

# **5** The Luxembourgish education system during the pandemic

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This chapter examines how the government of Luxembourg handled the COVID-19 crisis in education, with a particular focus on formal (general) education. The study is structured around three areas of analysis: educational continuity during the various stages of the health crisis; the impact of the crisis on educational outcomes and stakeholder well-being; and the processes of engaging, co-ordinating and communicating with stakeholders. The analysis shows that, on the whole, Luxembourg managed the crisis successfully in the education sector: schools mostly remained open, educational continuity was ensured when they were closed, and educational outcomes remained relatively stable. The OECD proposes recommendations to support actions taken by Luxembourg in future, both in the context of the pandemic and for other similar crises, taking into account the broader needs of the country's education system.

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## Key findings

Compared to other education systems in the OECD, the education system in Luxembourg is characterised by: i) a high degree of linguistic diversity and multilingual ambition; ii) high levels of investment in education; and iii) equity and quality challenges in student performance. These are all important contextual elements for understanding the decisions made by the country's government starting in February 2020.

To ensure educational continuity, Luxembourg stood out in its desire to **reduce the number of days on which schools were closed to a minimum**. In total, school closures in 2020 and 2021 amounted to 48 days of teaching in primary education and 34 in secondary education (fewer for final-year students). Solutions to ensure educational continuity were put in place during this time. One of the successes of the government's management of the crisis was its ability to build a consensus regarding the overall strategy that underpinned all of its actions.

As in many other OECD member countries, educational continuity has meant that **school monitoring in Luxembourg has not detected any systematic negative impact on students' educational outcomes**. Overall, the system has withstood the upheaval caused by the crisis, teaching has continued and learning has ensued. The slight decline in German language comprehension performance, first in oral work in 2020 and then in written work in 2021, could have been anticipated, as could the impact on the workload faced by students, teachers and parents, who have had to deal with exceptional circumstances for a long time.

For Luxembourg, the following are areas that could be improved as the crisis continues (and in the event of other, similar crises):

- **Make preparations for educational continuity** in the event that schools have to close again. This goal requires building teachers' capacity to incorporate digital technology and skills into an expanded educational toolkit.
- **Put in place tailored support to curb the growth of educational inequalities** during times of crisis. In the short term, the ministry must improve its proactive support measures, providing differentiated support if resources are limited, to benefit the most vulnerable students first. In the medium to long term, more extensive transformation of the education system will be needed, for example on the model of the European Schools.
- **Reconsider the division of responsibility for managing and equipping schools with digital infrastructure between central government, which supplies secondary schools directly, and communes, which equip primary schools through (weighted) public funding.** In essence, centralising the supply of digital equipment could take some pressure off the communes – especially in times of crisis – and harmonise the quality of digital infrastructure, between the schools themselves and between primary schools and secondary schools.
- Conduct statistical studies on the effects of the crisis on the lives and experiences of children and families in Luxembourg, and on different population groups, to better inform public policy.
- Tailor health and pedagogical measures to ensure that they are proportionate to the emergency context, while continuing to be science-based, and that they seek a return to normality, or a degree of predictability, as far and as safely as possible.

From the earliest days of the COVID-19 crisis, **the Ministry of Education, Children and Youth was able to rely on the autonomy, resilience and co-ordination of its staff and their resources**. The COVID-19 and education governance framework, from which the joint Ministry of Education and Ministry

of Health co-ordination unit emerged, enabled the government to put in place the necessary health measures to stop the spread of the virus as soon as schools reopened.

For future crisis co-ordination, the following should be considered:

- In times of crisis, **include the education sector in the** government of Luxembourg's **interministerial crisis unit**.
- **Ensure that the crisis governance framework, including the steering committee, remains as stable as possible.** The membership, remit and resources of the committee should now be established in advance and transparently, to ensure that it is able to function properly. The Ministry of Education, Children and Youth's decision to maintain its co-ordination unit in a "dormant" form is particularly relevant.
- **Strengthen the coverage, integration and interoperability of databases from different sectors** to facilitate the mobilisation of reliable and complete information, which is particularly vital in times of crisis.
- Depending on the urgency, strike a balance between the consultation time dedicated to developing the policy response and to communicating the decisions made. Upstream, better stakeholder consultation makes it easier to communicate and implement measures. Direct communication has its place in times of crisis but communicating decisions through the regular hierarchy must prevail in situations where there is less urgency.

## 5.1. Introduction

This chapter analyses the government of Luxembourg's COVID-19 response in the field of education, particularly general formal education. The analysis is based on national and international data, as well as on three surveys of key actors in the Luxembourg education system: a first addressed to the Ministry of Education, Children and Youth; a second to the Ministry of Higher Education and Research; and finally a third addressed to school leaders (or school principals). Of the approximately 200 state-run and private schools in Luxembourg, 141 principals responded to this survey by the OECD. In addition, interviews carried out with numerous stakeholders in the Luxembourg education system during two working visits to Luxembourg are an important source for the analysis and recommendations.

This chapter begins by setting the context for education in Luxembourg and outlining the key elements of the government's response to the health crisis in the education sector. It then examines the main successes and areas for improvement in the government's response. The study is structured around the following lines of analysis: educational continuity during the various stages of a health emergency; the impact of the crisis on educational outcomes and stakeholder well-being; and the processes of engaging, co-ordinating and communicating with stakeholders. The chapter then summarises some proposed recommendations for the government of Luxembourg, to support its future actions in the context of the pandemic or other crises, taking into account the broader needs of the education system.

## 5.2. Understanding the Luxembourg education system

Luxembourg's education system is one of the smallest among the OECD member countries (less than 100 000 students across all levels). It has three features: i) a goal of multilingualism and a high degree of linguistic diversity among learners compared to other OECD education systems; ii) high levels of investment in education; and iii) equity and quality challenges in student performance. This section discusses the broad outlines of these three features to better understand the constraints and opportunities faced by the Ministry of Education, Children and Youth during the pandemic, and as backdrop for the OECD's recommendations.

### 5.2.1. Luxembourg has a unique education system focused on multilingualism

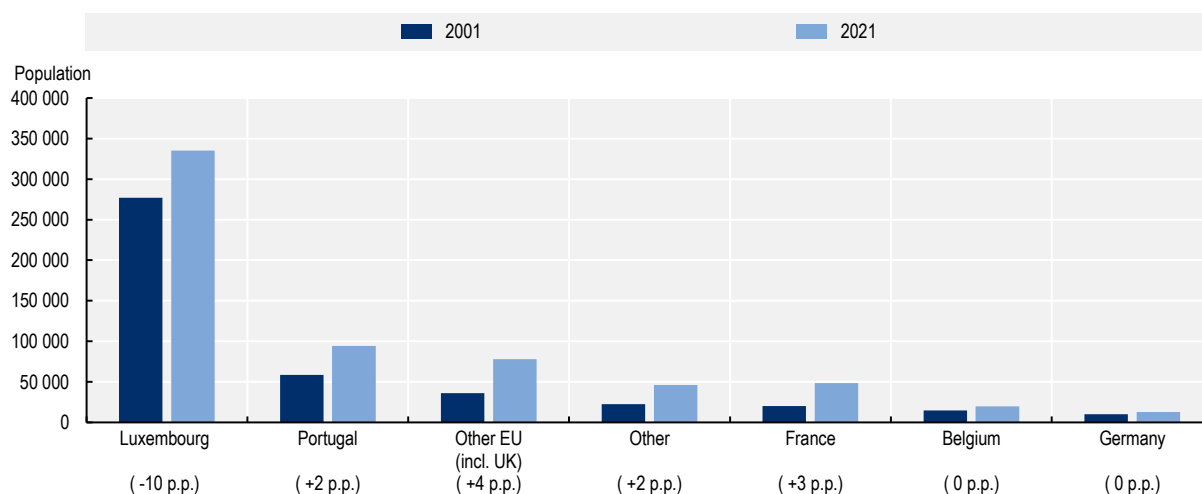
In 2022, Luxembourg had 170 state-run primary schools (equivalent to pre-primary and primary education according to the International Standard Classification of Education [ISCED]) and 41 state-run secondary schools (divided into three years of lower secondary education and three or four years of upper secondary education according to ISCED). In addition, there are 14 private primary schools and 12 private secondary schools in the country; these institutions receive state subsidies and follow the state curriculum to varying degrees (MENEJ, 2022<sup>[1]</sup>; MENEJ, 2022<sup>[2]</sup>). In 2019-20, 93% of students were enrolled in state-run education in Luxembourg (LUCET et SCRIPT, 2021<sup>[3]</sup>).

The uniqueness of Luxembourg's education system compared with other OECD member countries lies largely in its multilingual approach to teaching and learning, and in its highly international population. The country has three official languages (Luxembourgish, German and French), each of which takes alternates as the language of instruction in the education system. Children aged 1-4 can benefit from the multilingual education programme provided by early years education and childcare services through the childcare voucher system. This programme gives them early and daily contact with French and Luxembourgish, while taking into account that they may speak other languages (MENEJ, 2022<sup>[4]</sup>). The language of instruction then evolves as students progress through their school careers. In the "traditional" education system, pre-primary education is provided in Luxembourgish, primary education is provided in German (including children's literacy), and most secondary education is in French or German. Higher education is provided in German, English and French (OECD, 2016<sup>[5]</sup>). Some state-run or private schools offer an

international education programme, in line with the country's multilingual ambition, but allowing for literacy and schooling in a child's native language (or languages other than German). In 2022, 16 state-run and private primary schools and 13 secondary schools were offering international education (MENEJ, 2022<sup>[6]</sup>).

Between 2001 and 2021, the population of Luxembourg increased by 44%, with a large rise resulting from the migration of groups speaking a European Union language (particularly French and Portuguese, see Figure 5.1). Over the same period, the share of the population with Luxembourgish nationality fell by 10 percentage points, from 63% to 53% (LUCET et SCRIPT, 2021<sup>[3]</sup>). Cross-border activity is also fairly active (see Chapter 1). In 2022 therefore, the education system (both primary and secondary education) is seeing an increasing number of students whose main language at home is not Luxembourgish (65.7%) (LUCET et SCRIPT, 2021<sup>[3]</sup>).

**Figure 5.1. Population of Luxembourg by country of origin**



Note: p.p. = percentage point change compared with other population groups between 2001 and 2021. Population growth of a group in absolute variation does not always equate to relative variation growth in the population.

Source: LUCET and SCRIPT (2021<sup>[3]</sup>), *Rapport national sur l'éducation au Luxembourg 2021* [National Report on Education in Luxembourg 2021], <https://bildungsbericht.lu/wp-content/uploads/2022/05/Rapport-national-sur-l-education-Luxembourg-2021.pdf>.

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The multilingual structure of the traditional education system is a growing challenge for an increasingly diverse student population. From the age of 12 years, students are directed to different educational tracks, essentially “classical” and “general” education. Classical education is more selective and *de facto* considered to be more prestigious than general education. However, there are now variations on this model, such as international education. As demographics have changed, the supply of and demand for international education has grown in recent years. In 2019-20, for the first time, more than 10% of secondary school students, primarily following the classical curriculum, completed their studies through an international education programme, either in the state-run or private sector (LUCET et SCRIPT, 2021<sup>[3]</sup>).

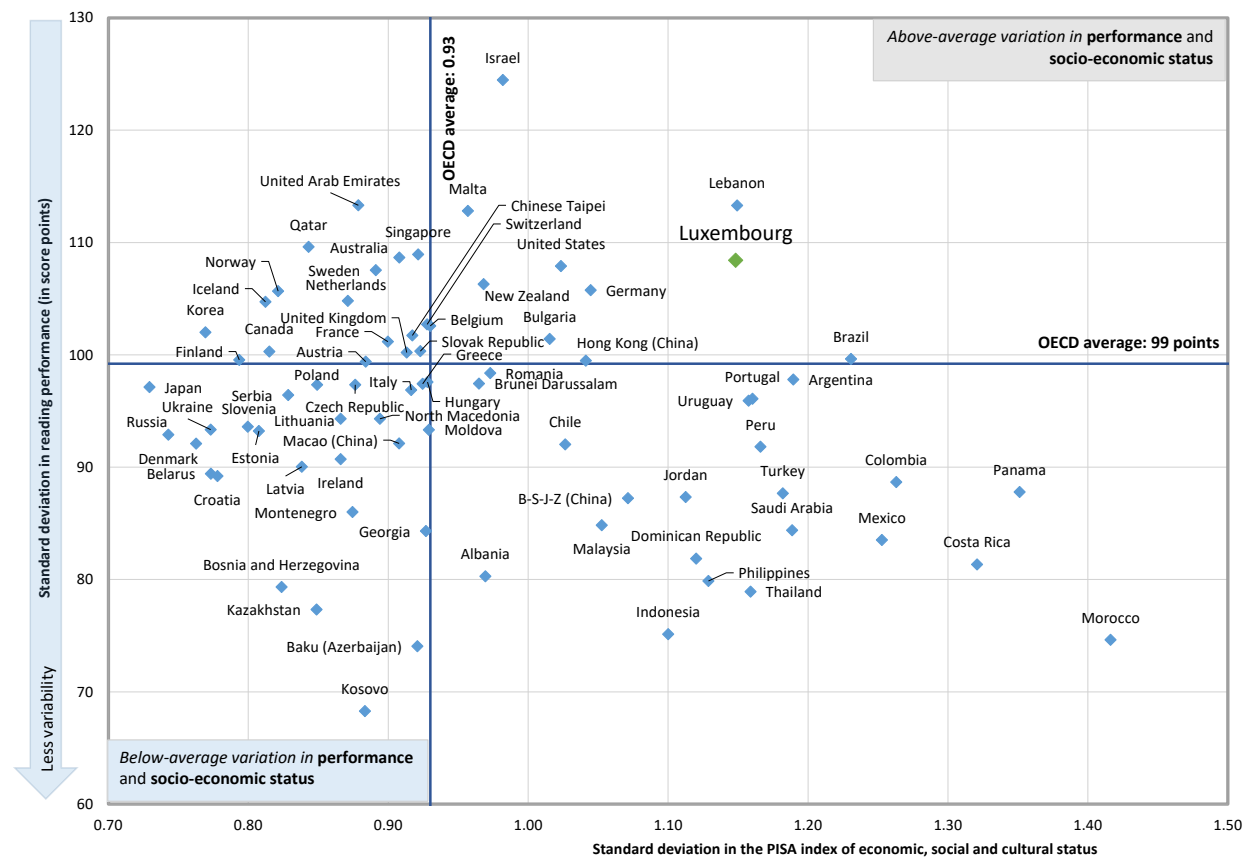
### 5.2.2. High levels of education spending, modest learning outcomes

In Luxembourg, the annual per student cost is more than twice the OECD average. After taking into account public-private transfers, public spending on educational institutions, from primary to tertiary level, per full-time student in Luxembourg was USD 23 457 in 2018 (in USD purchasing power parity), compared with an average of USD 10 000 for OECD member countries.

