closures. Length and timing of closures varied between EU Member States and levels of education. Within countries, there were also differences between regions, localities and schools. During closures, some countries kept schools open for children of essential workers (e.g. Finland, the Netherlands), but usually only to provide childcare while parents were at work. When schools were open for all, some children or classes had to stay home due to COVID-19 cases. Some children were also kept home because parents or guardians did not feel the children were well-enough protected against the virus while attending, or traveling to, school.

Online education has provided access to education for many pupils across the EU. However, there have also been problems in accessing online education and pupils which were already in vulnerable situations before the pandemic, have faced more problems in accessing education, amplifying learning gaps. This research focuses on experiences with online education and measures taken to prevent and address learning gaps. The focus is on primary and secondary school-going children. Such early-age schooling has impacts for pupil's later lives.

Importantly, school closures lead to long-term welfare losses, partly due to lost future earnings of children. These losses come with increased inequality between children coming from poor vs. well-off households. School closures' impact on physical or mental health likely also have a strong socio-economic gradient. The school closures can be expected to lead to a decrease in intergenerational mobility (Fuchs-Schündeln et al, 2022).

The research draws on input by the Network of Eurofound Correspondents for the identification of policy measures in the EU Member States (collected by mid-2021) complemented with Eurofound's own desk research, and on analysis of Eurofound's e-survey 'Living, working and COVID-19' (round 3 in Spring 2021) for opinions of parents or guardians on experiences with online education.

First, experiences with online schooling during the pandemic will be discussed, investigating factors contributing to satisfaction with the online schooling experience and perceived quality of online education. This paper also discusses whether parents have desire for more online schooling, and the role of access to equipment and internet. Next, policy measures are discussed which had been taken by Member States by mid-2021. Lessons are drawn to inform policy makers.

Policy Context

In its 2017 communication on ‘School development and excellent teaching for a great start in life’, the European Commission argued that:

‘Good education underpins inclusive and resilient societies. It is the starting point for a successful professional career and the best protection against unemployment and poverty. It fosters personal development and lays the basis for active citizenship. Good education fuels R&D, innovation, and competitiveness. However, for societies to reap these benefits, high-quality education needs to be a reality for all.’ (p. 2)

The pandemic situation has brought an additional challenge for the EU’s efforts in stimulating access to good quality education for all. Distance learning, through online tools, has facilitated continued education for many children during the crisis.¹ The pandemic has created and accelerated innovations in teaching and learning to provide practical skills training and to conduct assessments (European Parliament, 2021b).

Distance learning, however, also has exacerbated educational inequalities and increased learning gaps between students that were in a more vulnerable situation already before the pandemic and students who were not (European Commission/EACEA/Eurydice, 2022, p.37). These include pupils with weaker language skills (including migrants) or social problems at home (Lammi-Taskula et al, 2020). Students with learning disabilities, who need more support, also are likely to have suffered more negative impacts (Azevedo et al, 2021; Infostart, 2021). Primary and lower secondary school pupils (and students who depend more on the physical presence of a tutor or teacher) have been pinpointed as particularly affected by school closures (European Commission, 2020). Besides educational outcomes, social isolation and mental health are also issues of concern.

The European Commission supports national efforts by monitoring progress towards targets as part of the European Semester, and encourages the exchange of policy development and approaches. For instance, it does so through the Education and Training 2020 Working Groups. Since 2016, the Working Group on Schools has had a broad mandate to develop the governance of school education systems to promote improved quality by enhancing sustainable innovation and inclusion. Priority areas include support for learners with special educational needs, including migrants, and support for teachers, with opportunities for professional development and flexible, attractive career options. EU funding has also contributed to equip schools for online schooling during the pandemic, and to facilitate access to internet for children.

The 2021 European Pillar of Social Rights Action Plan aims to reduce early school leaving and increase participation in upper secondary education. Within the European Education Area, the new initiative ‘Pathways to School Success’ aims to decouple educational attainment and achievement from social, economic and cultural status. The Digital Education Action Plan 2021-27 aims at supporting the development of a high-performing digital education ecosystem in Europe and

¹ Distance learning refers to learning taking place with the teacher/trainer being separated from the learner by space and/or time, and online tools are widely used for that. However, once the physical distancing requirements of the pandemic would not apply, online learning opportunities can be combined with classroom-based methods, digital and non-digital tools in various spaces, which altogether can be referred to as ‘blended learning’. See the Council Recommendation 29/11/2021, which encourages blended learning approaches for the benefit of inclusive and high-quality education.

at enhancing digital skills and competences to address the digital transformation for all. To achieve its objectives, the Action Plan sets out 2 priority areas. One deals more generally with enhancing digital skills. The other one focuses specifically on fostering digital education, including:

- infrastructure, connectivity and digital equipment
- effective digital capacity planning and development, including up-to-date organisational capabilities
- digitally competent and confident teachers and education and training staff
- high-quality learning content, user-friendly tools and secure platforms which respect e-privacy rules and ethical standards

The November 2021 Council Recommendation on ‘blended learning for high quality and inclusive primary and secondary education’ further calls for Member States to address learning gaps as direct response to the pandemic situation, and to take a longer-term approach in preparing schools and teachers for combining on-site and online education.

Key Findings

- Many parents or guardians who were satisfied with the quality of online education of their children under 18, report that overall online schooling has been a negative experience for their children (33%) or for themselves (41%). So, satisfaction with the online schooling experience was clearly determined by more than the quality of online schooling alone.
- Even among parents or guardians who could respond to the online survey, so had access to the internet, 21% had insufficient equipment to carry out online schooling at home: 11% among people whose household make ends meet easily and 32% among people whose households do so with difficulty.
- In the Member States, there have been many initiatives to facilitate access to ICT for people in vulnerable situations. This may have contributed to the observed decrease of people with great difficulties making ends meet reporting to have insufficient equipment to carry out schooling. However, many continued reporting a lack of equipment over the course of the pandemic. Few improvements were reported in groups with slightly lower levels of difficulties making ends meet.
- Parents/guardians often found their children received no or too little live feedback from teachers, and around half reported lack of written/online feedback. People with difficulties making ends meet more often found they did not receive the right amount of feedback than people in a better financial situation; usually feedback was considered absent or too little, but they also more often found it was too much.
- Parents/guardians of children between 12 and 18 were more likely to think the impact was negative for their child than parents of younger children. Younger parents (in particular aged 18-34) were more likely to report the experience was negative, especially for themselves.
- Over half of parents/guardians (52%) who found the experience of online schooling positive for their children, do not favour more online schooling in the future.
- Having the right amount of materials and online schooling contributed positively to satisfaction with online schooling. Both too much and too little materials and online classes contributed negatively to satisfaction with online schooling.
- Having received no or too little written or -especially- live individual feedback contributes negatively to quality, while having received too much individual feedback does not. This contrasts to having received too much online classes or materials to self-study, which does contribute negatively to quality.
- Being informed/consulted about one's child's education is an important contributor to satisfaction.
- Pandemic-related support in several countries have included additional outside-hours learning (especially summer schools), often including non-formal education focusing on children's broader wellbeing, and physical activity. National language training was also a key focus-area of support.
- Local governments, schools, principals and especially teachers have played a large role in identifying children in need of support.

Experiences with online schooling during the pandemic

School children across the EU have been affected by the impacts of the COVID-19 crisis, in particular by school closures. Length and timing of closures varied between EU Member States and levels of education. School closures ranged from 10 weeks or less in Hungary to 47 or more in Slovenia (UNESCO, 2022). Within countries, there were also differences between regions, localities and schools. Furthermore, the nature of ‘school closures’ differed among Member States, regions and localities. For instance, during closures, some countries kept schools open for children of essential workers (e.g. Finland, the Netherlands), but usually only to provide childcare while parents were at work. When schools were open for all, some children or classes had to stay home due to COVID-19 cases. Some children were also kept home because parents or guardians did not feel the children were well-enough protected against the virus while attending, or traveling to, school.

