

# **ONE YEAR OF SCHOOL DISRUPTION**

25<sup>th</sup> January, 2021



# AGENDA

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# 1. EXECUTIVE SUMMARY

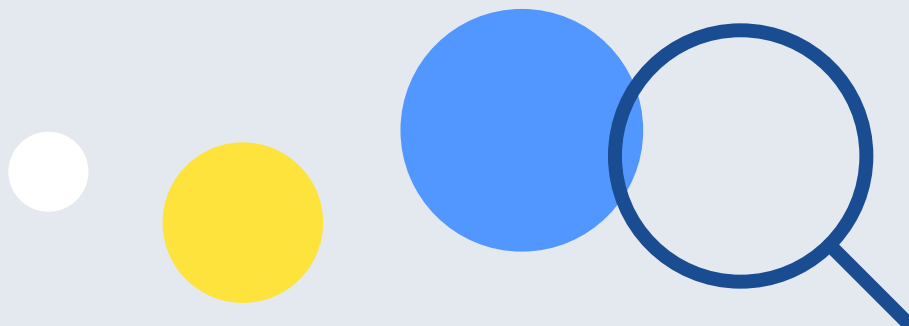
One year after the first school closures, with COVID-19 continuing to force public decision-makers to grapple with extremely difficult decisions, it is timely to ask what the consequences of school shutdown and reopening choices have been, and if better choices regarding school responses could be made as the pandemic continues to unfold.

In early 2020, nearly all governments responded to COVID-19 by prioritising public health, closing schools and locking down the economy. Since then, policies and timelines have diverged significantly between countries. To better inform education-related decision-making, Insights for Education has been tracking national school reopening and practices since school shutdowns began. Drawing on the previous syntheses published in Insights for Education's October 2020 report *COVID-19 and Schools: What We Can Learn from Six Months of Closures and Reopening*<sup>1</sup> that showed no consistent pattern between school status and COVID-19 cases, this new analysis focuses on the next set of questions asked by policymakers.

This one-year review **challenges the widespread assumption that there is an inevitable trade-off between public health, opening schools and protecting the economy. It spotlights practices associated with better outcomes.**

## THE MAIN FINDINGS ARE:

- + **Analysis of 101 countries shows that a trade-off between keeping schools open, protecting health, and protecting the economy is not inevitable. Fifteen countries have shown that it is possible to balance all three policy goals.**
- + **Divergent policy choices translate into dramatically different outcomes for the impact of COVID-19 on learning.** This report focuses on three clusters of countries that illustrate radically different outcomes.
- + **Countries faring better, especially those with least learning disruption, opened as the first wave of infection ended and prior to the second starting.** Typically, there was **clear political prioritisation and broad community engagement** for getting children back to school.



A YEAR IN DATA (UPDATED AS OF 13TH JANUARY, 2021)

**27<sup>TH</sup> JANUARY,  
2020**

Mongolia was the first country to order schools closed

**98%**

of countries have implemented full or partial closures due to COVID-19

**199 BILLION**

closed days of school in 2020

**267 MILLION**

children out of school in 27 closed countries today

**878 MILLION**

children in 37 partially open countries today

**88 COUNTRIES**

that have reopened have stayed open, avoiding any second national closures

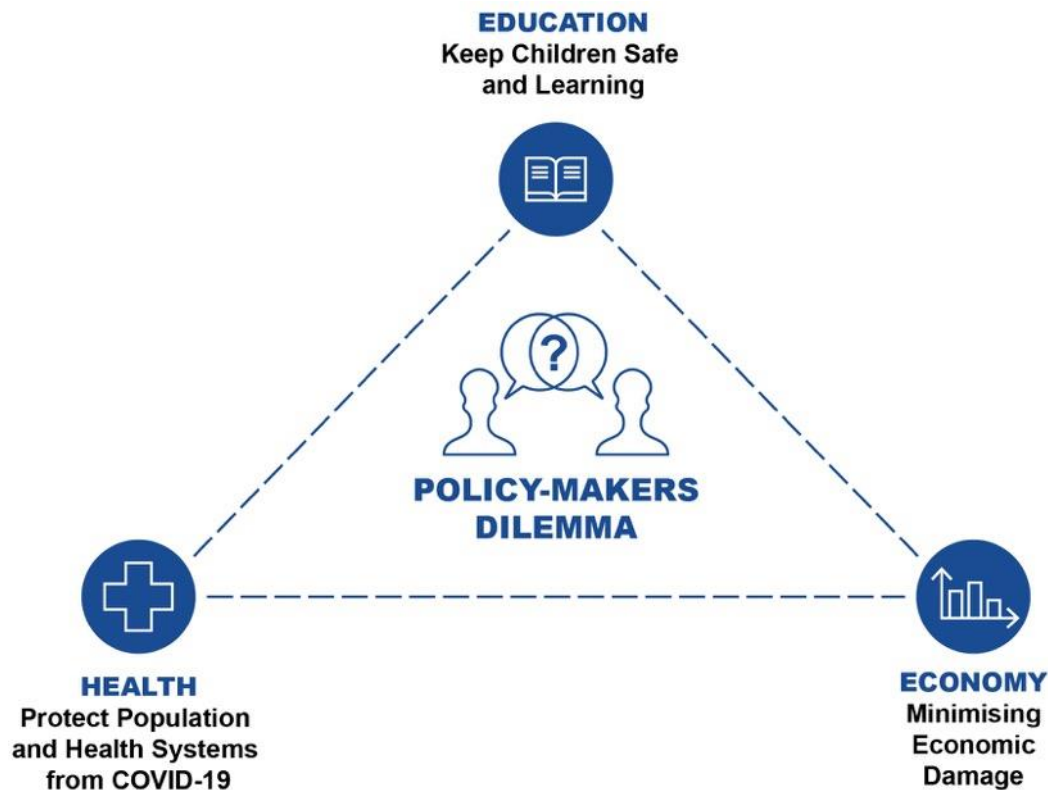
**31 COUNTRIES**

have implemented additional closures after attempting to reopen fully or partially

Daily updated data showing the impact of COVID-19 on the world's school systems is available on [Insights for Education's website](#).