However, despite this high level of investment, Luxembourg performed below the OECD average in all three areas assessed (reading, mathematics and science) by the Programme for International Student Assessment (PISA) 2018 (OECD, 2019<sup>[7]</sup>). Luxembourg's performance has changed very little across PISA cycles since 2000.

In Luxembourg, students' socio-economic status had one of the largest impacts on reading performance in PISA 2018 than anywhere in the OECD, with this factor explaining 17.8% of the variance in performance (compared with an OECD average of 12%). More advantaged students in Luxembourg have a reading score 122 points higher than disadvantaged students. This is the biggest difference observed between these two groups in any country or economy participating in PISA. The average difference in the OECD is 89 points. At the same time, the differences in performance between immigrant and non-immigrant students are lower than the OECD average, although 55% of Luxembourg's 15-year-old students come from an immigrant background, according to the PISA survey. Given the same socio-economic background, these students scored an average of 17 points lower in reading than non-immigrants, compared with an OECD average of 24 points. However, Luxembourg is one of the countries participating in PISA 2018 where there is a high degree of socio-economic diversity among students, and where students' educational outcomes vary more than in countries with similar overall performance or level of economic development (OECD, 2019<sup>[7]</sup>) (see Figure 5.2).

**Figure 5.2. Variation in students' reading performance by socio-economic status, PISA 2018**



Source: OECD (2019<sup>[7]</sup>), *PISA 2018 Results (Volume I): What Students Know and Can Do*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/5f07c754-en>.

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National assessments in Luxembourg corroborate these findings: students from socio-economically disadvantaged homes, who do not speak any of the languages of instruction at home, or who attend one of the two general secondary education tracks, have lower academic performance than their peers (LUCET et SCRIPT, 2021<sup>[3]</sup>).

### **5.2.3. The Ministry of Education, Children and Youth has a broad remit, while allowing schools and teachers pedagogical autonomy**

The Ministry of Education, Children and Youth is responsible for early childhood education and care, primary education, secondary education, adult education, and other services related to the inclusion of students with special needs in formal education (through specialised centres of excellence in educational psychology) and non-formal education (crèches and mini-crèches, drop-in centres, school centres, childminders, and youth centres). The Ministry of Education, Children and Youth is also responsible for child and youth welfare and working with young people. The education sector employs the largest number of public workers (44.8% of the 31 049 civil service employees as of 31 December 2020, including teachers) (Government of Luxembourg, 2021<sup>[8]</sup>). The ministry's responsibilities are similar to those of many education ministries in OECD member countries. Although they are separate organisations, the Ministry of Higher Education and Research and the Ministry of Education, Children and Youth have been both led by the same minister since 2013 (Government of Luxembourg, 2022<sup>[9]</sup>).

Like many other OECD member countries, Luxembourg grants a broad pedagogical autonomy to teachers and schools. For example, in 2017, two-thirds of decisions relating to the organisation of secondary education were taken by Luxembourg's secondary schools. Only one-third were taken at the central level. In contrast, all decisions regarding staff management, planning and structures, and resource management were made centrally (OECD, 2018<sup>[10]</sup>). These areas of responsibility are delegated to the communes for primary education.

While the curriculum is centralised, teachers have pedagogical autonomy in implementing it. This autonomy extends to the choice of teaching materials as well as their choice of professional training. The government develops and provides free educational materials (such as textbooks), and teachers can choose to use them or not.

These contextual elements (multicultural system, challenges around equity and quality, pedagogical autonomy for teachers and schools) are essential to understanding and putting into perspective the decisions taken by the government of Luxembourg during the pandemic.

## **5.3. Educational continuity during the health crisis in Luxembourg**

### **5.3.1. Schools remained mostly open during the COVID-19 pandemic**

The Ministry of Education, Children and Youth made opening schools a priority throughout the pandemic. This was its main strategy to ensure educational continuity and the well-being of young people in Luxembourg.

A decision to close the country's schools was taken during the week of 9 March 2020. In a context of uncertainty and drawing on the strategies adopted by the countries of the Greater Region of SaarLorLux, on Friday 13 March, the government of Luxembourg announced that schools and educational activities would be suspended from Monday 16 March to prevent or slow the spread of the COVID-19 virus in the population so as to best protect those who were most vulnerable (see Annex table 5.A.1). Some 150 000 children, young people and adult learners, and 20 000 education professionals were asked to stay at home for an initial two weeks. As the health situation deteriorated, the return to school was gradually postponed, first until the Easter



holiday (4-19 April), and then until 4 May 2020, bringing the total duration (excluding holidays) of the first full closure period for secondary schools to five weeks, and for primary schools to eight weeks.<sup>1</sup>

Final-year students in secondary education began returning to school on 4 May 2020, followed a week later by the rest of the secondary school population, initially on an alternating basis so as to reduce the number of students on site by half. All students then returned to class gradually as the health situation evolved. Annex table 5.A.1 summarises the different protocols in 2019-20, 2020-21 and 2020-22. Because of their flexibility and effectiveness (see Box 5.1 on protocols and infections in schools), these health protocols helped to keep schools open or partially open as long as possible in 2020. It was not until the end of the 2020-21 Christmas break, in January 2021, that the decision was again made to completely close schools at all levels for one week. This decision was repeated one last time in February 2021 but affected primary schools only.

In total, school closures in 2020 and 2021 amounted to 48 days of teaching in primary education and 34 in secondary education (fewer for some classes) in 2020 and 2021. These figures place Luxembourg among the OECD member countries that closed their schools the least, alongside (depending on the level of education) Iceland, Japan, Norway and Sweden. The OECD average for school closures is about 81 days in primary schools and 94 days in secondary schools (OECD, 2021<sub>[11]</sub>).

The University of Luxembourg followed a similar trend, with the Ministry of Higher Education and Research preferring to limit periods of complete closure. Although the university has access to high-quality digital infrastructure, which enabled a relatively easy transition to remote learning, it reopened its doors in September 2020 (in contrast, many OECD member countries delayed the start of the academic year for higher education students), offering hybrid learning or alternating attendance patterns. The university also made much less use of remote learning than most universities in OECD member countries. Each course enjoyed broad autonomy to make its own arrangements, with some holding end-of-semester examinations in person as early as May 2020.

### **Box 5.1. Health protocols to tackle the spread of the COVID-19 virus in schools in Luxembourg**

The return to class of some students starting on 4 May 2020 was made possible thanks to strong health protocols, combining social distancing (enabled by the use of alternating attendance), the distribution of personal protective equipment (masks, hand sanitiser and so on), the communication of precautionary measures, and inviting everyone in schools to take part in the country's large-scale testing strategy. This approach, supported by ongoing collaboration between the Ministry of Education and schools, and facilitated by the rapid development of digital tools such as the EduTesting application and the self-declaration and tracing portal for infections,<sup>2</sup> enabled early detection of infections leading to numerous but localised isolations, and helped the system to respond more quickly to outbreaks. A health plan featuring four scenarios (MENEJ, 2022<sub>[12]</sub>) to enable the system to be adapted to changes in the circulation of the virus and virus variants made a significant contribution to limiting the spread of the pandemic in schools, reassuring school staff, students and parents. Although the government never mandated self-testing for students and teachers, nearly 90% participated.

Successive analysis reports show that schools were not a key location for virus transmission (MENEJ et al., 2020<sub>[13]</sub>; MENEJ, 2020<sub>[14]</sub>; MENEJ, 2021<sub>[15]</sub>). On the contrary, the data on infections collected by the General Inspectorate of Social Security and the Health Directorate, coupled with the Ministry of Education, Children and Youth's school databases and analysed by a multidisciplinary team, suggest that schools were less affected by the coronavirus than other sectors of society. This is partly because they are structured spaces where activities are organised in accordance with rules and clearly established health protocols, and partly because the school population has been very regularly tested (and then isolated if necessary).



These findings, gradually supported by medical advances showing that the virus was less dangerous (and, at least initially, less contagious) in young people, confirmed the government's strategy of keeping schools open as much as possible.

Education stakeholders, from school principals and teachers to parents and unions, approve – in retrospect at least – of the government's decision to make opening schools its top priority. One of the successes of the government's management of the crisis was its ability to build a consensus regarding the overall strategy that underpinned all of its actions. Faced with the fears expressed by some people regarding the return of children (and teachers) to school, particularly at the beginning of the pandemic, the government was able to defend the key role of schools in enabling learning, ensuring the mental, social and emotional well-being of students and their parents, and maintaining access to the labour market. The Ministry of Education, Children and Youth's strategy is consistent in this respect with the first of the OECD's ten principles for effective and equitable educational recovery from COVID: keep schools open as much and as safely as possible (OECD/EI, 2021<sup>[16]</sup>).

The ministry faced several challenges in delivering educational continuity: ensuring the continuity of teaching remotely while schools were closed and social distancing was the norm; defining and implementing health protocols for opening schools; ensuring the quality of education under altered conditions; and enabling students to graduate during the pandemic. These challenges are discussed in the following subsections.

#### *The first school closure was mitigated by remote learning*

After closing the country's schools in March 2020, the government was keen to guarantee every student's right to education by helping schools to provide remote learning. To support this unprecedented effort, teams from the ministry, including the Department for the Co-ordination of Educational and Technological Research and Innovation (SCRIPT), the national youth service, the educational technology centre, and the national education training institute IFEN, assisted school staff by developing and/or very quickly making available a range of educational resources for remote teaching or learning to teachers, parents and students.

First, SCRIPT created the Schouldoheem<sup>3</sup> platform, offering a diversified catalogue of digital resources available in five languages to meet the specific needs of the Luxembourg system. The platform was consulted more than one million times during the first period of school closures (to give some perspective to this figure, the country has 90 000 students and a population of 632 000). Approximately 68% of the visits were made within the first two weeks, and 84% were made directly from the website URL (i.e. without going through a search engine), clearly demonstrating that the platform's launch was successfully communicated. SCRIPT also offered 32 “challenges” in which more than 3 000 students participated, 14 livestreams that attracted 35 000 views in a few days, dance workshops in which nearly 9 000 children took part (SCRIPT, 2020<sup>[17]</sup>), and hard-copy learning materials made available to students by teachers. This resource development effort was the result of multisectoral collaboration involving SCRIPT, the Museum of Natural History, the national youth service and educational science students at the University of Luxembourg (e.g. for a directory of open educational resources (Université du Luxembourg, 2022<sup>[18]</sup>)). The deployment of these new tools and the transition to remote learning were accompanied by the establishment of a direct telephone helpline to provide educational and psychosocial support. This was staffed jointly by SCRIPT and the Psychosocial and Scholastic Assistance Centre (CePAS). This helpline for students, parents and education professionals offered educational support and answers to questions about remote teaching and learning.

Educational continuity has benefited from the excellent overall state of Luxembourg's pre-crisis digital infrastructure. In 2017, the country was ranked ninth in the world on the information and communication technology (ICT) Development Index, a measure that takes into account access (first place), usage (eighth

place) and the digital skills of its population (seventy-fourth place) (ITU, 2017<sup>[19]</sup>). Almost all of the country is covered by high-speed Internet and schools (as well as most homes) have adequate computer equipment. In primary education, each of the 15 regions has a teacher who specialises in digital skills and is responsible for helping their colleagues master digital tools and for leading public procurement. The role that these teachers played with teaching teams was particularly appreciated during the crisis. In addition, at the secondary level many students (sometimes entire secondary schools) benefit from the one2one programme, which provides all students in a class with personal tablets using an annual rental model.<sup>4</sup> During the previous legislative period, the Ministry of Education, Children and Youth had also renegotiated its contracts with Microsoft, guaranteeing all students and school staff free, unlimited access to Office 365 products. As a result, within the first few days of school closures, the majority of students were able to connect with their teachers using the Microsoft Teams collaboration platform and take part in remote learning. One of the first tasks schools often faced was the need to remind people how to use these tools, sometimes still not widely used.