What were parents and guardians’ experiences with online schooling during the pandemic, and what were their perceptions of their children’s experiences? What problems did they face? And what factors contribute to explaining differences in perceived quality and of the overall online schooling experience? Do they want more of it after the pandemic? This section analyses Eurofound’s e-survey data to find answers on these questions.

The analysis presented has limitations. Firstly, the e-survey is unlikely to have reached people with no or limited access to internet, which are likely to have faced most obstacles in online education. This chapter aims to mitigate for this by the choices made for analysis and reporting (e.g. focusing more on multi- and bi-variate than on descriptive statistics). Furthermore, the e-survey is among people aged 18+, so it excludes primary and secondary school-going children themselves. The results are based on accounts by children’s parents or guardians rather than by themselves. Thirdly, school closure policies varied, so averages include a diverse range of experiences.

Satisfaction with the online schooling experience

Satisfaction with online schooling was captured with three main questions, asking the overall satisfaction with *the quality of* online schooling and whether online schooling overall has been a positive *experience* for the children and for the parents/guardians. In Spring 2021, the pandemic presented protracted challenges to the education system. Similarly, parents and guardians might be fatigued by the education overburden. The LWC-19 survey captured the transition period and results show clear preferences. Among respondents with children in education, 26% said that they were satisfied with the quality of online schooling and 51% were dissatisfied with it². Besides satisfaction, respondents were asked whether online schooling has been a positive experience. The results for the children were thus given by the parents or guardians of the pupils. Interestingly, the survey showed that respondents more often rated online schooling more positive for the children (25%) than for themselves (20%), while a staggering 58% of parents/guardians found online schooling a negative experience. Even among parents or guardians satisfied with the quality of online education,

² Proportion of people who agree or strongly agree with ‘I am satisfied with the quality of online schooling’ and disagree or strongly disagree with ‘I am satisfied with the quality of online schooling’.

14% disagreed with education being a positive experience for the children, let alone for themselves (21%).

In order to capture the difference between the experiences of children and carers, two regressions were fitted. The first column of Table 1 presents the results for whether online schooling has been a positive experience for children, whereas the second column investigates the experience for parents or guardians.

Table 1: Factors contributing to whether parents/guardians found online education a positive experience, EU27, Spring 2021

Online schooling was a positive experience...		
	for children	for parents/guardians
Making ends meet	0.07***	0.06***
Enough equipment in the house	0.26***	0.24***
Informed on education	0.11**	0.01
Employment status (<i>Baseline: in employment/self-employment</i>)		
-Unemployed	0.07	0.13
-Unable to work due to long-term illness or disability	0.02	0.09
-Retired	0.14**	0.15**
-Full-time homemaker	0.30	0.52***
-Student	0.03	0.10***
Female	1.48***	1.73***
Educational attainment parent/guardian: (<i>Baseline: primary</i>)		
-Secondary	-0.19*	-0.07
-Tertiary	-0.12	-0.10
Rural	0.02	-0.01
Age group (<i>Baseline: 18-34</i>)		
- 35-44	0.22***	0.24***

- 45-50	0.20***	0.24***
- 51+	0.42***	0.48***
Number of children < 12 years	0.01	-0.01
Number of children ≥ 12 years	-0.03**	0.01
Duration of full school closure (in weeks)	-0.03**	-0.04***
Constant	1.97***	1.86***
Observations	5,962	5,949
R ²	0.16	0.16

Notes: The table shows Ordinary Least Square regression coefficients. Significance level *p<0.1; **p<0.05; ***p<0.01, Member State dummies were included in the analysis, but excluded from the displayed table. The analysis was also ran with satisfaction with the quality of online schooling included. School closure only considered the period when LWC19 e-survey was fielded. Data for the 'Duration of full school closure' comes from the 'UNESCO global dataset'. The data behind the variables come from the following survey questions: 'Thinking of your household's total monthly income, is your household able to make ends meet... ranging from 1 – With great difficulty to 6 – Very easily; 'To what extent do you agree or disagree with the following statements about online schooling of your children...', items: 'I am informed or consulted about the education of my children.' 'Overall, online schooling has been a positive experience for my children.' 'Overall, online schooling has been a positive experience for me as a parent/guardian.' (dependent variable) 'Our household has or has obtained sufficient equipment to carry out online schooling at home.' Answering categories: 1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree -1 = Don't know/ Prefer not to answer -9 = Not answered.

Source: Eurofound (2022), *Experiences with remote schooling and addressing learning gaps*. (based on 'Living, working and COVID-19' e-survey data analysis, round 3 fielded in February and March 2021)

Making ends meet easily provided a high positive experience than struggling households. This result held for both children and parents. Better resources possibly meant purchasing the right equipment or ensuring a good internet connection to follow classes and do homework. It is interesting to note that 'making ends meet' a particularly important explanatory variable only after removing the perceived quality of online education from the model. This may suggest that people with a better financial situation have access to better quality online schooling, which contributes to people to be more satisfied with the overall online experience.

Tightly connected to this, equipment was a big factor in rating the experience positively for both children and parents/guardians. Better equipment meant more comfortable learning conditions. This finding is also strengthened by the negative effect of a crowded household. Although having more children below the age of 12 did not affect the experience for both children and parents, similar result is not found for children above the age of 12. Having more children above the age of 12 resulted detrimental for the children. Perhaps, children that age would require more attention and limited time resource would prevent following classes simultaneously or doing homework efficiently. The extent to which parents /guardians were satisfied with the overall experience of online

education, for themselves, seemed not affected by that. Younger parents (in particular aged 18-34) were more likely to report the experience was negative, especially for themselves.

Overall, parents/guardians of children between 12 and 18 were more likely to think the impact was negative for their child, but not for themselves. When 'satisfaction with quality' was included as an independent variable, the overall experience with online schooling was particularly negative for parents/guardians of children below 12, while for the children itself it remained insignificant. When 'quality' was excluded, the coefficient for the parents/guardian's experience remained negative but became insignificant. Younger children are likely to require more support by their parents/guardians than older children. This may tally with the finding that parents/guardians with children below 12, especially women, compared to those who do not have children of this age, fared worse under school closures in terms of wellbeing (Toffolutti et al, 2022).

Fatigue with online schooling is also captured by the length of school closure. We do see an effect both for children and for parents or guardians. For both groups, length of school closure has a negative impact, so that the longer the school closure, the lower is the experience rating.

Employed parents or guardians do not seem to rate online schooling more positively or negatively than their unemployed or inactive counterparts. Interestingly, we see that retired and full-time homemakers expressed a more positive opinion on online schooling. Full-time homemakers considered online education more positive than employed, possibly due to the caring nature of their usual activity.

Gender seems to have a dividing effect between the rating of children and parents or guardians. Female respondents were more positive over the experience with online schooling for children and for themselves than male respondents. Interestingly, this becomes non-significant when perceived quality is controlled for, suggesting that this is particularly explained by women whom are more satisfied with the quality of online education. It may for instance be that women -on average- were more involved with schooling prior to the pandemic, and that the online education built on this prior knowledge leading to a greater appreciation of the online experience.