## 2. POLICYMAKERS' DILEMMA

### Prioritising Public Health, the Economy, or Education?



Policymakers faced tremendous challenges in 2020. Initially, personal protective equipment was in short supply, medical systems had inadequate capacity, and testing was insufficient to understand the true level of infection. Without short-term hope of a vaccine and needing to buy time to set up pandemic response systems, policymakers were forced to manage a health crisis with a series of non-pharmaceutical interventions.<sup>2</sup> Close schools, restaurants, or both? Lock down for two weeks or two months? There were no easy choices, with all closure decisions having significant implications for the daily lives of millions of people. According to the World Bank, COVID-19 “represents the largest economic shock the world has experienced in decades”.<sup>3</sup> Governments made difficult and competing decisions to protect health, to minimise economic damage, and to keep children learning and safe.

Mongolia was the first nation to order schools closed, on 27<sup>th</sup> January, 2020.<sup>4</sup> That was only four days after the city of Wuhan locked down.<sup>5</sup> No one suspected that Mongolia would be the first country in a global cascade of closures. By the end of March 2020, 96% of countries had closed (fully or partially) their school systems with approximately 1.5 billion children affected.<sup>1,6</sup> School closures spread much faster than the virus itself: a pragmatic act by national governments in the face of a poorly understood threat.

During the initial lockdowns, the policy goal of keeping children safe and learning was not high on this list. But an important consequence of school closures (albeit to keep children safe from the virus) was a growing public and political awareness of the consequences which included

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lost learning, deteriorating mental health, more child protection challenges, and economic implications for employees without access to childcare.<sup>7</sup> By September 2020, as a second wave of infections began in many parts of the world, and with growing awareness of the long-term negative and cumulative effects of learning loss,<sup>8</sup> school closures had changed from being a first response to a last resort for many countries.<sup>1</sup>

This report focuses on education and learning. However, for governments this was just one of the competing demands they faced over the year. To analyse these dilemmas, outcomes were compared against three policy goals:



### To keep children safe and learning

**This analysis uses the total number of days that school systems were closed or only partially open, which is referred to as “disrupted school days”, as a proxy for disrupted learning.** It does not reflect learning that might have taken place through distance, online or hybrid models, which were widely adopted but where quality is known to have varied significantly.



### To protect populations and health systems from COVID-19

**This analysis uses the number of deaths attributed to COVID-19 per 100,000 of population as a proxy for health impact.** Some countries only report COVID-19 deaths that occur in hospitals; people who die from the disease at home may not be recorded. Limited testing and challenges in the attribution of the cause of death mean that this measure may not provide an accurate count of the true number of deaths from COVID-19, but it is judged to have greater reliability than most other sources of information currently available at a global level. In time, excess mortality statistics will give a more meaningful overview, but this data is not yet available across a sufficiently wide range of countries.



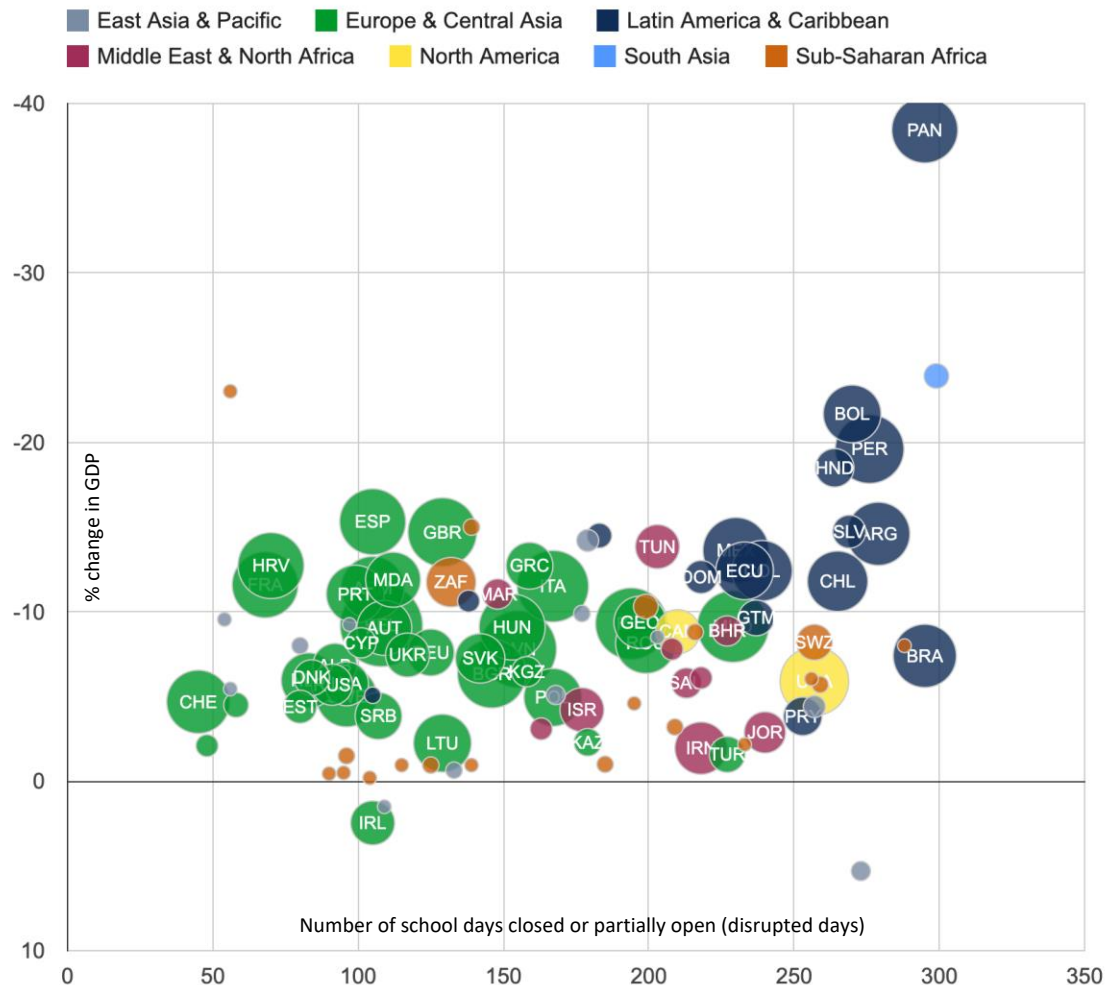
### To minimise economic damage

**This analysis uses quarterly 2020 Gross Domestic Product (GDP) data for each country compared with the corresponding periods in 2019 to calculate a percentage (%) change in GDP as a proxy for economic impact.** As a measure of economic performance, GDP has weaknesses given that it does not record the “underground economy” which is significant in many countries. There is also variability in the frequency and quality of country reporting and there may be varying lags in the time period over which economic shocks become evident in the data. Nonetheless, it is judged to be a widely understood and available proxy for economic performance, especially when data is expressed as a percentage change between the same quarter within the same country.