Additional digital equipment was loaned to students from disadvantaged backgrounds on a case-by-case basis, at the initiative of schools, the educational technology centre or communes. Solutions were generally found quickly for students who did not have equipment at home.

Students with specific needs also benefited from special support measures provided by socio-educational staff at specialised centres. These ranged from a dedicated telephone helpline to individual coaching. Outpatient child and family services and ad hoc care for special needs students resumed before schools reopened in cases where such services or care were vital to continuity of treatment or to diagnosis.

Especially during the first closure, educational continuity through remote learning mobilised school principals, school committees and teachers, galvanised by the unprecedented circumstances. Some teachers distributed hard-copy educational materials through the letterboxes of the children in their classes, others organised a secure homework collection. Teachers helped to identify and increase monitoring of students most at risk of disconnecting and dropping out. The vast majority quickly adapted to the use of digital tools that had previously been largely underutilised or not employed at all (in particular the Teams platform). During the first wave of the pandemic, and despite a general feeling of unpreparedness, the teachers interviewed by the OECD and their representatives expressed a certain sense of pride. Faced with the state of emergency, they managed to ensure some educational continuity remotely, even though it was not perfect. In retrospect, they express satisfaction at having succeeded in mastering digital tools that had not previously been widely used.

These different forms of support are similar to those put in place in other countries and economies during the pandemic. Many countries made digital resources available to students and/or teachers and asked teachers to provide remote learning (or at least stay in touch) with students (Vincent-Lancrin, 2022<sup>[20]</sup>). In France, the government opened up or expanded access to educational resource platforms that existed before the crisis, set up a virtual classroom platform and offered teachers educational support in how to use them (Thillay, Jean and Vidal, 2022<sup>[21]</sup>; Vincent-Lancrin, 2022<sup>[22]</sup>). In Belgium (Flemish Community), the KlasCement teacher resource platform was enriched with resources for remote learning and peer-to-peer discussion (Minea-Pic, 2022<sup>[23]</sup>). In Luxembourg, although SCRIPT was able to build on pre-existing educational resources, it had to create a new platform in five languages with limited human resources, given the size of the country. In the few countries that have conducted such studies, including France, Germany and the United States, teachers, on average, scaled back their goals and focused primarily on giving out homework and lessons rather than on remote learning (Thorn and Vincent-Lancrin, 2021<sup>[24]</sup>). Discussions with teachers and teachers' unions suggest that teachers in Luxembourg also used a mix of homework to be completed by students independently (paper or digital format), online classes and individual monitoring. For teachers with access to the virtual classroom system (Teams), the lack of a statistical study on this issue means that there is no information about the balance they struck between different educational practices, nor the intensity of the contact they had with their students (and students' families) during this first closure.

### *Experience gained during the first year made it easier to respond to subsequent closures*

Luxembourg closed its schools twice more after they first reopened in May 2020. At the end of the Christmas holidays in 2021, the government once again decided to close all schools completely for one week. With the experience gained in 2020, the technical progress made by its staff on mass testing, the availability of mechanisms for tracing infections and the gradual vaccination of the population, the ministry was able to reopen primary and secondary schools after just one week of closure in January 2021. In secondary schools, alternating attendance then face-to-face teaching continued until the end of the school year. In the primary sector, schools closed for a third and final time in February 2021.

According to the stakeholders consulted, the later closures did not pose the same challenges as the first one, since teachers already had some initial experience, the platforms and helplines were still in place and, more generally, the protocols used while schools were open retained some elements of remote teaching and learning. How they were managed is not known due to a lack of data, but it is likely that more emphasis was placed on remote learning through virtual classrooms, as was the case in Germany (Thorn and Vincent-Lancrin, 2021<sup>[24]</sup>).

### *Educational continuity was maintained through the health protocols*

When schools reopened after the first closure, the government's efforts focused primarily on the health aspect of the crisis to keep schools open as much as possible. Additional educational resources remained available on the digital platforms, as did other support services introduced during the period of closure. The health protocols nonetheless required staff and learners to adapt to ensure high-quality education in new and changing conditions.

From the first time schools reopened, the health priority was mainly reflected through: i) the provision of health guidelines and materials to schools; ii) the implementation of health protocols at multiple levels; and iii) the design of on-site spaces and schedules.

In May 2020, the return to face-to-face teaching was gradual, using an alternating attendance pattern. To reduce the number of students present on site by half, the government requested that classes (or half-groups) used alternating attendance patterns based on a weekly system: half of the students attended classes in person, while the other half attended classes remotely or did work at home or, if possible, in school, in spaces provided by the communes or in drop-in centres, where staff supervised the half-groups. This general framework was adapted to suit local circumstances, thanks to the autonomy given to schools. It was also staggered differently for different classes: final-year classes in the classical and general secondary education tracks, as well as those in vocational education, were able to return to site before other classes so that they could prepare for their final exams (see section below). The final-year classes were followed by the other secondary and vocational education classes, as well individual music classes. Then it was the turn of primary classes, as well as childcare facilities such as crèches and drop-in centres (MENEJ, 2020<sup>[25]</sup>). Subsequently, when the health situation allowed it, alternating attendance was abandoned in favour of a return to full-time, face-to-face teaching for all, with the aim always being to avoid completely closing schools.

During these periods of full or partial school opening, the Ministry of Education, Children and Youth and government institutions focused their efforts on developing and implementing various health protocols, as well as providing protective equipment and testing materials, making the strategic choice to try and keep schools open rather than preparing for an eventual forced return to remote learning. The 141 school chairs and school principals (primary and secondary) who responded to the OECD questionnaire were generally satisfied, too: 79% rated the government's logistical support as satisfactory or very satisfactory during periods when schools were fully open and 73% during periods when they were partially open. Furthermore, 90% were satisfied or very satisfied with the provision of protective equipment (tests, masks, hand sanitiser, etc.). This feeling seemed widely shared by the teachers' representatives, parents and students

we met, all of whom praised the efforts that made it possible to reopen the schools, and then to keep them at least partially open.

### *Higher education shifted to remote and then hybrid format*

In higher education, the Ministry of Higher Education and Research granted broad autonomy to the University of Luxembourg, enabling it to respond flexibly to the challenges posed by the crisis, despite challenges of its own, such as managing international students and handling the occupation of student housing during the period of closure.

At the beginning of the crisis, the university gave itself three weeks longer to prepare than the primary and secondary education sectors. The effort was led by a task force responsible for observing how the pandemic developed in neighbouring countries. Before the first government shutdown of the university was announced on Friday 13 March 2020 (along with the rest of the country's schools), an ambassador trained the teaching staff in the use of videoconferencing solutions. For its part, the IT team developed two platforms (TeachRemotely.lu and WorkRemotely.lu) and equipped some 15 classes with remote learning tools. With modernised classrooms and an additional investment of EUR 1 million, the university was able to implement a hybrid teaching model by the start of the 2020-21 academic year, less than six months after it was first closed. Although there were variations across different courses, classes were typically divided into three rotating groups: one on site and two working remotely. The university did not close again after the summer of 2020. As the virus evolved, educational continuity was ensured by hybrid teaching throughout the 2020-21 academic year, and then by a return to face-to-face teaching from November 2021.

Nevertheless, the Ministry of Higher Education and Research faced a double challenge typical for higher education: managing international students coming to study in Luxembourg and managing Luxembourg students going to study abroad (traditionally a large number).

The closure of the borders of neighbouring countries made it difficult for international students to return to their families when the university closed. Those who had to stay behind received support from the university's inclusion and well-being unit, as did Luxembourg students whose only option was to remain in their university accommodation. This support was psychological (establishment of a hardship fund), material (provision of digital equipment), social (quizzes, weekly evenings to help students avoid feeling isolated), financial (fundraising and help from the ministry to provide equipment and food, for example) and academic (personalised support sessions).

The university's management team, teachers and students thus seem to have received the appropriate autonomy, flexibility and support to handle the crisis from the Ministry of Higher Education and Research. Hybrid teaching was well accepted, although discussions with stakeholders show that the positive educational innovations it generated have tended to evaporate over time and that it was not equally popular with different student populations.

In the case of Luxembourg students abroad, the Ministry of Higher Education and Research co-ordinated with the Association of Luxembourg Student Unions (ACEL) to contact, support and possibly repatriate them. The ministry added the option of a semester of fees for Luxembourg students with scholarships to study abroad.

### *Educational continuity has also been achieved by maintaining examinations*

The last significant element of educational continuity was the maintenance of end-of-course examinations under near pre-pandemic conditions. This decision was both required and made possible by Luxembourg's general strategy of keeping schools and universities open as much as possible. This goal was achieved through different means depending on the type of education.

At the primary level, the government originally wanted to postpone the traditional common tests. However, it was forced to cancel them due to the extended lockdown. Since these results were not available, the procedure used to determine students' pathway at the end of primary education was changed: decisions on which secondary education track they would follow were based on students' work in different areas, formative evaluation and, potentially, information provided by psychologists. The numbers of students being guided towards the various different types of education remained stable, although there was a slight decrease in the number being guided towards the classical secondary education track compared with 2019 (MENEJ, 2020<sup>[26]</sup>).

In secondary schools, priority was given to maintaining the national school-leaving examination, the procedures for which were changed as little as possible. It is for that reason that students in their final year of secondary or vocational education returned to class first (from 4 May 2020). The baccalaureate normally consists of six written tests and two oral tests, which make up two-thirds of each student's final grade, with the remaining third evaluated by continuous assessment. In 2020 however, the government decided to restrict the examination programme to what had been covered in class before lessons were suspended (on 16 March). The number of in-class assignments for core subjects was reduced, and in their special subjects, students were given the opportunity to complete a personal project rather than take a written test. At the end of the summer session, which went ahead according to the original schedule with the same criteria for passing and failing, 83% of candidates obtained their qualification, a stable figure which is in line with trends in recent years (MENEJ, 2021<sup>[27]</sup>).

In vocational education, the government made changes to the procedures for holding and assessing the work experience modules, granting exemptions for certain modules in accordance with well-defined conditions. Final-year students were granted a waiver for all work experience modules that could not be assessed. For all other classes, students were granted a waiver for all work experience modules that should have been completed between 16 March 2020 and the end of the school year; the deadline for signing new apprenticeship contracts was also extended.

Finally, in higher education, the Ministry of Higher Education and Research and the University of Luxembourg wanted students to take their examinations, so that they could continue to progress in their studies with the guarantee of recognised examinations. For some courses (medicine, for example), examinations were conducted in person; for others, they were conducted remotely. At first, online proctoring techniques were considered, but they were quickly discarded when they proved unpopular with students and the wider public. The authorities preferred to assess students using homework assignments, recorded oral exams and more flexible proctoring methods. In addition, recognising that study conditions were not optimal, the authorities allowed students an additional semester to repeat courses, coupled with a similar extension of the number of semesters for which students would be covered by financial aid. This situation seems to have had no impact on the number of credits validated, the number of degrees obtained or the number of registrations. Very few changes were made to application and selection procedures, which are specific to each course.

Based on the successful experiences of the previous year, the government introduced similar measures during the resurgence of the epidemic in 2021. In both primary and secondary education, the examination curricula for some subjects were reduced to so-called "essential" content to ensure that students were able to progress. To guarantee the smooth running of final examinations, five types of health precautions were put in place based on the experience accumulated in 2020 (MENEJ, 2021<sup>[28]</sup>): i) mass distribution of tests to enable preventive testing of all final-year students (on an optional basis); ii) the set-up of examination rooms and mask mandates; iii) extended time for resits offered to students with COVID-19 at the time of the examinations; iv) lifting of quarantine (under strict protocols and in a separate room) for infected students who requested it; and v) preventive remote learning for everyone for the last three days of classes. The pass rate for the various final secondary school examinations declined from 83% in 2020 to 76% 2021; however, this is within the range of fluctuations seen in recent years (MENEJ, 2021<sup>[27]</sup>).

In 2020 and 2021, the Ministry of Education, Children and Youth also divided the school year into semesters rather than terms to reduce the number of assessments, which were difficult to organise due to remote learning and alternate attendance. The ministry proposed making this permanent at the secondary level, but not everyone was happy with the reduction in the number of assessments, in part because this raises the stakes of these assessments for students. The increase in the volume of subjects to be revised and the examination periods to be organised after the Christmas holidays were, for example, aspects on which a consensus was not reached. It was finally decided that, within the framework of educational autonomy, schools could maintain the use of semesters if they so wished.