Obviously, the model does not capture all variables which could contribute to explaining a negative perception of online schooling (i.e. the dependent variable in the model in Table 1). Possibly, omitted variables which could play a role may include:

- the idea that face-to-face education has more to offer than high quality online education has (e.g. in terms of social interaction with other children and the role played by teachers in educating children in such day-to-day interaction, beyond the school curricula);
- lack of internet skills by parents/guardians, or -seen from another perspective- lack of guidance or clear instructions to mitigate this;
- aspects of the home situation not entirely captured by the variables that impede engagement with home schooling, e.g. for parents to be present and guide children through the online education process;
- for the overall experience of parents, in addition to the above, likely some aspects of inconvenience of time-allocation to home schooling not captured by the variables (e.g. due to other care/housework activities, or inter-parent tensions), play a role.

Desire for more online schooling?

While Summer 2020 gave a more positive picture towards online schooling, respondents changed their opinion in Spring 2021. A large majority of respondents with children in online education disagreed with more online schooling already in Summer 2020 (59%), while 23% agreed and 18% did not express a preference. In Spring 2021, however, disagreement with more online schooling was even more widespread (71%), while 16% agreed and 13% did not express a preference.

Parents/guardians with a negative online schooling experience rarely want more of it in the future, even when the pandemic would be over: 3% of those who report a negative experience for their children, and 4% of those reporting a negative experience for themselves, want more of it.

Interestingly, those reporting positive experiences do not necessarily want more of it in the future either: 44% of those who report a positive experience for their children, and 51% of those reporting a positive experience for themselves, want more of it. Many who found the experience with online schooling positive for the period it lasted, thus seem to think it would not be positive, especially for their children, if there would be more of it in the future, even when the pandemic is over.

Access to equipment and internet

Fewer than one in ten (7%) households in the EU had no internet connection at home in 2021 (down from 8% in 2020), with even lower rates among households with children: 2% of single person and 1% of two (or more) adult households with dependent children.³ Still some households had no internet connection, especially those in the lowest income quintile (21% in EU on average) and in some countries (16% in Bulgaria, 15% in Greece, 14% in Croatia). No broadband connection was available to 10% households, and to 4% among single people and 3% among two (or more) adult households with dependent children.⁴ Prior to the pandemic (in 2019), the main (reported) reasons for not having internet connection included a lack of need or interest and insufficient skills (both 45%). Equipment costs (25%) and high-cost barriers (23%) also played a key role. The importance of cost as a barrier to access varied largely between Member States, from 5% in Estonia to 53% in Portugal (European Commission, 2021).

Even households with broadband internet may not be able to follow (or follow well-enough) online schooling for various 'material' reasons: lack of access to appropriate devices, unstable or slow connections, or inability to pay for the needed electricity. Publicly accessible devices and connections, for instance in libraries or community centres, can mitigate such problems. National data confirm that access to equipment and internet certainly played an important role. In Hungary, about 20% of students could not participate in digital education due to various reasons - but a large proportion was explained by lack of access to equipment/internet (a problem for 10-20% of homes with students) (Hermann, 2020).

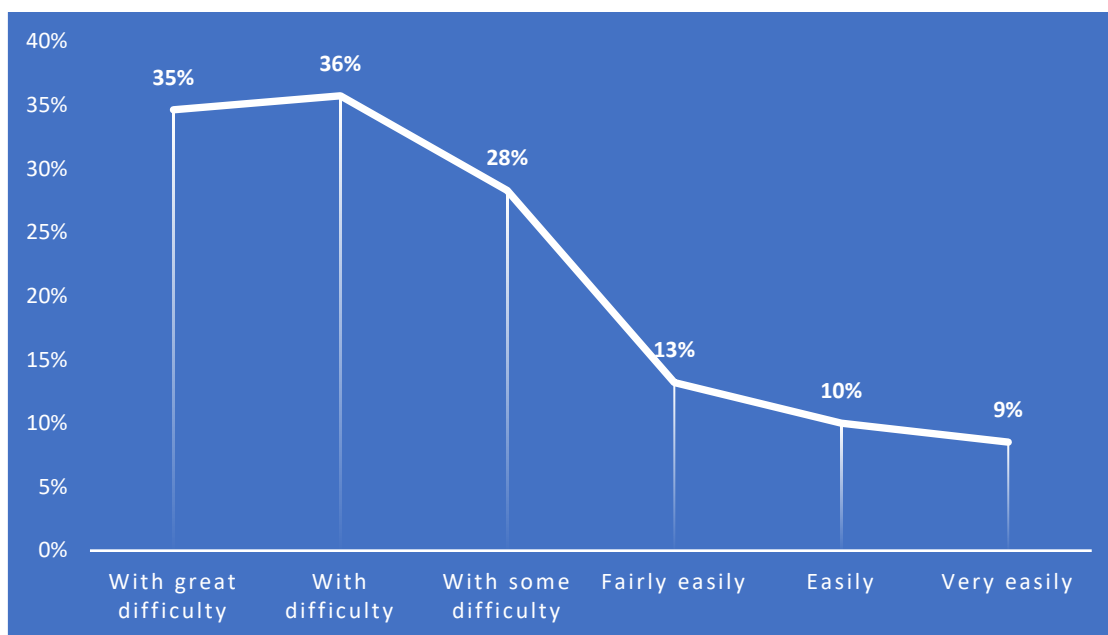
Lack of equipment to carry out online schooling at home explains part of the negative experiences of online schooling, both for parents/guardians and children (Table 1). Even among people who filled-out the e-survey (indicating that at least they had some access to internet), 23% disagreed (or strongly disagreed) with the statement 'our household has or has obtained sufficient equipment to carry out online schooling at home'. They may have too few or inadequate devices to facilitate home schooling for their children, sometimes needing them for their own work as well. People who report

³ Eurostat variable 'isoc_ci_in_h', extracted 12 April 2022, analysed by Eurofound.

⁴ Eurostat variable 'isoc_ci_it_h' extracted 12 April 2022, analysed by Eurofound.

difficulties making ends meet are more likely to disagree with this statement are more likely to say they had (or had obtained) insufficient equipment to carry out schooling at home (Figure 1). Altogether, among people with difficulties making ends meet (some difficulties, difficulties, great difficulties) 32% said so, compared to 11% of those making ends meet easily (very easily, easily or fairly easily).

Figure 1: Proportion of people with insufficient equipment to carry-out online education from home, by ability to make ends meet, EU, Spring 2021



Notes: proportions disagreeing or strongly disagreeing with the following statement about online schooling of their children: 'Our household has or has obtained sufficient equipment to carry out online schooling at home' (vertical axis) by the degree of difficulty of making ends meet ('Thinking of your household's total monthly income, is your household able to make ends meet') (horizontal axis).

Source: Eurofound (2022), *Experiences with remote schooling and addressing the learning gaps*. Based on 'Living, working and COVID-19' e-survey Spring 2021 data analysis.

From summer 2020 to spring 2021, there seem to have been improvements in particular among people with great difficulties making ends meet: among them, the proportion of people who report insufficient equipment decreased from about half (51%) to just-over one-third (35%). There are multiple possible explanations, including better adjustment of online education to specific situations, households having had the time to adjust their situation in terms of equipment, or data comparability issues. However, the concentration of improvement among people with great difficulties making ends meet suggests the improvement may also have come from policies aimed at improving access to equipment among people in the worst economic situations (see section on 'Facilitating access to online education').