**To explore the consequences of countries’ highly varying choices, national disruptions to health, the economy and education were examined, measured by COVID-19 deaths, % change in GDP, and disrupted school days respectively.**

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**Disrupted School Days (horizontal), % Change in GDP (vertical), and COVID-19 Deaths per 100,000 of population (bubble size) by Region**



See Appendix A for country details and statistics.

View a live and interactive version of this chart at <https://infographic.education.org>.



### 3. DETAILED FINDINGS

Statistical correlations were tested to explore the relationships between each of the three variables (see Appendix B for methodology).

1

#### **THE NUMBER OF DISRUPTED SCHOOL DAYS AND COVID-19 DEATHS PER 100,000 OF POPULATION ARE NOT CORRELATED.**

**This finding brings into question part of the rationale for closing schools and offers some support for the argument that a trade-off between keeping schools open and protecting health is not inevitable.** However, it is important to reflect that school closures might have had other health benefits which are not tested here (e.g., reducing overall pressure on hospital beds).

It is possible that further research will establish more complex relationships between these variables than has been explored here. It may also be necessary to control for related factors (e.g., average age of population) which were beyond the scope of this work.

2

#### **THE NUMBER OF DISRUPTED SCHOOLS DAYS AND THE DECLINE IN THE ECONOMY ARE WEAKLY CORRELATED.**

Countries that kept their schools closed the longest tended to incur more economic damage, while countries that managed to open their schools tended to minimise economic damage, though no causal relationship should be inferred.

**This finding further supports the argument that a trade-off between keeping schools and the economy open is not inevitable.**

3

#### **THE DECLINE IN THE ECONOMY AND DEATHS PER 100,000 OF POPULATION ARE WEAKLY CORRELATED.**

This finding is consistent with the conclusion from *Our World in Data* on 30<sup>th</sup> August, 2020, which states that “countries that have managed to protect their population’s health in the pandemic have generally also protected their economy too”.<sup>10</sup>

**This finding further supports the argument that a trade-off between keeping the economy open and protecting health is not inevitable.**

Beyond this statistical analysis, closer examination reveals three distinctive patterns of outcomes:

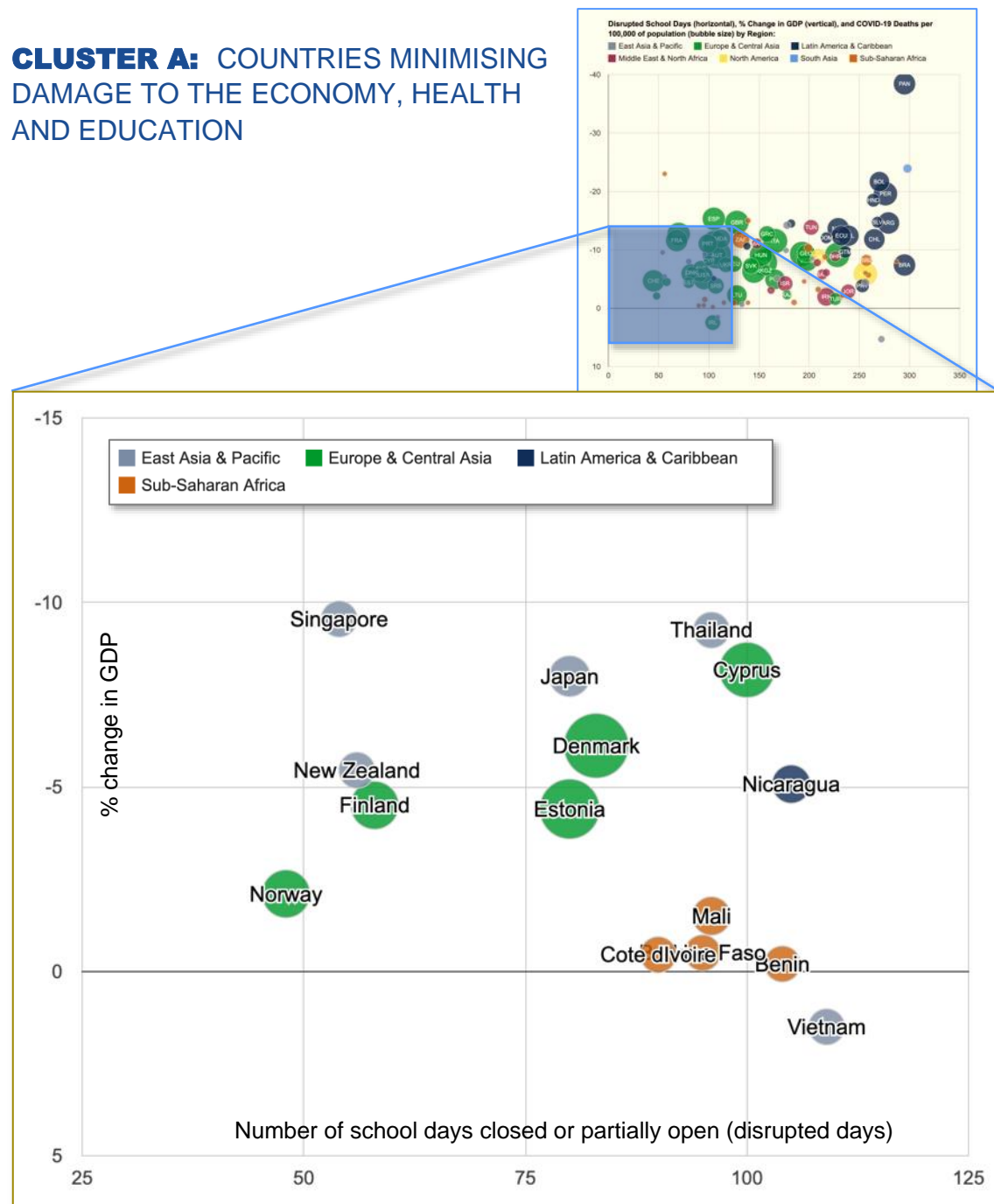
- A. COUNTRIES MINIMISING DAMAGE TO THE ECONOMY, HEALTH, AND EDUCATION (CLUSTER A).**
- B. COUNTRIES MINIMISING DAMAGE TO THE ECONOMY AND EDUCATION, WHILE INCURRING HIGHER COVID-19 DEATHS (CLUSTER B).**
- C. COUNTRIES WITH THE HIGHEST LOSSES OF LIFE AND DISRUPTED LEARNING (CLUSTER C).**

See Appendix A for country details and Appendix B for statistical methodology.