Thus, throughout the crisis, the government has tried to reconcile protecting the health of school populations with maintaining continuity of education and examinations. In this spirit, the ministry's action around examinations has met two distinct requirements. On the one hand, it had to adapt the examination procedures sufficiently to ensure that they could go ahead under the best possible conditions. On the other hand, it was careful not to change their content too much so that they would retain their value relative to other cohorts, even if they had to take into account the uncertainty surrounding the equality of learning conditions during the pandemic. Other countries (such as France and England) decided not to hold written tests for their final examinations in 2020, and it is unlikely that the student cohorts in these countries will be penalised in their future studies or in the employment market as a result. The maintenance of written tests in Luxembourg gave students and teachers a strong signal that education was continuing as normally as possible, and that they should keep putting in the same effort. Fair examinations required roughly equivalent effort and coverage of the curriculum for all final-year students, perhaps giving a similar impetus to the rest of the system.

To summarise, the government kept schools open as much as possible as the main way of ensuring educational continuity, supporting those in schools by providing educational resources and supplying more staff to enable alternate attendance. The strategy advocated by the ministry was generally successful: the country closed schools only briefly, stakeholders appreciated the logistical support provided by the government to implement health protocols, and the public approved of these decisions, at least in retrospect. However, this continuity also came at the cost of increased effort and investment by school staff, students and parents.

## **5.4. The impact of the COVID-19 crisis and government responses on student achievement and well-being in Luxembourg**

### **5.4.1. School monitoring shows no systematic deterioration in student skills following the COVID-19 crisis**

#### *The Luxembourg school monitoring system*

Before presenting these results, it is necessary to offer an overview of the school monitoring system in Luxembourg. In the 2000s, the OECD's PISA studies led Luxembourg to rethink its school system and to embark on an effort to improve quality assurance. National education standards were defined and, after being enshrined in law in 2009, laid the groundwork for performance-based management of the school system.

At the heart of this approach, Luxembourg created the national standardised testing programme (ÉpStan). This school monitoring system assesses students' language and mathematics skills, as well as their motivation to learn and their attitude towards school, at the beginning of each school learning cycle (i.e. at the beginning of classes 2.1, 3.1, 4.1, 7e and 5e, equivalent to levels 1, 3, 5, 7 and 9 in the international system, or CP, CE2, CM2, 5e and 3e in France). Each year, the assessment is carried out across all students in these classes, i.e. about 28 000 students (rather than on representative samples as is done in

some countries). Standardised testing (the ÉpStan) consists of tests and questionnaires (some of which have been digitalised and are administered through the dedicated Oasys platform<sup>5</sup>), making it possible to analyse the link between students' socio-economic and sociocultural backgrounds and their academic performance. Using this model, the Luxembourg Centre for Educational Testing (LUCET) provides relevant information to national education stakeholders and decision makers in Luxembourg, and establishes a longitudinal database comprising entire cohorts, making it possible to track changes in students' competency profiles, as well as their school biographies.

Despite the health crisis and the constraints it placed on the Luxembourg education system, LUCET administered the ÉpStan in autumn 2020 and again in autumn 2021. This is one of the successes of the government's response: these assessments mean that it has been possible to reliably measure the impact of the health crisis on students' learning and on a range of additional dimensions, such as motivation, parental support, or, on an ad hoc basis, their attitudes towards remote learning.

Additional studies and surveys (newly carried out or which existed before the crisis) are being used in addition to the ÉpStan and national examination results to help measure the impact of the pandemic on the well-being and health of the school population, and to guide the Ministry of Education, Children and Youth's crisis management policy. Most of these other studies, however, provide insights that should be interpreted with caution as they are not based on representative samples.

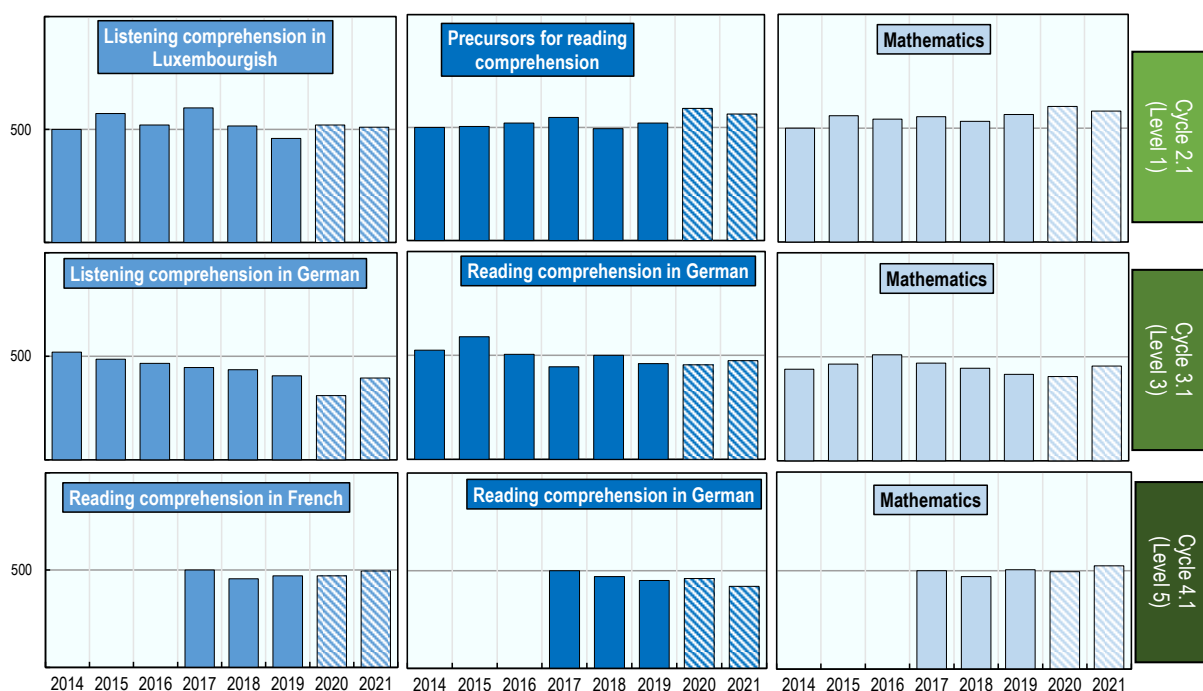
The relevant results are described in the two subsections below.

#### *Student learning outcomes were minimally affected by the COVID-19 pandemic*

The ÉpStan results for the two crisis years, announced in April 2021 and April 2022, remained broadly stable. Test scores in both languages and mathematics did not experience a downward trend, despite the challenges of remote learning and alternate attendance.

In 2020, the only significant decline was in the German listening comprehension of students in cycle 3.1 of their primary education (Figure 5.3). Regardless of socio-economic status and the languages spoken at home, student performance deteriorated following the first school closures and the subsequent alternating attendance system. Students and parents reported that they generally adapted well to homeschooling but did not enjoy it. The motivation or academic performance of students statistically more at risk of lower achievement (as a result of being from a disadvantaged socio-economic background, not speaking any of the languages of instruction at home, or being enrolled in the general and vocational secondary education tracks) may have been slightly more affected by the crisis (LUCET, 2021<sup>[29]</sup>), but the impact was not significant or systematic.



**Figure 5.3. Results of standardised tests (ÉpStan) in primary education**

Note: Cycles 2.1, 3.1 and 4.1 correspond to levels 1, 3 and 5, i.e. CP, CE2 and CM2 in France.

Source: Results of standardised tests (ÉpStan) administered by LUCET.

StatLink  <https://stat.link/npahul>

In 2021, primary school students' scores stabilised. The decline in German listening comprehension observed in 2020 seems to have halted, especially for students who speak German or Luxembourgish at home. Scores in German reading comprehension did decline, however. At the primary level, there was a slight decline in performance by students in cycle 4.1, while at the secondary level, a clear deterioration was observed among students in the general and vocational secondary education tracks, regardless of their language context (Figure 5.4).

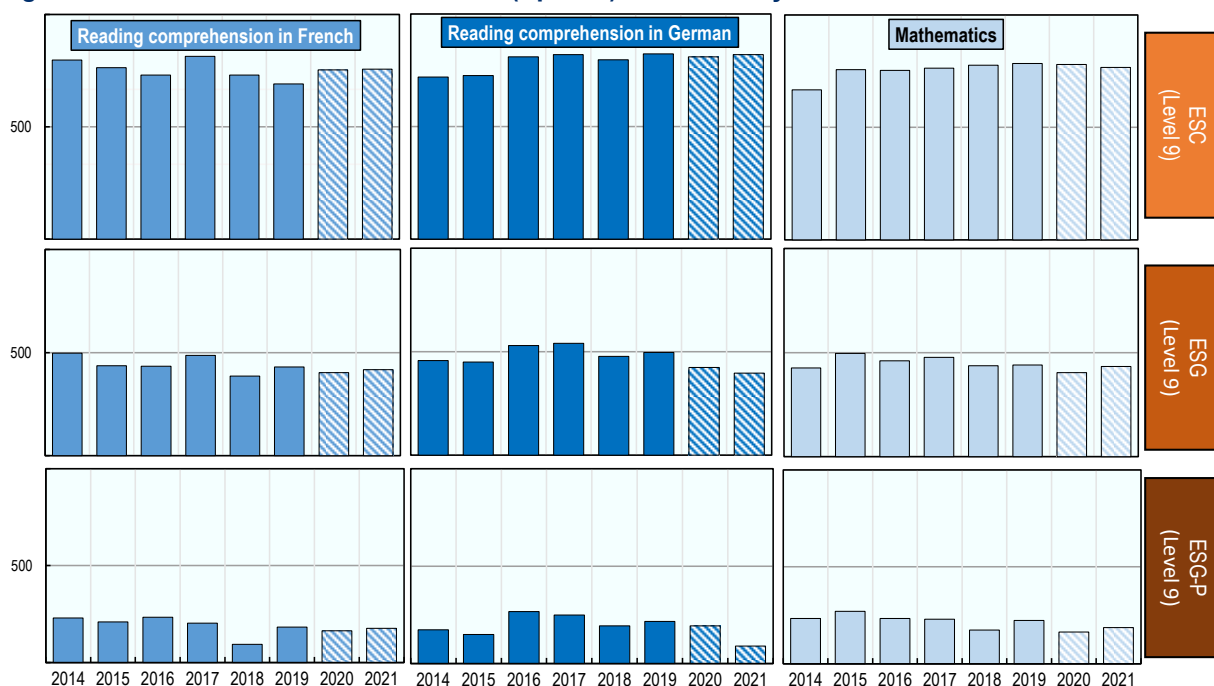
From these two waves of results, two conclusions can be drawn. Firstly, given that there is no systematic negative trend in the competency scores of primary and secondary school students, it appears that the system has proved resilient, and that educational continuity has enabled learning to go on. Secondly, it should nonetheless be noted that there was a slight decline in scores for German comprehension, affecting listening in 2020 and reading in 2021. This decline, which is concentrated in students in one cycle, would be of relative importance if not for the fact that proficiency in the German language has a significant impact on academic choices and success in Luxembourg (see the first section of this chapter). In light of these results, LUCET's recommendations to promote German comprehension in a more differentiated way in oral than in written language, and to give special attention to students who are less likely to succeed, seem very relevant.

The performance gap between students from different socio-economic, language or migrant backgrounds does not appear to have widened significantly or systematically. At the primary level (cycle 4.1), the gap in German between students from disadvantaged and advantaged socio-economic backgrounds remained the same in 2017 and in 2021 (20 points, although there was a slight increase between 2019 and 2020, while remaining within the fluctuations seen in results of pre-crisis cohorts). At the secondary level (5e), inequalities increased between 2019 and 2020, but this was remedied in 2021. However, put into perspective, the only significant widening was seen in written German, where the gaps between students from more and less advantaged social backgrounds increased from an average of 86 points between 2015

and 2019 to 105 and 107 points in 2020 and 2021, the largest gaps seen since the assessments began in 2010, and slightly higher than the 98-point gap in 2018. The assessments carried out for students in 7e do not include enough observations to draw any conclusions. As in France, perhaps the prior academic level best explains the impact of the crisis: at the secondary level, performance by students following the classical track remained stable in mathematics, hovering very slightly around 580 points from 2015 to 2021, while the performance of those following the general and vocational tracks fell between 2019 and 2020, from 482 to 471 points for general students, and from 417 to 399 points for vocational students. However, a similar decline, limited to students following the general and vocational tracks, occurred between 2017 and 2018, before performance subsequently recovered. The trends are the same when analysing French or German comprehension among students in 5e between 2017 and 2018, and again between 2019 and 2020. The main point to be drawn from these figures is that there are large differences in academic achievement between the different types of education (with the classical education track typically recruiting students who are more successful in school than the general or vocational tracks), and that the performance of the highest-achieving students appears to be less subject to the one-off variations observed from year to year, including those caused by the health crisis in 2020.

These results should be seen in the context of the results recorded in other countries that have collected quality data. There are few instances where standardised national assessments (such as the ÉpStan) have detected a significant decline in students' academic proficiency after short school closures; nor do widening gaps between groups of students from different socio-economic backgrounds appear to be systematic (Thorn and Vincent-Lancrin, 2021<sup>[24]</sup>). In the case of Luxembourg, the decline in students' level of German remains notable, however, because it is part of a pre-existing trend and is correlated with a widening of the gaps between students from different socio-economic backgrounds, but above all because it could, therefore, be anticipated. Conversely, the fact that its impact on standardised test results is so limited could not have been anticipated, either in Luxembourg or in some high-income OECD member countries.