Quality of online education

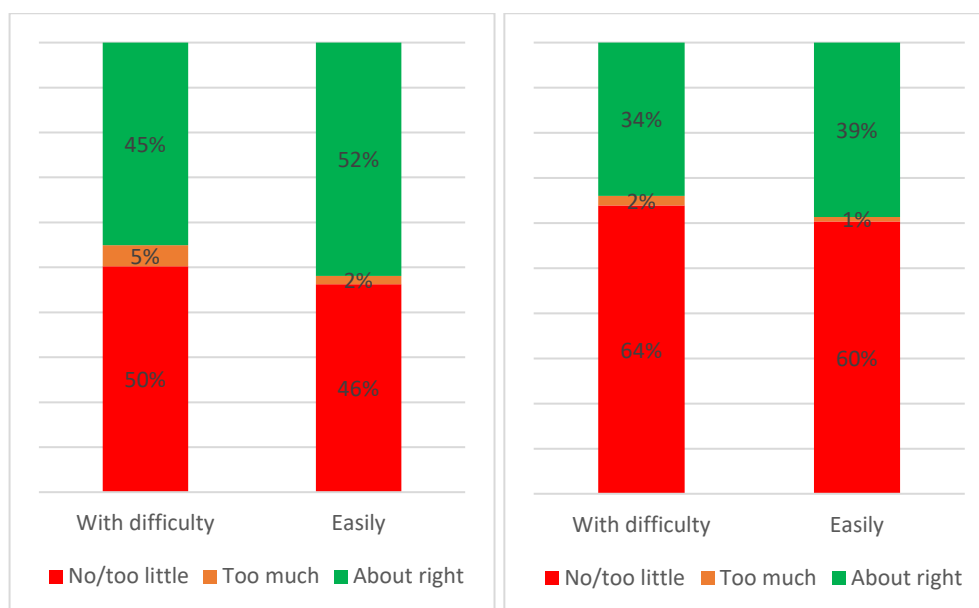
A Hungarian national report reveals that even among pupils with access to equipment/internet, many could not perform on the level they could have performed in the schools (Hermann, 2020). This may partly be due to quality issues.

Overall, 29% of the respondents with pupils in online education said to be satisfied with the quality of online schooling, while 46% were dissatisfied. In particular, when looking at the reasons why dissatisfaction could happen, quality of online classes and feedback play an important role. Over two-fifths (43%) of respondents to Eurofound's online survey indicated they both found there was too little of live and written/online feedback. However, when looking at live and written/online feedback separately, in the EU overall, in online schooling, live feedback was particularly often absent or there was too little of it (reported so by 62% compared to 45% for written/online); no live feedback was received by 38% (no written feedback by 16%). People who report their household has difficulties making ends meet more often say children in their household have not received the right amount of individual teacher feedback than people in households which make ends meet easily (Figure 2).

Figure 2: Individual teacher feedback, by ability to make ends meet during the pandemic, EU, Spring 2021

a) Written/online feedback

b) Live feedback



Notes: 'With difficulty' refers to people replying 'with difficulty' or 'great difficulty' when asked Thinking of your household's total monthly income, is your household able to make ends meet; 'easily' refers to those replying 'easily' or 'very easily'. Based on answers to the survey question: 'Since the pandemic began, have your children received any of the following as part of their online schooling...' 'Individual feedback from the teacher(s), written/sent online', 'Individual feedback from the teacher(s), live'.

Source: Eurofound (2022), *Experiences with remote schooling and addressing the learning gaps*. Based on 'Living, working and COVID-19' e-survey data analysis.

Both live and written feedback seem to contribute to satisfaction with online schooling, if received in the right amount (Table 2). However, live feedback seems to contribute more to satisfaction than written feedback does. Interestingly, too much individual feedback (whether written or live) does not impact overall satisfaction negatively (while too much online classes or materials/instructions to self-study does).

Both having received the right amount of materials or instructions to self-study (online or for downloading) and the right amount of online classes improve satisfaction. Both too much and too little materials and online classes contributed negatively to satisfaction with online schooling. Too little would imply that children are left by themselves too often without instruction, whereas too much would imply a hard task for parents/guardians to follow children during working time, or children could be fatigued and overly busy with school. When online classes were not given in the right amount, dissatisfaction was stronger than the lack of material and instruction. This could imply that parents and guardians regarded online classes as a higher form of online education compared to homework or feedback. This shows a trend in retaining classes, even online, as an important form of education. Having received the right amount of material or instructions shows a positive correlation with the ability to make ends meet. Among people with great difficulty making ends meet, 32% reports their children received the right amount of materials. The proportion increases to 62% for people reporting making ends meet very easily. The difference can partly be explained by

people with difficulties (or great difficulties) making ends meet particularly more often reported children received *too much* material (26%) than those who easily (or very easily) make ends meet (11%).

Being informed/consulted about education of one's children is an important contributor to parent/guardian's satisfaction with online schooling.

Table 2: Factors contributing to satisfaction with quality of online schooling

Dependent variable: I am satisfied with the quality of online schooling	
Making ends meet	0.02*
Informed or consulted on education of child(ren)	0.38***
Materials or instructions to self-study (online or for downloading): (Baseline: right amount)	
-No	-0.28***
-Too little	-0.39***
-Too much	-0.41***
Online classes: (Baseline: right amount)	
-No	-0.35***
-Too little	-0.46***
-Too much	-0.38***
Written feedback (individual): (Baseline: right amount)	
-No	-0.09
-Too little	-0.17***
-Too much	0.11
Live feedback (individual): (Baseline: right amount)	
-No	-0.27***
-Too little	-0.24***
-Too much	0.16
Female	0.01
Educational attainment parent/guardian: (Baseline: primary education)	
- Secondary	0.33***

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-Tertiary	0.40***
Rural	-0.003
Employment status: (Baseline: in employment/self-employment)	
- Unemployed	-0.02
- Unable to work due to long-term illness or disability	-0.04
- Retired	0.42***
- Full-time homemaker	0.26***
- Student	0.32**
Duration of full school closure (in weeks)	-0.06***
Constant	2.32***
Observations	4,400
R²	0.51

Notes: The table shows Ordinary Least Squares regression coefficients. Satisfaction with online schooling was measured by the following survey questions: "To what extent do you agree or disagree with the following statements about online schooling of your children..." F228_01 I am satisfied with the quality of online schooling. F228_02 I am informed or consulted about the education of my children. F228_03 Overall, online schooling has been a positive experience for my children. F228_04 Overall, online schooling has been a positive experience for me as a parent/guardian. F228_05 Our household has or has obtained sufficient equipment to carry out online schooling at home. F228_06 I would like more online schooling in the future, even when the COVID-19 pandemic is over. 1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree -1 = Don't know/ Pref; Online schooling "Since the pandemic began, have your children received any of the following as part of their online schooling..." F227_01 Materials or instructions to self-study, online or for downloading F227_02 Online classes F227_03 Individual feedback from the teacher(s), written/sent online F227_04 Individual feedback from the teacher(s), live 1 = No 2 = Yes, too little 3 = Yes, about the right amount 4 = Yes, too much -1 = Don't know/ Prefer not to answer -9 = Not answered. Respondents who answered "No" to all the quality questions (265 respondents) were removed from the analysis.

*p<0.1; **p<0.05; ***p<0.01, results controlled for country

Source: Eurofound (2022), *Experiences with remote schooling and addressing the learning gaps*. Based on analysis of 'Living, working and COVID-19' e-survey data (round 2 fielded in June-July 2020), and 'Duration of full school closure' data from the 'UNESCO global dataset'.

As seen before, households with difficulties making ends meet less often found the amount of feedback received right than people who make ends meet easily (Figure 2). Having received the right amount of feedback is a strong predictor of satisfaction with quality of online education (Table 2). The results in Table 2 demonstrate that even after controlling for whether people received the right amount of feedback or not, people with difficulties making ends meet with difficulties are less satisfied with the quality of online education. A possible explanation is that aspects of the feedback received beyond those included in the regression (such as quality of feedback, rather than quantity) may be lower for households with more difficulties making ends meet which may have access to lower-quality schools.