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### CLUSTER A: COUNTRIES MINIMISING DAMAGE TO THE ECONOMY, HEALTH AND EDUCATION



See Appendix A for country details and statistics.

The first cluster (A) reveals that 15 countries managed all three policy priorities without incurring a substantial trade-off. These countries have achieved relatively better outcomes than others; defined here as being 110 or fewer disrupted school days, less than 10% decline in GDP, and 40 or fewer deaths per 100,000 of population.

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**Generally, cluster A countries prioritised reopening schools among emerging policy choices, often securing strong community support.**

In most cases, these countries reopened schools soon after the end of the first wave of infections and before a second wave occurred.

Vietnam was among the first countries to respond with school closures on 3<sup>rd</sup> February, 2020,<sup>11</sup> like other countries in the region, putting into place plans developed as a consequence of previous experience with SARS, H1N1 and MERS.<sup>12</sup>

**Clear, transparent and consistent engagement between public authorities and the broader community** (including educators, parents, and many other groups) **so as to build support and preparedness for reopening schools and keeping them open is a key feature shared by many of these countries. For example:**

- + **New Zealand** created a \$50 million Urgent Response Fund to support the wellbeing needs of learners and a further \$16 million to support education workforce wellbeing.<sup>13</sup> They published disaggregated and weekly attendance data for all early learning centres and schools.<sup>14</sup>
- + In **Denmark**, the education ministry developed a coronavirus hotline to help schools assess learning and advise on education-specific issues.<sup>15</sup> The National Board of Health prepared a guide for school administrators and informational materials for teachers and students, including brochures, posters, and videos.<sup>16</sup>
- + **Japan** published extensive data and information aimed at all education stakeholders, including children, students, parents, teachers and school boards, and updated it regularly.<sup>17</sup>
- + In **Norway**, the Institute of Public Health created a “traffic light” model for all educational institutions, clearly defining safety guidelines for different epidemiological scenarios. This strategy was developed in coordination with the Directorate of Education and Training with an aim to improve transparency for education stakeholders regarding student and teacher safety.<sup>18</sup> Norway’s approach differed from other countries that also adopted traffic light systems (e.g., see below for Mexico and Brazil) in that it was specifically focused on education and emphasised steps to keep schools open.

**Another feature of these countries was the political prioritisation given to keeping schools open.** For example:

- + **Norway** justified additional tightening of restrictions for social gatherings and events by saying that “this will make it easier to keep children’s day care centres and schools open, which is an important priority for the government,” according to the Minister of Education and Integration, Guri Melby.<sup>19</sup>
- + Early in the pandemic, **Singapore** Prime Minister Lee Hsien Loong indicated his resistance to national closures: “I think we should look at schools as individual schools rather than one whole system. We confine and we rub out that cluster, but it does not mean that I must shut the whole system down.”<sup>20</sup>
- + **Japan’s** prioritisation of education can be exemplified by the recent action to keep schools open, despite an announced state of emergency in Tokyo in response to rising case rates.<sup>21</sup>
- + **Burkina Faso**, a country troubled by violence and threats to schools safety prior to the onset of the pandemic, launched a new radio channel solely for remote learning and prioritised the reopening of classes for exam grades on 1st June, 2020, with preventive

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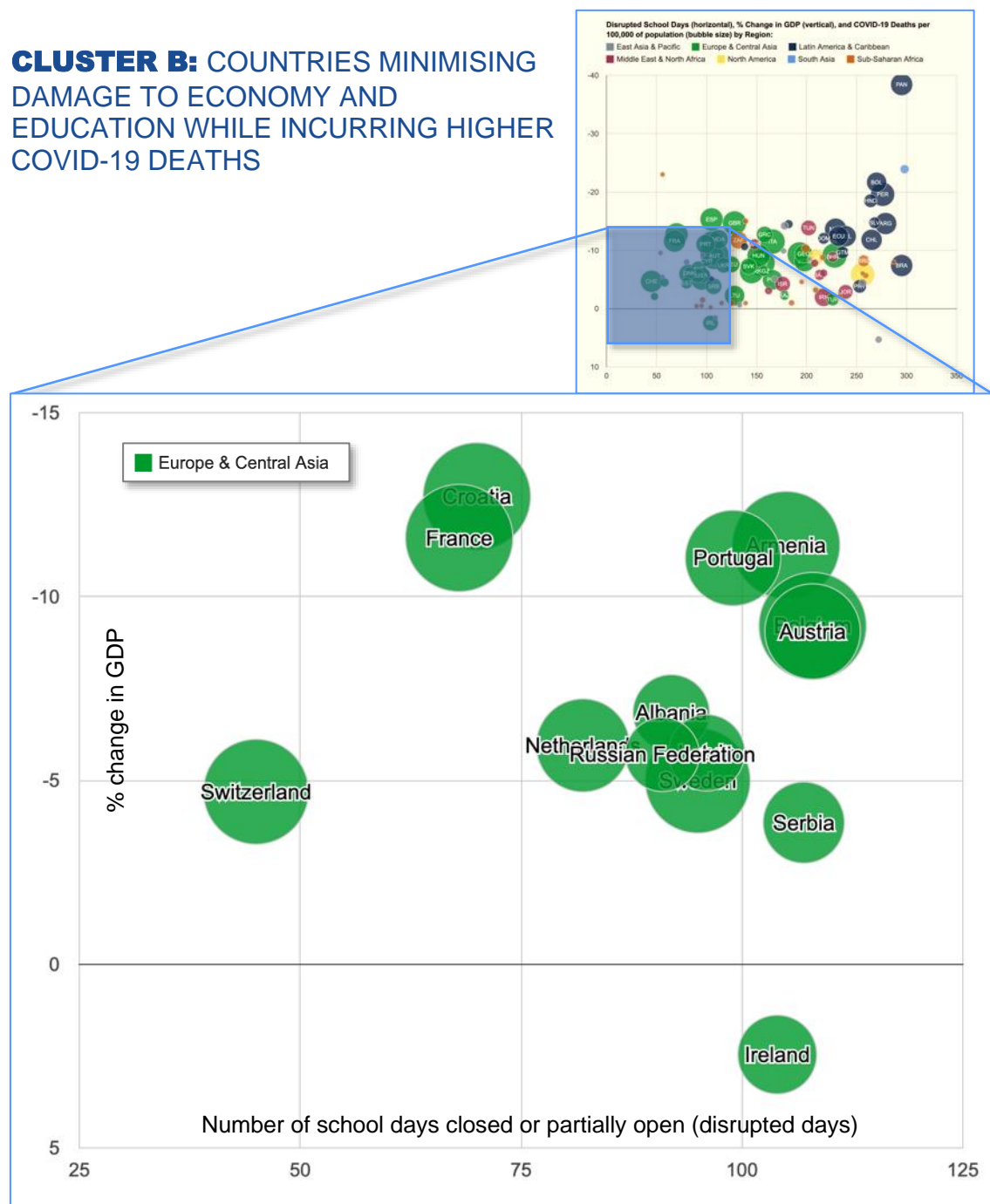
measures such as masks and hand-wash kits.<sup>22</sup> Schools fully reopened on 1st October. The Minister of National Education and Literacy, H.E. Mr. Stanislas Ouaro said: “We are doing everything we can to ensure that children and youth in areas affected by crises and other natural disasters in our country can benefit from an accessible, safe, inclusive, protective quality education.”<sup>23</sup>