**Figure 5.4. Results of standardised tests (ÉpStan) in secondary education**



Note: In this figure, the data are taken from students in 7e in Luxembourg. This is equivalent to level 7, or 5e in France. ESC = classical secondary education; ESG = general secondary education; ESG-P = vocational education.

Source: Results of standardised tests (ÉpStan) administered by LUCET.

*The COVID-19 crisis affected the well-being of students, families and teachers differently*

Luxembourg has conducted several studies to assess the impact of the pandemic on the well-being of education stakeholders.

The 2022 National Report on the State of Luxembourg's Children offers the most reliable comparison of the well-being levels of 8-year-olds, 10-year-olds and 12-year-olds between 2019 and 2021, with *ex-post* weighting making the study relatively representative (MENEJ, 2022<sup>[30]</sup>). Overall, the report shows that the well-being level of 10-year-olds and 12-year-olds did not change significantly between 2019 and 2021 and remains at high levels despite the pandemic. Overall subjective well-being remained stable for 10-year-olds (declining from 89 to 88 out of 100 between 2019 and 2021) and decreased slightly, while remaining very high, for 12-year-olds (dropping from 87 to 82 between 2019 and 2021). Changes in overall multidimensional subjective well-being follow the same pattern, with insignificant changes and high levels (an increase from 85 to 88 for 10-year-olds and a decrease from 85 to 83 for 12-year-olds). Interestingly, as has been found in other studies, 75% of 10-year-olds and 90% of 12-year-olds considered their families to be more cohesive after the pandemic than before, although they sometimes also reported that their parents were more tense or preoccupied than before the crisis. Overall, in 2021, 10-year-olds reported having suffered more from the pandemic than 12-year-olds, but both groups placed the following concerns at the top of their lists: missing their extended family, missing their friends (and activities for 10-year-olds), and being worried about the health of family members. However, these data cannot be compared with data prior to the health crisis. As in other studies, parents have a more positive view of their children's experience than their children do (Thorn and Vincent-Lancrin, 2021<sup>[24]</sup>).

The other studies also use non-probability samples, but their small number of observations and methodology make them non-representative, although anecdotally interesting. In a survey of the well-being of state-run primary students (170 observations) and private secondary school students (332 observations), 31% of responding children aged 6-11 years and 43% of 12-16 year-olds reported that their life satisfaction had decreased compared with before the pandemic (University of Luxembourg, 2022<sup>[31]</sup>). Despite the decline, even in this group, which is again not representative of Luxembourgish students, a majority of children self-assessed their well-being levels as stable or higher than before the pandemic. The children and adolescents consulted felt constrained by the social distancing measures and experienced negative emotions or worries about the disease. These concerns were particularly notable among older children and girls. The majority of the youngest respondents (55%) and almost all of the oldest (96%) said that they learned more effectively at school than at home, a perception shared by the students that the OECD teams met during their visits.

To measure the well-being of students' parents during the crisis, the Ministry of Education, Children and Youth ran several non-representative surveys. The first, run less than two weeks after schools were closed for the first time, revealed a sense among parents that they were managing the challenge presented by the new education context relatively well (MENEJ, 2020<sup>[32]</sup>). Of the 13% of respondents who reported difficulties, one-half cited a lack of time, one-third a lack of knowledge, 9% a lack of computer equipment and 8% a lack of information. On average, parents reported spending 2.5 hours per day helping their child(ren) with schoolwork; this is more than in other countries that conducted representative studies during the first wave (Thorn and Vincent-Lancrin, 2021<sup>[24]</sup>). Another non-representative survey conducted in January 2021 paints a similar picture for the 4 200 parents who responded (at a later stage of the crisis). Seventy-nine percent of them had felt especially stressed since the crisis began and 69% were concerned about their children's progress at school and their learning (more so for parents of children with special needs attending specialised centres) (MENEJ, 2021<sup>[33]</sup>). Parents were likely to become fatigued as the crisis wore on, even once schools reopened. Nevertheless, 70% of respondents felt that their child had adapted quickly to the new educational context.

The Ministry of Education, Children and Youth also measured teacher well-being. In a non-representative survey run at the end of March 2020, 90% of respondents felt they were managing the challenge of remote education well (MENEJ, 2020<sup>[32]</sup>). More than half reported that they talked to other teachers to share their experiences and improve how they organised their work – a positive development that also emerged from our questionnaires. Like for parents, a second survey, ran in January 2021 among 1 350 teachers at the primary and secondary levels, and in specialised centres, suggests that teachers were becoming fatigued as the crisis wore on (MENEJ, 2021<sup>[34]</sup>). At that time, 91% of teachers reported feeling stress related to the health crisis. The need to communicate with parents, students and management, prepare distance learning courses and carry out administrative tasks increased the workload of most teachers. They appeared concerned about students' learning (82%), their personal situation (81%) and their physical and mental well-being (83%). In contrast, 65% felt well or sufficiently informed and 86% felt they were able to support their students during this time.

Despite their methodological limitations, these different surveys paint a nuanced picture of the mental health of students, parents and teachers during the crisis. As is the case for the statistical surveys conducted in other OECD member countries (Thorn and Vincent-Lancrin, 2021<sup>[24]</sup>), it appears that the well-being of students, teachers and parents was affected by the crisis, increasingly so the longer it lasted. This is despite both teachers and parents feeling that they were overall able to cope with remote learning and the constraints imposed by the health situation. Like in other countries, both teachers and parents were concerned about delays in students' learning, though according to standardised testing (ÉpStan) this fear did not ultimately materialise in worse educational outcomes compared with previous years. Despite the pandemic-related difficulties and anxiety, the majority of educators feel that they did their best, that they rose to the challenges they faced and that they became more adaptable and competent at using digital tools. No notable drop in students' level of well-being was observed, though the pandemic was certainly not pleasant for them. Rather, it was teachers' well-being that seems to have declined as the crisis wore on.

The absence of statistical studies on the effects of the crisis on the lives and experiences of children and families in Luxembourg, and the impossibility of observing its effects on different population groups, is regrettable. In several countries, the disparate effects of the crisis on different social groups seems to have materialised in how the crisis was experienced at home, more so than in standardised tests. Here again, one might think that reopening schools would lead to sufficiently equal access to education being restored. However, the aforementioned studies and the interviews conducted during the visits by OECD teams paint a picture of an experience of the pandemic that is probably quite similar to that documented elsewhere. While it may have had negative effects, some significant, on a minority of students or families, a large majority of the population was able to adapt and cope resiliently.

## **5.5. Avenues for reflection on arrangements for educational continuity in times of crisis in Luxembourg**

The two preceding sections show that, on the one hand, the government of Luxembourg was able to quickly propose solutions to ensure educational continuity for students, in particular by keeping schools open as much as possible. On the other hand, they show that the effects of the crisis on academic performance – which remained stable – were limited, as, most likely, were its effects on the well-being of students and their families. This is despite feelings of fatigue among stakeholders during the crisis. Drawing on pre-pandemic trends, questionnaires answered by school principals, interviews during site visits and comparisons, this section offers critical avenues for reflection on arrangements for educational continuity in times of crisis.

During the first school closure, the ministry and its agencies made unprecedented efforts to guide and support educators and ensure educational continuity through remote teaching. The momentum and the attention afforded to education did, however, wane as the crisis wore on. Moving from educational and psychosocial support to mainly logistical and health-related support, the ministry focused its energy on issues around screening and contact tracing, perhaps believing that opening schools – even if only partially or with tailored arrangements – was the best option for educational continuity, especially since teachers and families could still use the resources developed during the periods when schools were closed. With teachers and students testing out new educational arrangements, alternating between classes with their teachers and working at home with varying degrees of autonomy depending on the week, three possibilities could have been developed, or could be developed in response to a new crisis.

### **5.5.1. Stronger tutoring or remedial teaching measures could have been put in place for students during the COVID-19 pandemic**

Generally speaking, the government's educational continuity strategy has paid off. By keeping schools open as far as possible and by providing support and tools to staff – admittedly more logistical than educational – the ministry succeeded in partially mitigating the disruption caused by the health crisis. On average, academic performance remained stable and the impacts on the well-being of education stakeholders were limited overall.

These results were not a foregone conclusion. The crisis could have exacerbated inequalities in the Luxembourg education system that had been identified for decades and could have affected students and families in different ways. In Luxembourg, socio-economic background, language background and type of education correlate with student attainment, as evidenced by standardised testing (ÉpStan) since 2011. Many stakeholders, including school principals and teachers, expected to see a decline in proficiency in the languages of instruction (especially German) among students with different language backgrounds when schools first closed.

This expectation did partially materialise. Students from disadvantaged backgrounds, those who speak neither German nor Luxembourgish at home and students in the general secondary education preparatory stream (ESG-P) (and to a lesser extent general secondary education (ESG)) were indeed more negatively affected by school closures (LUCET et SCRIPT, 2021<sup>[3]</sup>). They found it more difficult to get back to the competency levels expected of them. Indeed, in 2021, only students in Grade 3.1 who speak Luxembourgish or German at home reached the oral German level of the pre-2020 cohorts. Widening inequalities between students from different social backgrounds has also been observed in (written) German. Given that proficiency in the German language is critical in the Luxembourg system, proactive measures could have been put in place to support the affected students.

Admittedly, during the first months of the crisis, the Ministry of Education, Children and Youth dedicated most of its resources to remote learning, reopening schools and developing the health protocols on which they depended. However, an ambitious programme of differentiated (pre-emptive) or remedial (after the fact) support for those students most likely to be affected by the crisis could have been implemented during the two years of the pandemic to counter the potential increase in inequities.

The Ministry of Education, Children and Youth did run summer schools at the end of the 2020 summer break (and again in 2021 and 2022). These summer schools offered a two-week remedial education package for students whose parents requested it – not necessarily the students who needed it most. More than 30 people working with the Department for the Co-ordination of Educational and Technological Research and Innovation (SCRIPT) developed 48 thematic files in less than a month to provide all students with free learning materials, complete with answer keys. According to the interviews conducted by the OECD teams, stakeholders regarded these files positively. Published on the *Schouldoheem* platform, they have been visited by 50 000 people and downloaded 47 000 times (MENEJ, 2020<sup>[35]</sup>). During this two-week summer school, contact time with teachers was limited to a few hours per student. At the primary

level, 80 teachers, 165 temporary substitute teachers and 99 members of the “supervised studies pool” provided remedial classes to the 4 830 students enrolled. At the secondary level, there were 18 teachers and 69 student teachers for the 519 students enrolled. The Directorate for the Inclusion of Children also provided additional support to children with special educational needs enrolled in specialised centres. In recognition of the vulnerabilities of some students, the Ministry of Education, Children and Youth was responsive and flexible in deploying a range of measures to identify, guide, support and supervise individuals, bolstered by a parallel schedule of centre reopenings (sometimes ad hoc) and the resumption of mobile educational support services.

This may not have gone far enough, particularly at the primary education level. This support was not considered satisfactory by the majority of school chairs who responded to the OECD questionnaire, whether for students from single-parent families (37% satisfied at primary level compared with 68% at secondary school level), from different language backgrounds (31% compared with 52%), with a foreign background (32% compared with 58%), from less privileged backgrounds (24% compared with 73%) or with special educational needs (22% compared with 62%). This wide gap between primary schools and secondary schools is partly explained by the structural organisation of the Luxembourg education system. While secondary education is under the direct supervision of the central administration, through secondary school principals, primary education is decentralised into 15 regional directorates (headed by a ministry official) and primary schools depend on the communes for the infrastructure and equipment they need, and in part for school development plans.<sup>6</sup> The Ministry of Education, Children and Youth (and the support it provides to educators) could therefore seem structurally further removed from primary schools than from secondary schools.

While some countries offered limited student support, especially when their schools remained open for a long time (France, for example), others implemented ambitious tutoring programmes targeting students identified by their schools or teachers as experiencing difficulty. This was the case, for example, in England with its National Tutoring Programme, in Japan where additional counsellors and social workers were assigned to schools, and in the Czech Republic and Wales (OECD, 2020<sub>[36]</sub>; OECD, 2021<sub>[37]</sub>). Once the first round of closures had ended, some of the resources allocated in Luxembourg to support teachers during the reopening under the health protocol could have been directed towards tutoring in German for targeted populations, at a minimum, and even towards tutoring in other disciplines depending on the student.

The OECD recommends that the Ministry of Education, Children and Youth put in place tailored support, particularly in times of crisis, to curb the growth of educational inequalities. While the impact appears to have been small, the observed decline in oral German in 2020 and of written German in 2021 following remote learning could have been anticipated, given that fewer and fewer students in Luxembourg speak German at home. In the medium term, ongoing efforts to explore the effectiveness of dual language education (i.e. in German and French) or of mirroring the international state school model (which offers German, French, Portuguese and English sections from primary to secondary school) seem promising in terms of reducing social determinism based on the effect of the language spoken at home on academic achievement. Enacting this type of reform would not negate the need to offer differentiated support in a crisis, but that support might instead have to take a different form and be less German-centric. The new homework support scheme that will be implemented in September 2022 is a first step in this direction.