Satisfaction was also perceived higher among the respondents with higher education, perhaps because they could follow and help more the pupils in homework and home learning. Low-earning and less-educated cohort of society would depend more on physical schooling for their children's education (Bacher-Hicks, Goodman and Mulhern, 2021; van de Werfhorst, 2021; Green, 2020).

Length of lockdown also affected satisfaction towards online education, with a significant increment of dissatisfaction per week of full school closure.

Computer skills of teachers also affect the quality of online education. A public consultation by the European Commission revealed that parents generally expressed a more negative opinion on the measures taken to ensure continuity of education and training, compared to educators.

Respondents to that consultation further rated teachers' digital skills and competences as the most important component of digital education (European Commission, 2020). A Hungarian study showed that schools generally had access to internet/equipment, but teachers lacked skills to use the equipment and systems (Hermann, 2020). Over two-third (68%) of teachers in the country said they were assisted by their colleagues when they needed help, and 24% of the teachers mentioned the Public Education Center providing assistance for them. In non-disadvantaged schools, 40% of them said they have not received enough assistance, compared to 30% in disadvantaged regions.⁵

Quality of online education can be impacted by technical issues. For instance, geographical differences in the presence, stability and speed of internet connections also impact the quality/modes of internet schooling provided. In Ireland, more interactive and collaborative teaching methods were applied (live video classes) by schools in areas where high-speed broadband was widely available (ESRI, 2021). These schools showed more student engagement. Furthermore, schools which used individual student devices in the classroom prior to the pandemic were better equipped to rapidly shift to distance learning in emergency circumstances.

⁵ <https://partnershungary.hu/wp-content/uploads/2020/04/Szegrega%CC%81cio%CC%81-e%CC%81s-digita%CC%81lis-oktata%CC%81s-a-koronavi%CC%81rus-ideje%CC%81n.pdf>

Measures to prevent and make-up for gaps

Broad funding packages

Overall, seemingly unprecedented funding packages have been allocated to address backlogs in education. Examples of broad funding packages include:

- Germany made available €2 billion to alleviate extra burdens and hardship for children due to COVID-19 via additional funding for existing programmes;
- Finland allocated €65 million for education to alleviate the impacts caused by the pandemic on children and youth, to be used in 2021-2022: €40 million for pre- and primary schools, €15 million for upper secondary schools, €5 million each for adult education and for vocational education, and €4 million for universities (Valtioneuvosto, 2021). Municipalities can use the funds to hire additional staff and reduce class sizes (Ministry of Education and Culture, 2021). The country further allocated €67.8 million to close the gap between schools in terms of learning results that municipalities can apply for. The funds are targeted to socioeconomically vulnerable areas, for instance facilitating schools to reduce class sizes further (YLE, 2021).
- Ireland allocated €102.6 million to be spent in 2021 to mitigate the impact to students' learning and wellbeing of school closures and restrictions, through the COVID-19 Learning and Supports Scheme (CLASS). Schools receive their additional teaching allocations based on the number of pupils enrolled, with enhanced allocations for special schools and schools in the Department's Delivering Equality of Opportunity in Schools (DEIS) scheme. CLASS also seeks to share best-practices.
- The Netherlands made available €8.5 billion for the period 2021-2023 to address the backlog in the Nationaal Programma Onderwijs (National Education Programme), of which €5.8 billion for pre-, primary and secondary schools. As a first step, schools needed to submit a 'schoolscan' to the municipality, identifying problems among pupils and needs to address these. Interventions included are based on the UK's NGO Education Endowment Foundation's 'Teaching and Learning Toolkit':
 - o more education to improve knowledge and skills in groups of pupils (during or after regular school hours);
 - o effective use of education to keep information and skills up to date;
 - o socio-emotional and physical development (sports activities, cultural activities and interventions to improve wellbeing of pupils (which can range from in-class observations to parent meetings and indeed a psychologist in the most severe cases);
 - o executive function development in students;
 - o employment and support (additional);
 - o preparatory measures and facilities.

Funding has also come from NGOs. In Hungary, NGO KLIK offered 10,500 teachers (5% of total) in 400 underprivileged localities a one-off financial support of HUF 500,000 gross.⁶ In total, 1,231 localities qualified by having at least 1.75 times the national average unemployment rate, and/or ranking in the bottom third of localities based on an indicator based on social-demographic

⁶ <https://nedolgozgingyen.hu/wp-content/uploads/2020/08/EFOP-3.1.11-19-Felhivas.pdf>

measurements, housing, living conditions, local economy and local unemployment, infrastructure and environment. Eventually, about HUF 330,000 was paid out to the teachers with the obligation of repayment in case the school dropout rate exceeded 10% at the end of the 2020/21 school year.⁷

Besides funding, the pandemic situation also triggered countries to establish broad strategies to address backlogs. Lithuania adopted a broad 2021 plan to make up for learning losses due to the pandemic. Its stated aims were ensuring equal access to quality education for all students (including groups in vulnerable situations); strengthening the competencies of school leaders, deputies and teachers; targeted support for graduates; allocating extra time for learning; ensuring timely and targeted communication. Both the support with equipment (Table 3) and summer schools (Table 4) were part of this programme.

In general, during the pandemic, when providing responses to the rapidly emerging crisis, support often built on pre-existing structures (Eurofound, 2022). This was no different in education. Additional funding was often allocated to existing frameworks, programmes and NGOs, with large flexibility for municipalities and schools on how to spend funds. Schools overall play a key role in targeting the measures. Funding packages often concerned various school levels, including primary and secondary education. In allocating resources, common approaches to monitor student outcomes include formative assessments by teachers at the classroom level and studies based on questionnaires to teachers, principals or school provider.

Facilitating access to online education

Providing equipment and connections

An important group of measures has focused on facilitating access to internet for pupils, mainly by handing-out equipment (desk-tops, laptops or/and tablets) and paying for connections (Table 3).

⁷<https://nedolgozinyen.hu/2020/08/28/pedagogusok-kapaszkodjatok-nem-is-tamogatas-a-kasler-altal-bejelentett-500-ezres-tamogatas/>

Table 3: Examples of programmes to make ICT equipment/connections available, 2020/2021

	Programme: what is provided?	Target group	Funding/scope/timing
BE	Laptops	Pupils in precarious situations. Schools and social services of the schools were given a large degree of autonomy on how to distribute the devices to their pupils	Flanders Government, 2020-2021
BG	Equipment	Children who use municipal social services	National government and donations by the Bulgarian Academy of Science (municipalities need to apply).
CZ	Equipment	Children in low-income households	National government: schools received budget based on the number of teachers (CZK20,000/teacher), totalling CZK1,284,567,802. NGOs took similar initiatives (e.g. www.znesnaze21.cz)
DE	Equipment	Schools identify pupils/families who are not equipped to participate in online schooling.	€500 million earmarked (Corona Sofort-Programm) 2020 supplement to the 2018-2023 funding programme 'DigitalPackage', originally excluding support for pupils/families.
EL	Equipment	1st round April 2021: families receiving OPEKA (Organisation of Welfare Benefits and Social Solidarity) child benefit in the first income category with one or more dependent children, aged 4 to 24 years, in primary, secondary or tertiary education 2nd round June 2021: to all with family income of up to €6,000 (for the rest same as 1 st round)	€200 voucher/family The estimated number of beneficiaries is approximately 325,000 families, 560,000 young people aged 4-24. The approved budget is €129 million Example of earliest funding by the EU's Recovery Plan for Europe. But until then funded by ministry of education.
HR	Tablets & SIM cards	All fifth and seventh grade primary school pupils	Mainly public, but also internet providers