- + Schools in **Côte d’Ivoire** partially reopened in late May 2020 while infection levels were still rising, ahead of many others in the region. A ministry official was quoted as saying, “We also have an imperative duty to ensure that the children entrusted to us can complete their education.”<sup>24</sup> Numbers declined over the summer vacation and have remained at a low level after the full opening of all schools in September. A benefit of reopening was a resumption of school feeding programmes.<sup>25</sup>

However, other serious challenges persist even in these relatively successful countries. In **Mali**, teachers went on strike as schools reopened in June 2020 on the grounds that schools did not have adequate health and sanitation facilities.<sup>26</sup> There is significant political instability in the country, most recently with a coup d’état on 18<sup>th</sup> August.<sup>27</sup>

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### CLUSTER B: COUNTRIES MINIMISING DAMAGE TO ECONOMY AND EDUCATION WHILE INCURRING HIGHER COVID-19 DEATHS



See Appendix A for country details and statistics.

Occupying the same corner of the chart as cluster A because of their similar outcomes in terms of disrupted school days and economic impact, a further 14 European countries (cluster B) experienced substantially higher levels of COVID-19 related deaths (more than 40 per 100,000 of population) as illustrated by the larger bubble size. Policy responses across these cluster B countries have varied, but their **prioritisation of learning has been consistent and reinforced** by the highest levels of government.

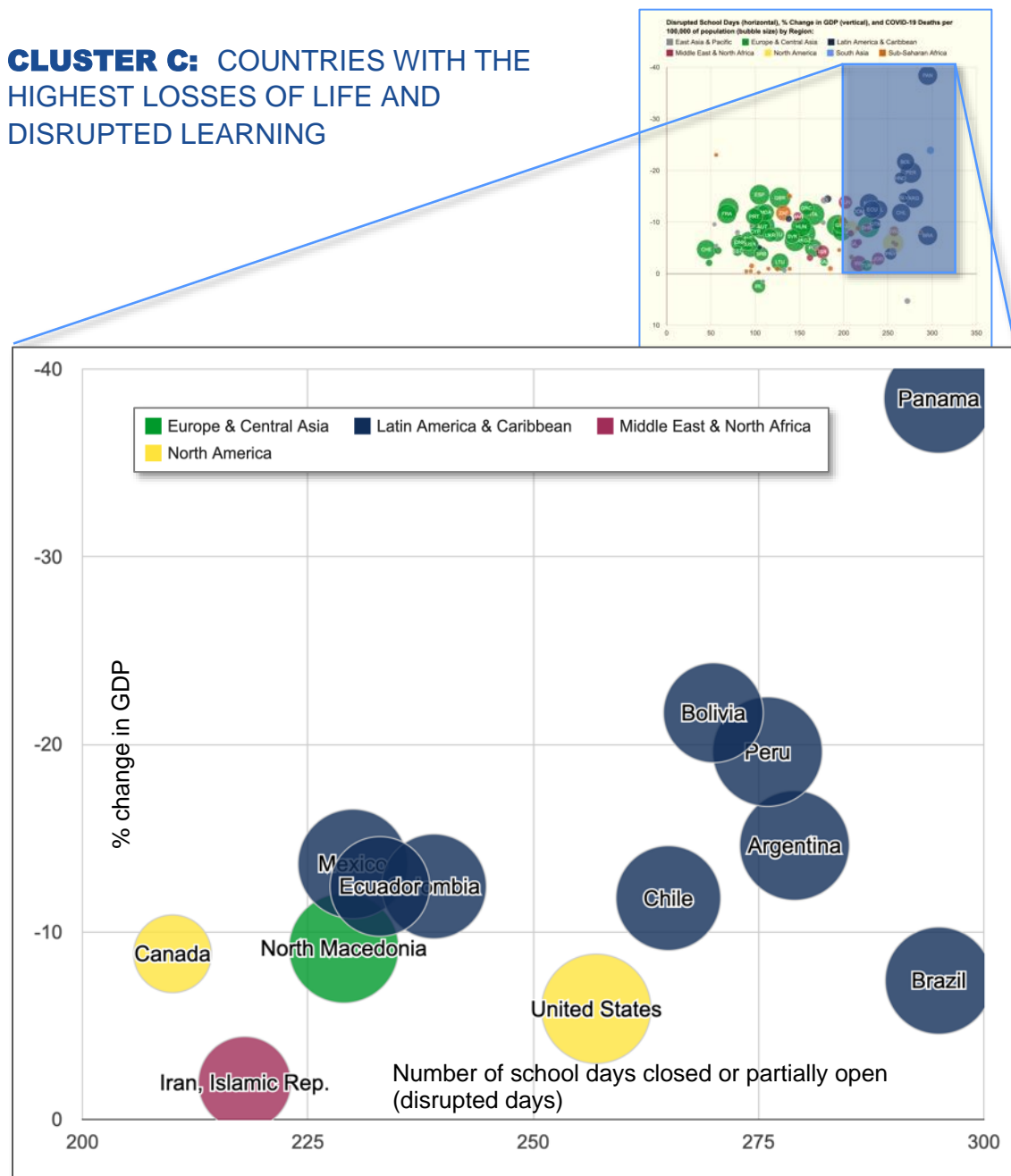
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For example:

- + **Ireland** kept schools open as a priority in October 2020, while closing all non-essential business and limiting travel within the country. Education Minister Norma Foley said: “There has been an absolute determination to keep our schools open.”<sup>28</sup> More recently, in the face of rapidly rising infection rates, all non-essential services and shops have been closed since Christmas. The government has maintained that schools are safe for students and teachers but has moved to close them until 1st February, 2021, in a bid to reduce population mobility. There are exceptions for final year students who will be permitted to attend class three days per week to continue preparation for Leaving Certificate exams in June, and schools for children with special needs.
- + **Sweden** gained notoriety for its “herd immunity” response and resisting the national closure policies of its neighbours.<sup>29</sup> It is one of the few countries that did not, at any time, implement national school closures. Instead, it has adopted more limited closures, for example, most recently switching all high schools to distance learning in early December 2020.<sup>30</sup>
- + **Switzerland** kept schools open despite some of the highest caseloads (peaking at about 95 new cases per 100,000 of the population each day). Indicative of teacher support for keeping schools open, Franziska Peterhans, Central Secretary of the cantonal teachers’ associations said, “If the alternative is to close the school, then the mask is definitely the lesser evil.”<sup>31</sup> At the end of the year and despite about 40 new cases per 100,000 of population, only two Swiss cantons had decided to delay the start of school in January 2021 by a few days with both government and teachers continuing to prioritise face-to-face education.
- + **France** (peak of 94 new cases per 100,000 of population) closed all non-essential businesses at the end of October 2020 while keeping schools open.<sup>32</sup> President Macron declared: “Our children cannot be permanently deprived of instruction, education, contact with the school system.”<sup>33</sup>

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### CLUSTER C: COUNTRIES WITH THE HIGHEST LOSSES OF LIFE AND DISRUPTED LEARNING



See Appendix A for country details and statistics.

On the right-hand side of the chart with larger bubbles are the countries that experienced the longest closures of their school systems *and* higher levels of COVID-19 deaths. Notably, 11 out of 13 countries are in North or South America.

### WHY HAVE THESE COUNTRIES BEEN OUT OF SCHOOL FOR SO MUCH LONGER?

Three potential reasons stand out. Cluster C countries have typically experienced protracted infection cycles in which each wave of infection builds on the last with no significant gap between, they have sometimes prioritised economic considerations over learning, and sometimes lack community support for getting children back to school. The consequence has been very lengthy school closures.

#### PROTRACTED INFECTION CYCLES

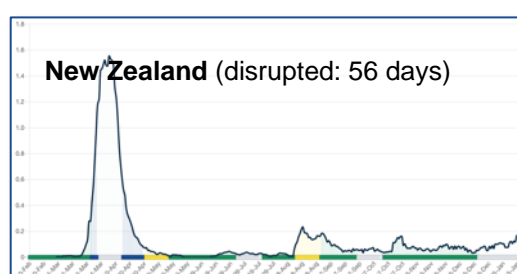
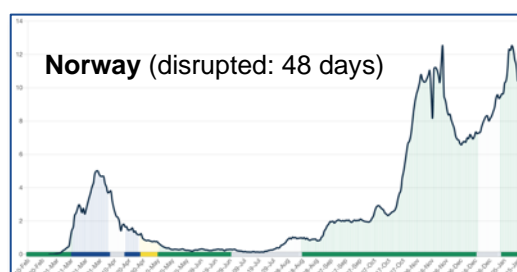
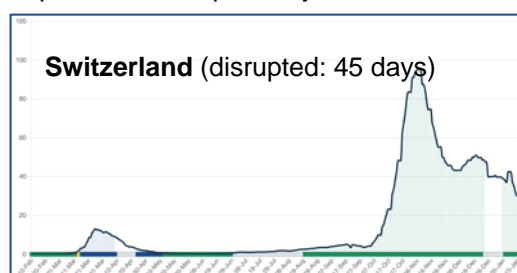
- + Comparing the progression of the COVID waves shows prolonged infection waves in cluster C (see figure below) in which each wave of infection builds on the last with no significant gap between. These protracted waves might pose an additional challenge to reopening schools, compared to reopening in countries facing clearer declines between infection waves. For example, in Europe, as levels reduced sharply after the first wave, many countries seized the opportunity to reopen schools. In countries such as the USA and Mexico, this window for reopening between waves did not occur, possibly explaining some of why schools have been disrupted for much longer.
- + It is worth noting that, compared to European counterparts in cluster B, countries in cluster C experienced on average **lower peaks of new daily infections yet reported similar death rates**: The average peak in the 14 European countries was 82.3 cases per 100,000 of population, compared with 34.1 cases per 100,000 in this cluster. However, in terms of deaths, the outcomes were more similar: 81.7 deaths per 100,000 in Europe, compared with 93.9 deaths per 100,000 of population mostly in North and South America. However, interpretation of these figures may reflect differences in testing and death reporting. For example, the autonomous University of Mexico has claimed that the death toll in Mexico has been underestimated by anywhere between two to four times.<sup>34</sup>



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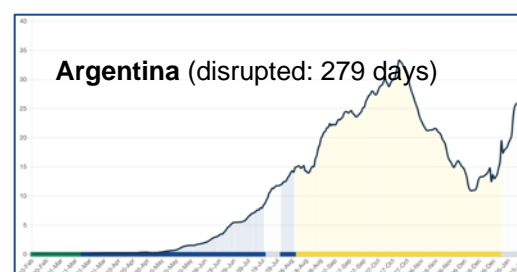
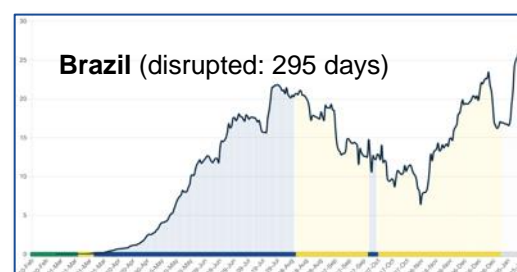
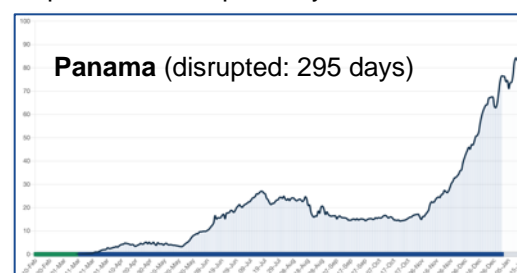
In many Cluster A and B countries, as levels reduced after the first wave, schools reopened – and then stayed open (even in a second wave)

Top 4: least disrupted days



In cluster C countries, typically the first wave did not come to an end before the second wave started – and schools remain disrupted throughout