### ***5.5.2. More direct educational support could have been provided to teachers during the COVID-19 pandemic, especially in primary education***

After demonstrating remarkable momentum at the beginning of the crisis – at first driven by the ministry and then quickly self-sustained by the desire of, and need, for educational teams to stand together to face new challenges – teachers later showed some fatigue regarding the situation. The unprecedented circumstances imposed by the pandemic meant that the Ministry of Education, Children and Youth had to

provide additional support to its educational staff, despite its tradition of educational autonomy. This educational support may not however have been enough.

The OECD survey shows that the government's educational support was not deemed satisfactory at either the primary or secondary school level. However we look at it, the responses from primary school chairs and secondary school principals paint two different pictures. The remarkable differences in satisfaction between primary and secondary schools may in part reflect how the system is governed: the responses would likely have been different if the respondents to the primary school questionnaires had been from the regional directorates (intermediaries between the schools in each region and the ministry) rather than school presidents, who are structurally more distant from the ministry. The division of public responsibility differs between primary education, whose management and equipment are partially decentralised to the communes, and secondary education, which is entirely centralised. This makes it harder to interpret certain questions on the activities of the ministry and other government actors because supervision concerns several actors (ministry, including the General Directorate, communes and other public bodies). Collaboration with the ministry is considered relatively less satisfactory than collaboration with other actors. From this perspective, the relative satisfaction levels for these two levels of education (with respect to their direct hierarchy) also provide a complementary indicator to their absolute satisfaction levels.

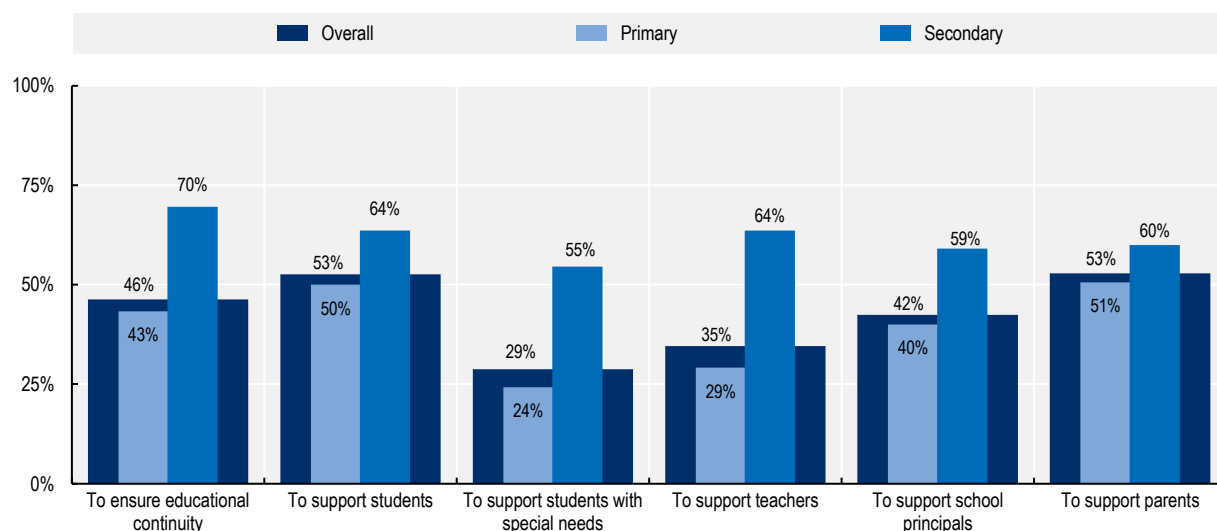
At the primary level, throughout the whole crisis, school chairs (or more broadly school management) were moderately satisfied with the government's general guidance on educational continuity (56%) and on the provision of non-educational resources (48%). However, they were satisfied with the digital educational resources made available (71%).

At the secondary level, secondary school principals were largely satisfied with the ministry's and the government's general instructions on educational continuity (83%) and with the educational resources provided for distance learning, whether digital (83%) or not (73%).

During the closures, only 29% of school chairs felt that their teachers received satisfactory support from the government, compared with 64% of secondary school principals (Figure 5.5). In both primary and secondary schools, all things considered, satisfaction with support for teachers (and school chairs/principals) was relatively low compared with satisfaction on the other issues covered by the questionnaire.

On average, the two periods of full school closure were less well received by school staff. From the psychological support that the ministry offered to teachers (materials, resources, services, etc.) to the specific efforts made for students with special educational needs, from single-parent families or from disadvantaged backgrounds, the responses from primary schools were more critical across the board than those from secondary schools. In the case of primary education, satisfaction with support for teachers was particularly low, much more so than among other groups (except for students with special educational needs).



**Figure 5.5. Quality of support received by schools during closures**

Note: N = 141. Percentage of schools that rated the support they received from the government as satisfactory or highly satisfactory.

Source: OECD secondary questionnaire delivered by the Ministry of Education, Children and Youth.

StatLink  <https://stat.link/9y8qfm>

The views gathered through the questionnaire from primary school chairs and secondary school principals were supported by interviews with educators at each level and from each type of educational institution. These meetings confirmed the different perceptions between primary and secondary education on certain points.

Whether or not they considered the ministry's provision of educational resources satisfactory, many of the teachers interviewed reported that they had not used them or had used them only to a limited extent, either because they considered them unsuitable for their needs or because they received them too late, after they had made other arrangements with their colleagues. Many teachers saw them as more suitable for families, as additional resources to those they themselves offered. However, this emergency collaboration between educators, which initially took place at the institutional or professional network level, emerged as a positive aspect they looked back on from the crisis. This strengthened the mutual support and feelings of cohesion in the school teams. Paradoxically, perhaps this intense peer-to-peer collaboration contributed to the sense that there was a lack of government support for teachers. Recourse to peer learning and strengthened professional communities seem to have been one of the positive aspects of the crisis.

Could the ministry have done more to support teachers in their role as educators, at least at the primary level? Since teachers hold educational autonomy dear, they might have found government support intrusive, so the government's reluctance to intervene is understandable. However, as was the case for students, the continuation of the crisis could have been used as an opportunity to explore ways of offering support tailored to the Luxembourg context. While it is difficult to imagine what more the government could have done during the first school closure, more attention could have been paid to teacher support once schools had reopened under the health protocol, which created an unprecedented teaching environment.

The government invested heavily in human resources to keep schools open, especially when schools were alternating between in-person lessons and home-learning, during which many additional staff were hired (e.g. in 2020, 600 permanent substitutes were assigned to the regional directorates, followed by 499 staff who were authorised to act as temporary replacements).

Other forms of support would perhaps have been possible. The special circumstances brought about by the health and social crisis could have justified opening up more professional positions. The government could, for example, have strengthened the already active professional communities of educators around a governmental platform, as was done in Belgium (Flanders) (Minea-Pic, 2022<sup>[23]</sup>). It could have encouraged the organisation of virtual *edcamps*, like in Ukraine or the United States (Modica, 2022<sup>[38]</sup>). It could also have promoted the value of digital education through participation in professional communities, beyond the training offered by the national education training institute IFEN. The aforementioned suggestions on tutoring or other forms of support for struggling (or potentially struggling) students would also have indirectly facilitated teachers' work.

In short, the educational autonomy that teachers normally enjoy revealed its limits as the crisis set in, judging by teachers' feelings around their well-being and their views on government support. While at the start of the crisis this autonomy supported stronger team cohesion and peer learning within schools, as time wore on it also symbolised educators' feelings of isolation. During the first period of closure, the ministry deployed a range of digital resources to enable school chairs and principals, teachers, students and parents to take part in remote learning. This transition, which was generally successful in view of the urgency of the situation and the response in other countries (Vincent-Lancrin, Cobo Romani and Reimers, 2022<sup>[39]</sup>; OECD, 2021<sup>[37]</sup>; OECD, 2021<sup>[11]</sup>), left mixed impressions among actors on the ground: those working in secondary education felt well supported by the government and well equipped, while those working in primary education found they were not equally equipped, were supported by the regional directorates, but lacked educational support from the government. The experience of the second period of closures, almost a year later, was not much different – although everyone felt better prepared. Paradoxically, educational autonomy, which teachers usually appreciate, may have been perceived as “abandonment” in a time of crisis – perhaps all the more so because measures implemented by the Ministry of Education seemed entirely focused on health-related issues. To avoid this feeling of neglect and to support teachers in times of crisis, the government could work with them to identify appropriate support measures for different teaching protocols, facilitate and recognise peer learning (when it is proven and documented), or target its support towards teachers of students who are struggling. More broadly, it should continue to build teachers' capacity to incorporate digital technology and skills into an expanded educational toolkit (OECD, 2021<sup>[37]</sup>; OECD, 2021<sup>[40]</sup>).

### ***5.5.3. The division of responsibility for the provision of digital infrastructure could be redefined***

Despite the quality of the ICT infrastructure in Luxembourg, many stakeholders complained of problems with digital equipment and connections, which further hindered educational continuity. The crisis exposed differences between families and led to questions about the division of responsibilities between central government and the communes in relation to digital infrastructure, with the former providing digital infrastructure to secondary schools and the latter to primary schools.

Primary schools seem to have suffered more from shortages of digital equipment for themselves or their students than secondary schools. A minority of schools rated the provision of digital equipment for remote learning (37%) and teaching (40%) satisfactory during the crisis, compared with 70% and 73% for secondary schools. The wording of the question in the survey does not make it possible to establish whether this is a structural effect (central government helped primary schools less because they are not its responsibility, which was perceived as such) or a situational effect (central government could and should have helped primary schools more, even if they were not its main responsibility).

In essence, perhaps the decentralised organisational model showed its limitations during the health crisis, at least as regards infrastructure for digital learning. For example, the shift to remote learning necessitated the provision of additional computer equipment to teachers and students, especially the most disadvantaged, which the communes were not always able to do. In a country the size of Luxembourg,

more centralised management of the physical and digital infrastructure of schools would have made it possible to reach more students at risk of disengagement and properly equip them. This would have allowed schools and educational teams to focus on teaching and educational continuity for their students, and therefore to provide more personalised support to those students who needed it. This was done to a certain extent at the start of the crisis when the ministry, through the educational technology centre, reviewed the ability of schools to stay in touch with their students in order to reconnect with those who were withdrawing from education and, if necessary, to replace paper materials with digital communication tools.

Discussions with stakeholders suggest that central government may be better positioned to provide hard digital infrastructure to all institutions, including primary schools, as it already provides a lot of the soft digital infrastructure used (resources, software, etc.). This would allow for greater harmonisation and equity between students and families living in different communes around the country – and perhaps lessen the perception that primary schools are less well equipped than secondary schools when it comes to digital tools.

The OECD therefore recommends that the government of Luxembourg reconsider the division of responsibility for managing and equipping schools with digital infrastructure between central government, which supplies secondary schools directly, and communes, which are responsible for equipping primary schools through (weighted) public funding. In essence, centralising the supply of digital equipment could take some pressure off the communes – especially in times of crisis – and harmonise the quality of digital infrastructure, between the schools themselves and between primary schools and secondary schools.

#### ***5.5.4. The short-term management of the health crisis in the education sector could have been reimagined as the crisis wore on***

As the health crisis wore on, the Ministry of Education, Children and Youth dedicated an increasing share of its resources to working with the Ministry of Health to co-ordinate large-scale testing, contact tracing and isolation (and then vaccination) of school populations at a pace dictated by the pandemic. This approach to educational continuity based on keeping schools open demanded significant resources from the ministry, impeding the government's ability to refocus on strategic long-term educational planning. This is probably one of the reasons why the Ministry of Education, Children and Youth did not put in place more proactive educational support for students or teachers as the crisis wore on and schools reopened but were not operating as normal.

Everywhere, health protocols had to be adapted to the immediate health needs resulting from unpredictable fluctuations in the course of the pandemic – something that Luxembourg did very well. But this emergency policy endured, obscuring medium-term educational issues. For the Ministry of Education, planning for educational continuity became a health issue. This approach showed its limitations in the second year of the pandemic, when the virus' rapidly changing infectiousness required the government's constant attention and school staff had to adapt almost instantaneously to new health protocols. As the pandemic wore on and the protocols multiplied, stakeholders on the ground sometimes complained that the ministry's crisis management neglected the growing need for educational support and predictable responses over time. The ministry, preoccupied with testing for COVID-19 and contact tracing, at times seemed to fail to see that educational continuity also required greater effort on the part of educators. As late as 2022, school principals and teachers felt that they had still not been allowed to step down from their "battle stations" and they continued to work under poorer conditions, especially as regards stress, burnout and fatigue. Some of the practices adopted at the start of the crisis persist and the constant use of digital tools has blurred the lines between school and home, a fact that both teachers and students lament.

Finally, according to several of the stakeholders contacted, the health crisis delayed other reforms initiated by the Ministry of Education, Children and Youth before March 2020, as well as many development projects planned by primary schools and secondary schools. To return to the normal way of managing things (which

does not necessarily mean returning to pre-crisis practices), it will be necessary to revive these reforms and programmes, especially since some past reforms played a positive role during the crisis (such as the creation of the regional education directorates, the one2one programme, the contract with Microsoft Office 365 and the establishment of educational leaderships). When asked in July 2022, the Ministry of Education, Children and Youth estimated that the reforms planned for the current legislative programme would all be completed before the next election period. Given the experience gained over the last two years and national education stakeholders' extensive use of new technologies, the ministry should also take advantage of the opportunity offered by the health crisis to judiciously integrate digital technology into education.