		Other grades: depends on socioeconomic position of student's families. Secondary schools received funds for procuring tablets for students whose parents receive guaranteed minimum income.	
LT	Equipment	Distributed to municipal schools according to the number of students from socially vulnerable families.	March – April 2020: €6.4 million February – November 2021: €6.8 million (EU structural funds)
MT	Equipment and/or free internet connections	Pupils can apply whose family income is equivalent to or less than the minimum wage or (if more than one child) annual income is below €15,000, or consists solely on social benefits,.	National government & companies and individuals who donated equipment to the Ministry. April 2020: max 250 students eligible. By 15 May 2020: 123 students received a tablet or a laptop and 132 received free internet access (DOI Malta, 2020). Repeated in Spring 2021.
PL	Equipment & internet connections	Primary and secondary school pupils identified by teachers	Over PLN360 million (approx. €80 million) allocated
PT	Equipment & internet connections	Pupils from vulnerable socioeconomic backgrounds	Implemented 2020/2021 school year. Until the end of 2020, 100,000 computers were distributed. In January 2021, the ministry of education purchased 335,000 more computers and mobile connections.
RO	Equipment & internet connections	Primary, lower secondary and upper secondary pupils in full-time education, enrolled in public schools from marginalised areas whose households do not possess equipment with internet connection.	By December 2020, 250,000 devices with internet connection have been delivered. By 19 October 2020, 58,266 additional devices were purchased.

Source: Eurofound (2022), *Experiences with remote schooling and addressing learning gaps* (based on contributions by the Network of Eurofound Correspondents, and desk research).

Often devices were provided without the need to return them, but sometimes they were lent for limited duration (MT). Internet connections have usually been funded only for limited duration, for instance 2 years in the Romanian example. Sometimes special rates were negotiated with internet providers (e.g. HR). For instance, in Germany, special mobile flat rates for pupils (e.g. €10/month) were (only) available via recognised schools.

Sometimes also teachers received equipment within the programmes listed in Table 3 (CZ, RO). In Czechia for instance, the main purpose was acquisition of technical equipment for primary schools so that teachers in schools could implement online teaching in case needed from the beginning of the school year 2020/2021, along with enabling to provide equipment to pupils. DigitalPackage in Germany includes support for schools to acquire equipment for digital schooling; devices for teachers were procured with a further €500 million. Some initiatives included teacher (PT) or/and ICT administrator (DE) training or support (BG).

Many of the initiatives were rather small scale. Even larger ones were criticised for leaving many pupils with support needs behind. For instance, the 435,000 computers distributed in Portugal cover 29% of the students enrolled in the 2019/2020 school year. However, it has been noted that many other pupils (and teachers) have such needs (National Association of Public Schools and Directors of the Grouping Schools and the National Federation of Teachers, 2021).

Providing further support to access online education for pupils in particularly vulnerable situations

There have also been tailored support initiatives for pupils in particularly vulnerable situations, going beyond handing out equipment or financial support. In Slovenia, the Center for School and Extracurricular Activities (Center šolskih in obšolskih dejavnosti, CŠOD) runs the project 'Together for knowledge', supporting Roma children since 2016. It is funded by the European Social Fund (ESF) and Ministry of Education, Science and Sport. During the pandemic, the ministry engaged CŠOD for providing special assistance (by means of 26 Roma teaching assistants) to Roma children and their parents to overcome difficulties with online learning during the pandemic. In Hungary, social workers of the H52 office in a Budapest district, printed out the exercises on paper, gave them to students, and -once done- scanned them and sent them to the school. In some buildings there were study rooms, where volunteers provided in person support for online schooling. Lithuania allocated about €250,000 to NGOs to provide learning/teaching assistance in educational establishments. In March 2021, these NGOs launched the initiative 'Help to Learn/Teach', where volunteers help students with educational difficulties to connect to e-learning platforms, find and do classwork and homework on the platforms, assist students during and after classes, and provide emotional support (15min.lt, 2021). There have also been measures relying on peer support. An example includes 'Homework friends' for children in vulnerable situations, in Denmark. It is ran by NGOs Red Barnet (Save the Children) and Red Barnet Ungdom (Save the Children Youth), for children already associated with Save the Children. In Poland, local social assistance services' were requested to monitor families in which children/young people did not participate in remote learning.

Providing alternatives and complements to online learning to address access problems

Lessons have also been broadcasted on national television (BG, HR, PT). Usually these lessons were not intended as an alternative to the school's classes. In practice, though, these lessons can provide access to education for people who have no access to online education, but do possess a TV. Lessons were also broadcasted on radio (HR). In Portugal, a platform was created on YouTube, where teachers could make their classes available to the wider educational community. In Hungary, despite the prohibition of being in school buildings, there were also reports of in-school teaching for small groups of pupils who could not manage online.

Outside school-hours learning

Several countries implemented possibilities for children to make-up for school losses by providing additional schooling after usual school hours: during summer breaks (Table 4) and school day evenings.

Outside school hours learning measures also involved for instance evening classes on school days. In Romania, from second half of the school year 2020-21, the Ministry of Education organised the National Pilot Programme 'School after school' for primary school students (along with extra lessons in secondary school). Pupils at risk of early school leaving are eligible, particularly those who lack access to online education and students of groups in vulnerable situations (Roma students, students from rural areas, students with disabilities and students from economically disadvantaged communities). In Sweden, in primary (from age 4) and secondary schools the teachers and schools can decide that the lessons can be held during otherwise free days, such as holidays and weekends to make up for lost education. Lithuania allocated €5.1 from May to August 2021, compensating teachers for additional working hours to support around 2,500 pupils with learning difficulties to make-up for the loss of teaching during the pandemic.

Some programmes have also existed pre-COVID. They may have been disrupted due to the pandemic situation, or have mitigated its impact. In France, the program 'Devoirs faits' (Doing Homework) since 2017 lets children spend time on homework with the supervision and the help of staff in their own school. The general concept behind such initiatives is to help children from disadvantaged backgrounds receive at least some of the inputs that other children get from their families, in terms of training and skills acquisition, support with homework, and engagement in extracurricular activities (Stantcheva, 2022).

Table 4: Summer schools to make up for learning gaps due to the pandemic situation, 2020/2021

	Targeting	Timing	Funding/take-up
Austria	Pupils, identified by principals, who faced educational disadvantages (back-logs/ knowledge gaps) due to school closures.	Last two weeks of summer vacation (23 August – 3 September 2021 for the three eastern regions of Austria, 30 August – 10 September for the remaining six regions)	National public
Czechia	Pupils who fell behind during distant education	Holiday months 2020 and 2021	National public (camp organizers and grant applicants can be non-profit organizations, church organizations, foundations, universities, associations, etc.)
Estonia	Camps for students in primary or secondary education and vocational schools. Priority is given to applications for camps for pupils with special educational needs, other mother tongues, at risk of dropping out and groups in vulnerable situations (including ensuring regional coverage).	May 2021 - December 2021 Up to 16 kids/group, 3-5 days, 1/3 youth work activities.	€6 million, max. €120/pupil, max 50,000 pupils. Take-up: 517 camps were supported by the measure and a total of more than 65,000 children took part. One organiser could organise several shifts per one camp and have several groups per camp/shift (up to 16 children per group). The number of participants per camp (which could have several groups and shifts) was between 5 and 10,608. Most camps had up to 1,000 participants, 6 camps had over 1,000 participants. The average is around 125/camp.
Italy	Camps for students in primary or secondary education and vocational schools. There are three phases aimed both at learning, socialising and preparing the new year	June – September 2021	€510 million to be distributed among public schools, for a rough €18,000 per school. Voluntary participation, each school had to file in a performance report.