Top 4: most disrupted days

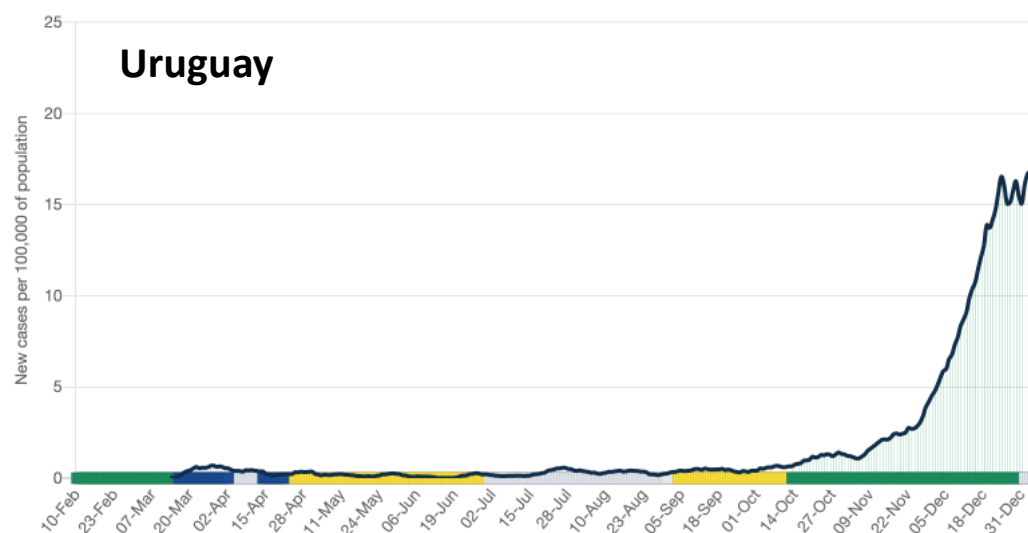


— New daily cases per 100,000 of population, 7 day rolling average  
 School status: ■ Open ■ Partially open ■ Closed ■ Vacation ■ Unknown

Sources: Insights for Education, Our World in Data, UNESCO, World Bank

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An exception to this trend is **Uruguay**, which has a wave pattern more typical of European countries, allowing it to partially reopen schools in late April 2020, to fully reopen on 13<sup>th</sup> October, and to stay open since. Uruguay responded quickly and prioritised the continuity of face-to-face education.<sup>35</sup> Despite recent significant increases in caseloads from mid-November, this strategy and decision-making remains consistent. On 7<sup>th</sup> December, the President announced tighter restrictions for businesses including supermarkets, restaurants, offices, and shopping centres, but ruled out the suspension of face-to-face classes.<sup>36</sup>



Sources: *Insights for Education*, *Our World in Data*, *UNESCO*, *World Bank*

Outside the Americas, and in this cluster, **Iran** was one of the first countries severely affected at the outset of the pandemic with relatively high caseloads and death rates. Schools were initially closed on the 26<sup>th</sup> February, 2020, and remained so until the government announced that face-to-face learning would be resuming in low risk regions by the end of September.<sup>37</sup> However, case rises led a week later to this directive being rescinded and over 15 million students returned to remote learning.

### PRIORITISING THE ECONOMY OVER EDUCATION...

**Brazil** is probably the most high-profile example of a country prioritising its economy over health and education.<sup>38</sup> In the City of Rio de Janeiro, the 24-hour opening of malls was announced to avoid crowds during Christmas holiday shopping while, simultaneously, municipal schools were ordered to close to help contain the growing number of cases in the city.<sup>39</sup>

**Mexico** also prioritised the economy over learning, as demonstrated by its traffic light system adopted as part of its phased reopening plan that started in May 2020. Only at the green level are schools permitted to reopen (along with bars and gyms), well behind other parts of the economy.<sup>40</sup> These categories and the infection levels that trigger them have not been refined over time, so the latest maps show just three states in this green category.

### ...AND POSSIBLY EXPERIENCING LACK OF COMMUNITY SUPPORT

In the **United States**, the devolved system of decision-making means that reopening strategies have varied significantly across the country. At the federal level, the government has outlined the services that states are required to have available for students and provided general guidelines, but the extent to which they are implemented is wholly dependent on the state and local government and school districts. Each successive COVID-19 wave has built on its predecessor, with infection levels failing to drop significantly in between. Teachers' unions have

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also played a critical role in these reopening decisions and have been, at times, vocal critics.<sup>41</sup> As a result, by the end of 2020, only 17% of the 14,800 school districts had fully returned to school, approximately 50% were offering hybrid learning, and 25% online learning only.<sup>42</sup> As an example of evolving approaches, New York City closed schools after reaching a 3% benchmark in November, reopened them two weeks later, then removed the benchmark and instead required mandatory in-school testing. According to the media, “Some New Yorkers were frustrated to see schools close down again while gyms were allowed to operate, and restaurants could offer indoor dining in most areas.”<sup>43,44</sup>

Like the USA, **Canada** has a highly devolved system of school administration and parents were given much more freedom to determine if their children should return to school; an option that was far less common in most other countries when schools reopened.<sup>45</sup> However, both the peak levels of infection and the numbers of deaths are much lower than in its southerly neighbour. Some provinces in Canada began to reopen from early June 2020 as their first wave of infections declined (e.g., British Columbia, Manitoba, Quebec) on a partial basis, with some only allowing elementary pupils to return and others conducting in-person classes on a part-time basis (1-2 days a week). While all school systems across the ten provinces reopened from September for in-person learning, in several cases this was on a partial basis (alternative days of in-person teaching) and with large numbers of students opting instead for online learning. According to one source, “When schools opened in Toronto in September, about 30 percent of elementary students and 22 percent of secondary students in the public school system decided to attend virtually. Since then, those numbers have substantially risen, indicating persistent parental fears despite the expert assurances.”<sup>46</sup> The situation continues to be in flux, with Ontario closing schools due to an increase in positive rates amongst younger school-aged children.<sup>47</sup>

To note: In Latin America, the southern hemisphere school year runs from March to December. The coincidental timing of holidays has contributed to the total period out of school as countries made decisions to close schools just as students returned for the 2020 academic year. **Chile** and **Guatemala** have announced that their schools will open for the 2021 school year in March.<sup>48,49</sup> The City of **Buenos Aires** announced both a summer “catch-up” school and an earlier start to the 2021 academic on 17<sup>th</sup> February.<sup>50</sup> Many other countries have yet to commit. Therefore, the majority of children in Latin America will soon have endured a full year without face-to-face education.