## **5.6. Engagement, co-ordination and communication with educational system stakeholders in Luxembourg during the COVID-19 pandemic**

The previous sections focused on the content of the government of Luxembourg's response. The next step is to examine the process behind the government's response, including how it engaged and communicated with the various stakeholders involved in education during the crisis.

### **5.6.1. Education's place in the horizontal governance of the crisis**

As in other education systems, a shared sense of urgency among stakeholders in the Luxembourg education system fostered rapid response and a sense of solidarity during the crisis. This facilitated the implementation of the important measures described in the following sections, such as closing schools, partially and then fully reopening them, or implementing health protocols and large-scale COVID-19 testing within schools.

Perhaps because of how it operates and its longstanding relative autonomy, the Ministry of Education, Children and Youth only participated in the government's interdisciplinary crisis unit on an ad hoc basis. The Minister for Education participated in some meetings, in the capacity of the Minister for Higher Education and Research, whose ministry was represented in the crisis unit given the importance of research during the pandemic. Bilateral meetings were also held with the Minister for Health. However, the ongoing participation of the Ministry of Education, Children and Youth in the discussions of this governmental crisis unit would have been preferable: it would have made it possible to reduce the contradictions and discrepancies observed between the health measures imposed in the different sectors (for example, masks were no longer compulsory in restaurants and bars, but they were still compulsory in schools).

A state of emergency was declared on 18 March 2020 in Luxembourg and then extended within ten days by the parliament with a two-thirds majority. On Saturday, 21 March, the parliament unanimously voted to extend it for a maximum of three months, in accordance with the Constitution (Official Journal of the Grand Duchy of Luxembourg, 2020<sup>[41]</sup>). The government was therefore able to govern, until June 2020, via grand ducal orders. Unlike ordinary laws, these do not require a vote in parliament. This allowed the government to respond quickly to the risks posed by the outbreak and to take a series of drastic measures, such as the lockdown and school closures. Once the state of emergency ended, the parliament resumed its role. Major efforts were made to legislate as quickly as possible to meet the changing demands of the pandemic in terms of health measures, with legislative processes averaging three to four days from the preparation and submission of the bill.

For three months, governing via grand ducal order facilitated the drafting and application of health protocols that allowed schools to be closed and then reopened, and the levels of protection, contact tracing and isolation to be amended based on how the virus was circulating in the country. After the lull in the

summer of 2020, any changes to disease control measures (such as the requirement to wear a mask) once again had to be presented to parliament and voted into law.

The involvement of the parliament, which differentiates Luxembourg from other OECD member countries (see also Chapter 3 on this subject), may have slightly delayed implementation. This time could have been used, for example, to improve communication on changes to the health protocol or its application in schools. The government's communication strategy consisted of informing stakeholders in the education system about changes to health measures through the press, before they were officially announced, which may have caused problems for education stakeholders. The legislation could have been made more flexible, even via a short legislative process, to allow the Ministry of Education, Children and Youth to take decisions on small changes without reinstating the state of emergency.

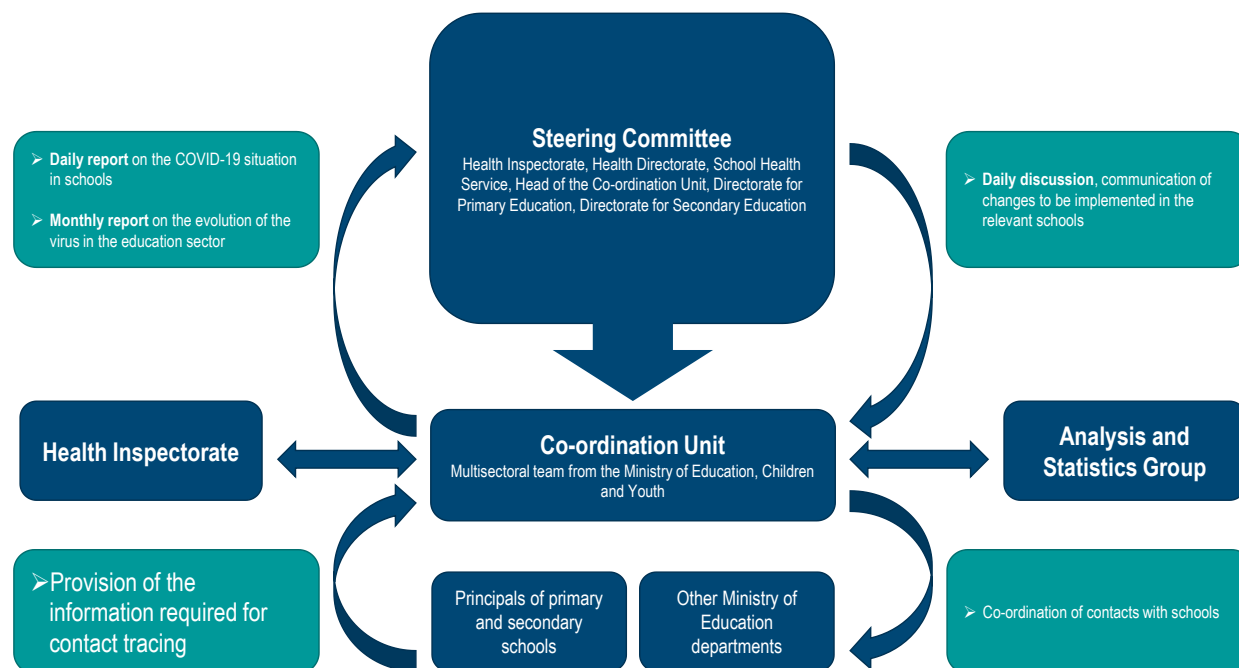
Moving forward, it would be advisable to explore the possibility of giving the Ministry of Education, Children and Youth greater autonomy, perhaps by agreeing broad principles regarding what would be considered acceptable amendments to procedures. This would allow the parliament to legislate more selectively and the Ministry of Education, Children and Youth to avoid delays and free up resources to prepare for implementing new measures.

### **5.6.2. A crisis governance framework for the education sector**

The Ministry of Education, Children and Youth created a governance framework for education, titled "COVID-19 and education" (Figure 5.6) to respond to the evolving crisis in the second half of 2020 (Phase 5 of Annex table 5.A.1). This framework brought together stakeholders from the education and health sectors.

Meetings of the COVID-19 and Education Steering Committee were held virtually twice a week (or as often as needed depending on the stage of the pandemic). The aims of this committee were to oversee policy responses in the context of the pandemic, to monitor the evolution of the virus in the education sector and to adapt the health arrangements for education accordingly. Within this governance framework, the co-ordination unit focused on handling information and implementing the agreed measures. The main co-ordination tasks between this unit and the Health Inspectorate were reporting information from the field to the steering committee, identifying high-risk contacts, co-ordinating arrangements within schools and early years education and care services, collecting and cross-referencing data, and monitoring infections in schools.

**Figure 5.6. The Ministry of Education, Children and Youth's COVID-19 and education governance framework**



Source: OECD, information-gathering questionnaire for the Luxembourg Crisis Management Evaluation (OECD, 2022<sup>[42]</sup>)

More generally, the COVID-19 and education framework was responsible for steering and monitoring the measures adopted during the pandemic, developing a transparent strategy for responding to the health crisis, providing clear guidance to stakeholders in the education system and implementing an enhanced testing strategy (starting in April 2021). For example, as part of these efforts, the Ministry of Education, Children and Youth published a quarterly report on the evolution of the pandemic in schools, as well as weekly analyses (MENEJ, 2021<sup>[15]</sup>).

Through this governance framework, and through the co-ordination unit in particular, the Ministry of Education, Children and Youth and the health sector were able to establish consultation processes to decide how teaching in schools should change depending on the stage of the pandemic. Throughout these interactions, protecting the health of the population guided the actions and efforts of both parties. The specific expertise of these two actors, i.e. concerning how educational institutions operate and epidemiological knowledge, helped them co-ordinate and manage the pandemic in the education sector.

The collaboration between the Ministry of Education, Children and Youth and the health sector focused on defining protocols based on an analysis of the health situation, their continuous adaptation to the evolution of the pandemic (including by developing multi-level isolation and classroom closure scenarios, and defining a return to in-person teaching), and case tracking processes and arrangements. Collaborations have also been established on the logistics of implementing the large-scale testing of primary and secondary school students and teachers, and professionals from other areas of education. The government made significant investments to provide the necessary resources (medical and protective equipment, vehicles) and capacity for the analysis, validation and transmission of results. Collaboration was also required for tracking high-risk individuals on a daily basis.

In its early days, the co-ordination unit was hindered by repeated changes to the “education” team. The rapid evolution of the pandemic and the constant need to train newcomers was detrimental to the effectiveness of the framework. The establishment of a stable team as soon as possible improved its performance.

The same lesson could have been learned for the steering committee, whose membership changed depending on the priorities of the moment. Despite the similarities in the country's actors' social missions, this lack of clarity sometimes made it difficult to consult the committee members. Indeed, several stakeholders noted that they did not always know who to contact about the problems they faced. A more stable committee, with defined (albeit possibly dormant) areas of responsibility, should have been established and communicated to other stakeholders. This stability would have allowed for a variety of perspectives to be kept on ministerial discussions, even when they became less critical to the implementation of education policy during the crisis.

From this perspective, the ministry's decision to keep the co-ordination unit dormant, rather than closing it, is to be welcomed. This will allow for better responsiveness in the event of a crisis. Generally speaking, responsibility for areas of crisis governance should remain as stable and transparent as possible. This would not only enable the unit's members to build expertise, but the other stakeholders in the system would always know who to contact.

### ***5.6.3. Strengthening the infrastructure and interoperability of information systems is a priority to decompartmentalise data and facilitate research***

In times of crisis more than ever, the quality of a government's response depends on its access to reliable, relevant and timely information. The management of the crisis and the government's ability to implement health protocols was largely built on Luxembourg's prior investment in longitudinal information systems. Collaboration within the co-ordination unit relied on these systems, both for tracing the virus and for producing scientific research on the school sector. It was in part the Ministry of Education, Children and Youth's restricted access to its information systems (governed by the personal data protection act) that made its participation in the "health" work and collaboration with the health sector essential.

In the education system, the Ministry of Education, Children and Youth has two separate information systems: one for primary education (Scolaria) and another for secondary education (Fichier élèves 2, or FE<sup>2</sup>). These two applications, which are accessible via the national education portal,<sup>7</sup> are part of an ecosystem of digital tools with various functions. These tools enabled the government to respond quickly. For example, in the first weeks of the pandemic, the ministry's educational technology centre used Scolaria to contact primary students, their parents and school staff individually by email. Thanks to Scolaria, the most important news bulletins were read by more than 70% of parents and the government was able to identify the lack of digital equipment in some homes, largely thanks to feedback from teachers.

Better integration or interoperability of some of these systems would have simplified government action and should be implemented to improve and simplify its digital ecosystem. The compartmentalisation of databases posed some problems on occasion (see also Chapters 3 and 4, which discuss similar challenges in the area of health). Because the specialised centres did not have their own information system, students with special educational needs who were not enrolled in a regular school were at risk of being overlooked during the initial delivery of remote learning materials. Later in the management of the crisis, the co-ordination unit set up between the Ministry of Education and the Ministry of Health faced similar obstacles when trying to organise contact tracing between primary schools, secondary schools and other facilities (childcare, day-care, etc.), particularly for siblings. While the linkage of data from these different sources was initially done using spreadsheets, the two ministries then developed new digital solutions that facilitated the tracing and isolation of infected individuals. The stakeholders contacted welcomed these developments. Work to develop technical solutions to enable interoperability (or easy data matching) between the databases should therefore continue.

During the pandemic, when urgent action was required, the government was therefore fairly successful in collecting, cross-referencing and sharing data, allowing for effective tracing and targeted isolation, which were prerequisites for the reopening of schools. The Ministry of Education, Children and Youth has good information systems and functional applications that facilitated the work of its teams and their collaboration



with the Ministry of Health teams. However, this co-ordination work has highlighted the efforts that need to be made to strengthen the coverage and synergy of the various information systems used by the ministry and the government as a whole.

In this context, the OECD recommends continuing to strengthen the interoperability of the ministry's information systems. The health emergency has highlighted certain gaps, suggesting that efforts should be made to integrate and link databases from different sectors to facilitate the rapid mobilisation of reliable and complete information, which is all the more necessary in times of crisis.

#### ***5.6.4. The Ministry of Education, Children and Youth sought to inform its staff and the public as the pandemic evolved***

Beyond a governance and co-ordination framework, the Ministry of Education, Children and Youth's response required new communication channels to be put in place, both internally and for the general public, to inform everyone about the policies the government was implementing, to publicise the resources the government was offering and to be transparent about the evolution of the pandemic in the school sector. The Ministry of Education, Children and Youth developed new tools for direct communication with the public and its staff.

First, meetings were held between the Ministry of Education, its general directorates of primary and secondary education, the trade unions, the taskforce for the non-formal education sector, principals' professional bodies (primary and secondary education), and representatives of parents and students. The purpose of these meetings was to inform all stakeholders about how the health situation was evolving and to consult on the next steps (e.g. reopening schools).