Luxembourg	Primary and secondary school pupils could request, based on their (/ their parents) self-assessment of gaps.	31 August – 11 September 2020 (and 30 August – 10 September 2021)	From 24 August 2020, students and parents could review online disciplines for which skill update was needed (www.schouldoheem.lu). In the first week, the website had 47,000 downloads. The measure was repeated in 2021.
Netherlands	Schools select primary and secondary, special, vocational school and adult education students with an educational disadvantage or an elevated risk of learning and development disadvantages due to schools closures	Summer 2020 & 2021, 25-30 hours.	€10.7 million (€500/pupil).
Slovakia	2020: primary schools 2021: primary, secondary and vocational schools	10-28 August 2020 9-27 August 2021	2020: €500,000 2021: primary: €350,000, secondary/vocational: €80,000

Source: Eurofound (2022), *Experiences with remote schooling and addressing learning gaps*. (based on 'contributions by the Network of Eurofound Correspondents, and desk research)

Delivery, targeting and take-up

Extra-curricular activities do not need to be channelled through schools. For instance, youth centres play a role. In Germany, an additional €100 million was allocated to the German Children and Youth Foundation. It promotes extracurricular projects and supports children and young people through coaching and mentors or additional offers in day-care centers as well as health, sport and exercise in the context of sports clubs via the program 'AUF!leben - Zukunft ist now'. In Slovakia, the 2021 programme (Table 4) specified that the support is to be provided at school premises. However, in providing the support, schools can cooperate with NGOs, free-time activities centres, community centres, social services for child and family, universities. In Czechia, 'low threshold centres' already existed before the pandemic, but obtained new roles in focusing its workshops, camps or courses combining leisure activities with school preparation / adaptation programmes.

In Luxembourg, support was contingent on individual requests by pupils. They could base their requests on learning gaps identified by themselves or their parents through an online platform established in 2020. This platform remained existent, and from 2021 learning exercises to address the identified knowledge gaps were also uploaded to it. Gap filling courses most requested were French and German for primary schools, and mathematics for secondary schools. Gaps can also be identified by schools in Luxembourg. In primary education, teachers diagnose possible shortcomings and organize educational support. This course was planned to take place during two afternoons during the week and Saturday morning until the end of the first trimester (and during school time if needed). In secondary education, high schools had their quota of support hours increased by 20% in the first term, so that they could follow on students who have difficulties in skill learning.

Language schooling elements

Several of the courses are broad in the material covered (e.g. 'school after school' in RO). Courses however also often focus on languages in which schooling finds place, because an understanding of these is seen as a basis for understanding all other learning content. In Austria, summer schools focus on German and maths, and especially target pupils with a lack of German language skills in primary and secondary school levels. In addition, at the primary level, social and science studies ('Sachunterricht') is provided if the child received a 4 (satisfactory) or 5 (unsatisfactory) on a 5-grade-scale, and at the secondary level, English is also offered. In Luxembourg, for primary school pupils, the focus was on maths or languages, two hours/day, with the supervision provided by a teacher or student. For secondary school pupils, in addition, other specialised courses were offered (previously only available for students who failed their exam the first time).

Attention for aspects beyond formal education: broader wellbeing

Content has also focused on improving wellbeing and abilities of the pupils on dimensions where they were affected negatively by lockdown, such as mental health, physical activity and studying more general abilities. In Czechia, activities aimed to reduce inequalities in access to education, but also supported mental health of children who attended primary school in the 2020/2021 school year. They also aimed to re-strengthen social relations with peers and cooperation. Czech summer camps' aims included promoting healthy lifestyle habits, and supporting children's physical activities. In Lithuania, the focus of the camps is on natural sciences, mathematics and language skills. However, they also link formal and non-formal education with an emphasis on supplementing partial knowledge and skills, the acquisition of which could be affected by the failure of full-time teaching during the school year, to renew children's work and study habits, and to encourage children's

interest in education. In Estonia, camps had to focus a third of their time on ‘youth work’, supporting the children’s overall mental health, well-being, and motivation through activities outside the formal curriculum is to ensure that the camps do not concentrate only on formal education.

The crisis also triggered mental health support at schools. Finland allocated €8 million for hiring of non-educational staff (social workers, psychologists), envisioning this to be a permanent measure from 2022-23 onward. These professionals ensure that absentees are reached, that the co-operation between the home and the school is strengthened and that time and resources are found to resolve problems (Yle, 2020). In Estonia, teachers are to be trained in mental health support and peer-coaching to create and maintain a mentally healthy and safe learning environment (incl. in case of distance learning), and to monitor, assess and value teacher’s own physical, mental and emotional health and prevent burnout. It includes developments in teamwork skills and on how to support pupils with special needs during the pandemic. Overall, nine projects were supported and the total cost was €200,000 (above the foreseen budget of 150,000), cofounded by the ESF. Three projects were provided by universities, while the other 6 by private companies or non-profit organisations. The activities provided take place in different towns in Estonia and are partially online. The application round was part of a long-term measure, from May 2021 to August 2023.

The additional funding in Germany includes €220 million extra funding for social work and volunteers at schools and in child and youth welfare. Examples include mobile youth welfare teams, more intensive advice on the transition from one type of school to the next, more psychosocial advice in schools, coaching of parents and children in crises at home or the use of additional volunteers through the volunteer services of the federal states.

Improving schools’ teaching capacity

Support often included strengthening schools’ teaching capacity, facilitating hiring staff. The Netherlands first made €210 million available for ‘Extra hulp voor de klas’ (‘Additional support for the class’), for applications between December 2020 and January 2021. Mid-2021 it added €240 million. In both cases, €102 million was for primary education (max €72/student) and €56 million for secondary education (max €62/student), open for applications from May 2021 and June 2021 for (Regioplan, 2021):

- a) deployment of teachers, teaching assistants and instructors;
- b) support for logistics and supervision of compliance with pandemic measures;
- c) hiring persons for class supervision, for example for digital teaching by a teacher;
- d) hiring support and guidance to unburden teachers and other staff; or recruiting, selecting and organizing extra temporary staff.

Measures to ensure quality and consistency in online education

Often, no uniform or consistent formal support was provided to youth workers, teachers or parents; the support that was provided often consisted of informal, self-organised or impromptu training arranged on a bottom-up basis (European Parliament, 2021a). Much has also come down to individual initiatives by schools and teachers. It has even been reported that teachers have spent private resources to make things work: in Hungary, teachers union PDSZ estimates average

expenditure at about one-third of their average salary: HUF51,000 (€142).^{8,9} Over two-thirds (68%) of teachers said they were assisted by their colleagues when they needed help, and 24% of the teachers mentioned the Public Education Center providing assistance to them. In disadvantaged regions 30% of teachers said they have not received enough assistance; in other schools more (40%) teachers reported not to have received enough assistance.¹⁰

There have been measures to ensure some consistency. For instance, in Croatia, the Ministry of Science and Education checked whether schools established virtual teachers' rooms and communities of practice which could be accessed through the education platform. If absent, the school principal, in cooperation with an IT specialist, were requested to organize one. Central involvement also allowed some monitoring of the extent of problems in reaching pupils. For instance, in Croatia, the Ministry of Science and Education could observe whether pupils and teachers had accessed their accounts. It found that two months into the lockdown, 5% of students (and 10% of teachers) had not accessed it.

Measures have also concerned the transition from distant education to physical education again when schools opened, with attention for the wellbeing of school children. For instance, countries have established guidelines for return to school by advising not being too harsh with exams in the days following return (MT, PL, SK).