Second, the Ministry of Education, Children and Youth sought to communicate with the general public. By communicating directly, the ministry mobilised new resources and expertise and produced numerous communication and meeting materials to disseminate its information, both to educators and other stakeholders. In addition to numerous leaflets and frequently asked questions on the ministry's website, beginning in April 2020 a system of parent newsletters was implemented, with 34 issues in 2020, 22 in 2021 and 6 in 2022. Other communication events were also held, including press conferences and video conferences with the Minister of Education. Many of these documents were prepared in different languages, which required a significant additional effort by the government (MENEJ, 2020<sup>[43]</sup>). Helplines were also set up to support families and teachers to access and use the educational resources, or for general information.

#### ***5.6.5. The government should have consulted more with stakeholders on the ground and favoured communication through the regular hierarchy once the critical states of emergency were over***

The Ministry of Education, Children and Youth's communication efforts in the context of the pandemic were necessary and should be commended. However, overall, the stakeholders interviewed noted that the ministry's communications were often top-down only. The government communicated decisions after they were made, rather than engaging in upstream consultation with stakeholders in the education system to inform decision making. Stakeholders in other sectors made the same observation.

This strategy, appropriate for the urgency of the first period of closure and the start of the crisis, became less understandable as the crisis wore on and amendments to protocols were marginal. In the future, it will be important for the government of Luxembourg to establish mechanisms for rapid consultation with those stakeholders with the greatest responsibility for policy implementation on the ground before taking decisions. The government dedicated time to listening to stakeholders, but in the future and as far as possible, briefly discussing the decisions taken before they are formalised could strengthen the sense among stakeholders that there has been real dialogue. For example, better consultation with primary

school chairs on health protocols could have made it possible to take better account of the range of realities on the ground or to allow for more autonomy in implementing certain aspects of the measures.

Similarly, while direct communication with the general public was appropriate at the start of the crisis (and beyond on some points), government decisions were sometimes communicated directly to parents, with little or no advance warning to schools, or with too little lead time or flexibility. This made it difficult for the leadership team in schools and even teachers to communicate and implement instructions. As the crisis continued, direct communication from the minister and the ministry could have focused more on explaining the measures and their objectives than on announcing them. A quicker return to communication through the regular hierarchy would have reactivated the various administrative levels in their roles, making the sources of information clearer, while giving them more time to prepare their communications to students, parents and other stakeholders.

The OECD therefore recommends that the government work to strike a balance in times of crisis between truly multi-directional consultation time with stakeholders when making decisions and communicating the decisions taken, and between direct communication and communication through the regular hierarchy depending on the urgency of the situation.

## 5.7. Summary of recommendations

In Luxembourg, the education sector showed responsiveness and adaptability in the context of the COVID-19 pandemic, establishing two major priorities: the safety of stakeholders and educational continuity. This resulted in a sustained effort by all those involved in education to be flexible in adapting to the changes imposed on teaching and learning. Overall, Luxembourg managed the crisis successfully in the education sector: schools remained open for the most part, educational continuity was ensured when they were closed, and academic performance remained stable. However, the government could have given greater priority to the purely educational (or pedagogical) aspect of the crisis and taken better account of the impacts of the length of the crisis on those affected in some of its decisions.

### 5.7.1. Ensure educational continuity in times of crisis

- **Keep schools open as much as possible as the main way to ensure educational continuity, without neglecting educational support for stakeholders on the ground over time.** The strategy advocated by the ministry was generally successful: the country closed schools only briefly; educational continuity was maintained during the closures through remote learning and the provision of digital resources; stakeholders appreciated the logistical support provided by the government to implement health protocols; and the public approved of these decisions, at least in retrospect. However, in an ongoing crisis, educational continuity also comes at the cost of increased effort and investment by school staff and families, considering that even when schools did reopen under health protocols, things did not go back to normal in terms of learning and teaching. This is true despite the opening of schools and educational continuity and should be borne in mind.
- **Implement differentiated forms of support, particularly in times of crisis, to curb the widening of educational inequalities** that can be anticipated in the short term, and whose already high levels before the crisis **call for more in-depth reflection in the long term** in any case. While the impact appears to have been small, the observed decline in oral German in 2020 and of written German in 2021 following remote learning could have been anticipated, given that fewer and fewer students in Luxembourg speak German at home (33% in 2022). In the short term, the ministry should improve its proactive support measures, providing differentiated support if resources are limited, for students identified as experiencing or potentially experiencing difficulties. For example, a German tutoring system could have been

explored starting in the 2020/21 academic year to complement the summer schools. In the medium to long term, the Luxembourg education system must continue to evolve, for example by enacting reforms that follow the model of European programmes or international schools, which can reduce some of the performance gaps between students due to their language background.

- **Support teachers consistently in their role as educators as they continue to work in unusual teaching environments, including by integrating digital technologies and skills into their professional development.** Starting in the first period of closure, the ministry deployed a range of digital resources to enable school principals, teachers, students and parents to take part in remote learning. During the periods of face-to-face teaching under the health protocol (alternating teaching), the reopening of schools could have given the impression of a return to normal teaching conditions. While teachers showed initiative and the crisis strengthened professional learning communities, it also led to stress and a sense of fatigue or abandonment. This could perhaps have been reduced by offering specific support to teachers who wanted it or by facilitating their peer learning.
- **Reconsider the division of responsibility for managing and equipping schools with digital infrastructure between central government, which supplies secondary schools directly, and communes, which are responsible for equipping schools through (weighted) public funding.** In essence, centralising the supply of digital equipment could take some pressure off of the communes – especially in times of crisis – and standardise the quality of digital infrastructure, between the schools themselves and between primary schools and secondary schools .

### **5.7.2. Strengthen stakeholder engagement mechanisms**

- **Include the education sector in the government of Luxembourg’s interministerial crisis unit.** The education sector’s participation will make public policies between the different sectors more consistent and will provide the ministry with better information to enable it to implement changes in the education sector.
- **Establish a stable governance framework as soon as possible.** The Ministry of Education put in place a crisis governance system that allowed for effective co-ordination between actors, particularly between the health and education sectors. However, one of the lessons learned from the crisis is the importance of keeping crisis units as stable as possible over time to ensure that the units acquire expertise quickly and that external stakeholders can communicate easily with their members. Such stability would have been beneficial to the crisis steering committee.
- **Strive to find a balance in times of crisis between the time afforded to consulting with stakeholders on decisions and communicating these decisions.** Better upstream consultation could at times have improved the quality of the decisions taken once the critical states of emergency had passed. Direct communication with the public has its place during a crisis, but a return to communicating decisions through the regular hierarchy should be encouraged in situations where there is less urgency.
- **Continue to strengthen the ministry’s information infrastructure.** Contact tracing systems and the production of scientific research were based on robust information systems, but the health emergency highlighted the importance of continuing efforts to integrate or link/make interoperable databases from the various formal and non-formal education sectors to facilitate the mobilisation of reliable and complete information in times of crisis. While standardised testing can be commended for providing quality school monitoring data during the crisis, it would also have been worthwhile to conduct quality statistical studies on the experience and well-being of teachers, parents and students during the various phases of the crisis.

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## Annex 5.A. Timeline of crisis management in the education sector

Annex table 5.A.1. Key stages of the pandemic and changes to educational provision (2020-21)

Period	General health context	School opening (general trends)
Phase 1 16 March – 3 May 2020	Start of the pandemic Increasing spread High infection rate First wave of infections	<b>Lockdown and suspension of classes and activities</b> <b>Remote teaching and learning</b> <b>Resumption of support and assistance activities</b> from 20 April 2020
Phase 2 4 May – 28 June 2020	End of the first wave of infections Decreasing spread Lower infection rate until mid-June	<b>Lifting of lockdown and gradual resumption of classes and activities</b> <b>Reopening of playgrounds</b> from 13/14 June 2020 <b>Educational day trips and field trips allowed</b> from 22 June 2020
Phase 3 29 June – 15 July 2020	Increasing spread Medium infection rate Start of a new wave of infections in July 2020	<b>Return to permanent face-to-face teaching</b> <b>Resumption of school trips</b> <b>Remote learning</b> for vulnerable, isolating or quarantined students
Phase 4 16 July – 14 September 2021	Medium infection rate	<b>Resumption of activities during school holidays</b> delivered by the National Youth Service <b>Care of children by early years education and childcare services</b> <b>Summer school</b>
Phase 5 2020/21 academic year 15 September – 8 November 2020	Medium infection rate at the start of the academic year Increasing spread from October 2020	<b>Normal in-person classroom format without division into subgroups</b> <b>Remote learning for vulnerable, isolating or quarantined students</b>
Phase 6 9 November – 25 December 2020	Medium infection rate Increasing spread (mid-October 2020) New wave of infections	<b>Partially alternating teaching</b> (from early November 2020) <b>Higher education: alternating daily or weekly teaching</b> for children in higher education except those in final year (from 30 November 2020) <b>Remote learning</b> for vulnerable, isolating or quarantined students
Phase 7 26 December 2020 – 7 February 2021	Slowing infection rate at the end of 2021 Increasing from January (mid-January) High infection rate	<b>Suspension of face-to-face classes and activities</b> in schools, specialised centres and all other institutions under the responsibility of the ministry (4-8 January 2021) <b>Remote learning</b> <b>Resumption of classes and activities</b> from 11 January 2021 <b>Remote learning</b> for vulnerable, isolating or quarantined students <b>Closure of early years education and childcare services</b> except for hospital crèches (28 December 2020 – 10 January 2021) <b>Establishment of emergency early years education and childcare services</b> for children of health and care workers
Phase 8 8 February – 18 April 2021 (end of Easter holidays)	High infection rate Delta variant	<b>Suspension of face-to-face classes and activities</b> in schools, specialised centres, early years education and childcare services and other institutions under the responsibility of the ministry (8–21 February 2021). <b>Remote learning</b> except for final-year students (8–21 February 2021) <b>Introduction of therapeutic provision</b> at specialised centres (8–21 February 2021) <b>Reopening of schools and early years education and childcare services</b> (from 22 February 2021) <b>Remote learning</b> for vulnerable, isolating or quarantined students <b>Additional ad hoc measures to be implemented in the event of an increase in infections at a school</b> <b>Additional ad hoc measures to be implemented in the event of an increase in infections nationally</b>
Phase 9 19 April – 15 July 2021	Decreasing spread until June 2021 Increasing from 21 June	<b>Alternating teaching</b> <b>Remote learning</b> for vulnerable, isolating or quarantined students <b>Final-year exams held in person</b> (from 17 May 2021)

	High infection rate Decreasing spread from July (mid-July)	<b>Resits</b> for students who tested positive during the exam period (3–16 June 2021) <b>General resumption of in-person teaching</b> for higher education students (from 31 May 2021)
Phase 10 16 July – 14 September 2021	Low to medium spread	<b>Activities during school holidays</b> delivered by the National Youth Service <b>Care of children by early years education and childcare services</b> <b>Summer school:</b> remedial and refresher courses
Phase 11 15 September – 28 November 2021	Medium infection rate Increasing infections from November 2021	<b>In-person teaching</b> <b>Normal operation</b> of early years education and childcare services
Phase 12 29 November 2021 – 10 March 2022	High infection rate New wave from November 2021 Omicron variant from December 2021 Decrease in infections from mid-February	<b>In-person teaching</b>
Phase 13 11 March – 18 April 2021	Decreasing spread	<b>In-person teaching</b>

Source: OECD (2022<sup>[42]</sup>), information-gathering questionnaire for the Luxembourg Crisis Management Evaluation.

## Notes

<sup>1</sup> Schools were first reopened on 4 May 2020 for final-year students in secondary and vocational education, then on 11 May 2020 for other students in secondary education, and on 25 May 2020 for primary and pre-primary educational establishments (MENEJ, 2020<sup>[25]</sup>).

<sup>2</sup> The COVID tracing application (<https://covidtracing.public.lu/home>) and the EduTesting portal (<https://portal.education.lu/edutesting>).

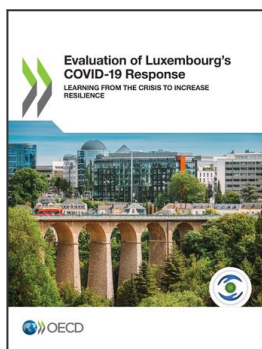
<sup>3</sup> The Schouldoheem platform: <https://schouldoheem.lu/fr>.

<sup>4</sup> The classes covered by the one2one programme are called “iPad classes”:  
<https://portal.education.lu/cgie/INNOVATION/ONE2ONE>.

<sup>5</sup> Oasys, the online assessment system developed by LUCET:  
<https://wwwfr.uni.lu/recherche/fhse/lucet/expertise/oasys>.

<sup>6</sup> The government allocates each commune the resources it needs in the form of “contact time”, weighted to correct socio-economic inequalities in the communes (a disadvantaged commune will receive a proportionally higher share of lessons, i.e. of paid contact hours, than a better-off commune)  
<https://men.public.lu/dam-assets/fr/fondamental/offre-scolaire-organisation/pdf-ef-en-details.pdf>.

<sup>7</sup> National education portal: <https://portal.education.lu/Application>



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