Encouraging and facilitating educational attainment

Part of the mitigation of the impact of the pandemic on current primary and secondary school children can come through measures which affect them later in life, such as facilitating longer school attendance over time. Finland extended compulsory school attendance from 16 to 18 years. This measure was planned already before the COVID-19 crisis but gained urgency to deal with the backlog caused by the pandemic situation (Yle, 2021). Luxembourg stepped-up encouraging students to continue their studies after primary school by financial support to secondary schools and pupils, to support firms that propose trainings, to offer other training when no more places in apprenticeship are available, and to propose training to anticipate and adapt to future jobs in the framework of digitalisation. In the Netherlands €645 million in structural compensation was provided to accommodate the increased influx of students, and longer stay of students and pupils than usual.

Take-up issues

Sometimes support is dependent on applications by schools, local governments or other actors (e.g. the summer camps in Estonia). In these cases there is a risk that those entities that lack the needed resources to apply (e.g. time, administrative capacity, or even ability to make co/upfront-payments when needed) are left behind. There is a risk that these are exactly the entities that need support most. For instance, while more funds may be allocated to poorer regions, within these poorer regions richer municipalities (usually urban) may be more likely to apply, triggering intra-regional inequalities (Dubois and Fattore, 2011). A similar reasoning applies when applications need to be

⁸ <https://merce.hu/2020/06/23/atlagosan-51-ezer-forintot-koltottek-sajat-zsebbol-a-pedagogusok-hogy-tudjanak-dolgozni-a-koronavirus-alatt/>

⁹ <https://nedolgozvingyen.hu/2020/06/22/felmeres-a-digitalis-munkarend-az-oktatasi-iranyitas-kudarca/>

¹⁰ <https://partnershungary.hu/wp-content/uploads/2020/04/Szegregacia-1-cio-1-e-1s-digita-1-lis-oktata-1-a-koronavi-1-rus-ideje-1-n.pdf>

made by the pupils (/their parents/guardians), with these in the most vulnerable situations sometimes least likely to be able to apply (e.g. due to lack of information) (Eurofound, 2015).

Not always all allocated funds were used. For instance, in Slovakia, 75% of the €500,000 allocated for 2020 outside-hours learning were used. In total, about 10% of all primary schools joined the project, 244 primary schools (including 19 schools from special educational stream). Low interest could be explained by short time for application (12 weekdays), low motivation of pupils and their families and lack of teachers due to August holidays. In 2021, 419 primary schools joined, about 20% of all primary schools in Slovakia in summer 2021. Moreover, total of 34 secondary schools joined the summer school project in 2021. There are regional differences. The proportion of schools that participated ranged from about one third in the Banska Bystrica region to 10% in the Bratislava region. These summer schools are unlikely to be repeated in Slovakia, but in September 2021 a tutoring programme is offered.

In the Netherlands, many schools did not apply for the 'Extra hulp voor de klas' funds. Schools which did not apply to the 1st round of applications most often gave as a reason that they did not have time to apply (36%), did not need the extra capacity (33%), could not use additional resources effectively (19%), found the measure too complex (11%), found the idea of the measure unpractical (11%), or could not comply with the requirements (e.g. joining or establishing a 'school region') (11%).

Policy pointers

- **Look beyond quality alone in improving satisfaction and eagerness to engage with digital education:** In order to maximise the benefits of digital education, it is important to improve its quality. However, satisfaction does not always follow quality of the education itself. It is important to consider other elements that also contribute to satisfaction with, and eagerness to further engage with digital education, such as reducing the burden for working parents by reducing the need for parents/guardians' involvement or better working time arrangements; online education to complement rather than replace classes post-pandemic and devoting more attention to extracurricular activities can also contribute to avoiding technology fatigue.

- **Develop means for consulting pupils and their parents/guardians about their perspectives:**
 - o Opinions are rarely sought of children themselves. While a challenging area, more efforts should go into investigating how their voices can contribute meaningfully to the debate.
 - o Improving the quality of online education has limited scope in improving parents' and guardians' experiences with it and feeding their eagerness for more of it. New ways to fine-tune online schooling need to be explored, and parents and guardians can be consulted to this end.

- **Consider the measures applied to close learning gaps during the pandemic to address the inequities that pre-date and may last beyond the pandemic:**
- As a response to the pandemic, governments have taken explicit measures, and allocated considerable budgets, to close learning gaps. Many of the measures overviewed above have potential for a positive overall impact on development of the young population that is enrolled in education since they provide the support to those in need and help prevent leaving them behind. Such measures could have relevance also beyond the pandemic – to address the gaps between the advanced learners and those in need to fill in knowledge and skill gaps. Governments could consider expanding such measures to address persistent gaps, beyond those triggered by the pandemic alone. For instance, teachers could be more systematically involved in identification of pupils who have additional schooling needs at early stages, with resources attached to that. Pupils with language issues could receive more substantial language support in non-pandemic times compared to pre-pandemic opportunities. The sustainability of measures, as well as the most effective best practices have yet to be assessed. So far, the initiatives across the Member States demonstrated that measures to address the challenges to delivering education can be mobilised at relatively short term, yet their methods and delivery need to be tuned if they are to be continued or scaled-up in the future.

- **Keep strengthening the infrastructure for accessing internet and educational technologies:** The crisis has triggered a rapid introduction of programmes to provide pupils, teachers and schools with equipment and internet access to facilitate digital education. However, many of these schemes were small scale and even larger scale schemes left gaps in coverage; furthermore the quality of internet connection varies by Member States, regions and levels of urbanisation, posing problems for student engagement. Scaling-up such programmes and improving internet connections in areas where they lag behind can improve quality of and

access to online education. Such measures could possibly be seen as provision of essential services in context of the Principle 20 of the European Pillar of Social Rights, and could also be supported via the EU's Resilience and Recovery Facility, which presumes the allocation of 20% of its funding for digitalisation measures.

- **Assess and improve mechanisms for allocating and distributing the support for closing the learning gaps:**
 - o Sometimes funds to address the backlog are allocated on the basis of the applications received from pupils, schools or local governments. There is a risk that some people or entities in the most vulnerable situations lack the resources to apply. More proactive allocation mechanisms are needed to make sure they receive the needed support.
 - o To target measures to address learning gaps, measures often relied on schools', and in particular teachers', knowledge of the pupils' situations. They proved to be fast and efficient in reaching groups in vulnerable situations. So, policy makers can consider relying more on such local actors in policy implementation in non-pandemic times as well.

- **Be aware of the pandemic-specific context when extrapolating the lessons learnt during the COVID-19 crises:**
 - o Positive lessons could be applied in enhancing in-person support with guidance through online tools for parents/guardians and children who need it; an option that was not available during social distancing.
 - o Policy makers should also be aware that a non-pandemic environment also comes with other challenges, such as possibly a lower willingness of actors involved (schools or employers of the parents/guardians) to provide specific individualised adjustments compared to the times of the extraordinary situation in the last couple of years.

- **Such messages are relevant both for non-crisis situations and crisis situations.** Crisis situations can include such as future pandemics, but also for instance for the many Ukrainian refugees who are children: e-schooling can connect them to former teachers, provide some immediate schooling while a more permanent solution is sought, and bridge the period when integration into the EU's school system is delayed.

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Further information

Information akin to the issues raised in this working paper is also addressed in the following:

Living, working and COVID e-survey: it is a key element of Eurofound's research on the far-reaching socio-economic implications of the pandemic across Europe. The survey was launched in April 2020, with five rounds completed at different stages during 2020, 2021 and 2022. The main results of the survey are presented on the Eurofound website, and the microdata can be requested free of charge upon Eurofound's acceptance of a research proposal. See more at:

<https://www.eurofound.europa.eu/data/covid-19>

Eurofound (forthcoming 2022) '[Access to essential services for people on low incomes: Energy, public transport and digital communications](#)', Eurofound working paper series.

In 2022, Eurofound and ECDC plan an exploration of the impact of the non-pharmaceutical interventions such as school closures.

WPEF22033

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