## 4. CONCLUSIONS

Drawing on an analysis of 101 countries over the past year, this review of the negative impact of COVID-19 shows that 15 countries have been able to balance public health, education, and economic outcomes. A trade-off between keeping schools open, protecting health, and protecting the economy is not inevitable.

After one year, countries with the least learning disruption share similarities: they lowered infection levels relatively quickly so that schools could reopen before the start of a second infection wave, they prioritised learning at the highest political levels, and they invested in meaningful community engagement to get children back to school. Ongoing transparency and communication have also been a shared feature of keeping schools open even in the face of rising infections.

The greatest number of days of disrupted learning has been seen in countries lacking distinct waves of infection, instead experiencing prolonged waves or waves building on top of one another: a lack of distinct valleys between infection peaks provided no clear window to reopen between waves. Sometimes, these same countries prioritised the economy over education and/or suffered from weak community support for returning to school.

While it is surely not yet possible to declare certain choices “right” or “wrong”, studying these patterns are essential for providing policy leaders with the best available information for deliberations around choices and trade-offs. At the time of this writing, schools in 15% of countries remain closed, and nearly one-third of countries have only partially opened their school systems.

While various factors, including infection levels, population density, health system capacity, and school system readiness, are important considerations in determining if, when, and how to open schools, global experiences demonstrate that even under very challenging circumstances schools can be safely opened and, most often, remain open.

Finally, this work reinforces the need to continue to monitor and study global experiences as they unfold, to enable better understanding of choices and their consequences, and to promote well-informed and contextually relevant choices to protect learning, health, and economies. Continued vigilance will be even more important, as some countries did not reopen schools after the December/January academic break and as new COVID-19 variants emerge, to avoid further extended shutdowns similar to those that started one year ago.

# APPENDIX A

## Country Data

### CLUSTER A COUNTRIES:

Region	Country	Disrupted school days	% change in GDP	Deaths per 100k	Peak daily cases	Population
East Asia & Pacific	Japan (JPN)	80	-8.0%	3.1	5.1	126.5 m
	New Zealand (NZL)	56	-5.4%	0.5	1.6	4.8 m
	Singapore (SGP)	54	-9.5%	0.5	17.2	5.6 m
	Thailand (THA)	97	-9.2%	0.1	0.6	69.4 m
	Vietnam (VNM)	109	1.5%	0	0	95.5 m
Europe & Central Asia	Cyprus (CYP)	101	-8.2%	17.9	70.4	1.2 m
	Denmark (DNK)	84	-6.1%	28	61.1	5.8 m
	Estonia (EST)	80	-4.4%	22	47.2	1.3 m
	Finland (FIN)	58	-4.5%	10.9	8.5	5.5 m
	Norway (NOR)	48	-2.1%	8.9	12.5	5.3 m
Latin America & Caribbean	Nicaragua (NIC)	105	-5.1%	2.5	1.1	6.5 m
Sub-Saharan Africa	Benin (BEN)	104	-0.2%	0.4	0.6	11.5 m
	Burkina Faso (BFA)	95	-0.5%	0.4	0.9	19.8 m
	Cote d'Ivoire (CIV)	90	-0.4%	0.5	1.3	25.1 m
	Mali (MLI)	96	-1.5%	1.5	0.5	19.1 m
<b>Averages:</b>		<b>84</b>	<b>-4.3%</b>	<b>6.5</b>	<b>15.2</b>	<b>26.9 m</b>

### CLUSTER B COUNTRIES:

Region	Country	Disrupted school days	% change in GDP	Deaths per 100k	Peak daily cases	Population
Europe & Central Asia	Albania (ALB)	92	-6.8%	43.5	27.8	2.9 m
	Armenia (ARM)	105	-11.4%	99.2	70.6	3.0 m
	Austria (AUT)	109	-9.0%	75.7	82.9	8.8 m
	Belgium (BEL)	108	-9.2%	174.2	153.6	11.4 m
	Switzerland (CHE)	45	-4.7%	97.9	95.2	8.5 m
	France (FRA)	68	-11.6%	105.6	94.2	67.0 m
	Croatia (HRV)	70	-12.7%	108.3	88.9	4.1 m
	Ireland (IRL)	105	2.5%	48.5	132.3	4.9 m
	Latvia (LVA)	96	-5.7%	46.8	53.6	1.9 m
	Netherlands (NLD)	83	-5.9%	73.9	68.9	17.2 m
	Portugal (PRT)	99	-11.0%	79.2	84	10.3 m
	Russian Federation (RUS)	91	-5.7%	42.4	19.5	144.5 m
	Serbia (SRB)	107	-3.8%	53.5	107	7.0 m
	Sweden (SWE)	96	-5.0%	95.7	73.7	10.2 m
<b>Averages:</b>		<b>91</b>	<b>-7.2%</b>	<b>81.7</b>	<b>82.3</b>	<b>21.6 m</b>

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### CLUSTER C COUNTRIES:

Region	Country	Disrupted school days	% change in GDP	Deaths per 100k	Peak daily cases	Population
Europe & Central Asia	North Macedonia (MKD)	229	-9.1%	127.1	52.8	2.1 m
Latin America & Caribbean	Argentina (ARG)	279	-14.6%	99.2	33.3	44.5 m
	Bolivia (BOL)	270	-21.7%	81	14.6	11.4 m
	Brazil (BRA)	295	-7.4%	96.3	25.9	209.5 m
	Chile (CHL)	265	-11.8%	89.9	35.2	18.7 m
	Colombia (COL)	239	-12.4%	91.9	32.5	49.6 m
	Ecuador (ECU)	233	-12.4%	80.5	11.6	17.1 m
	Mexico (MEX)	230	-13.6%	105.2	9.9	126.2 m
	Panama (PAN)	295	-38.4%	105.7	84.3	4.2 m
	Peru (PER)	276	-19.6%	116.3	25.9	32.0 m
Middle East & North Africa	Iran, Islamic Rep. (IRN)	218	-1.9%	67.1	16.2	81.8 m
North America	Canada (CAN)	210	-8.8%	45.7	25.5	37.1 m
	United States (USA)	257	-5.9%	115	75.5	326.7 m
<b>Averages:</b>		<b>254</b>	<b>-13.7%</b>	<b>93.9</b>	<b>34.1</b>	<b>73.9 m</b>

# APPENDIX B

## Methods and Sources

1. This analysis covers 101 countries including all countries with a population of one million people or more, where we were able to obtain data on COVID-19 deaths, quarterly GDP, and school closures (as described below) on **13<sup>th</sup> January, 2021**. We excluded just one country, China, due to the earlier timing of its economic downturn compared to any other country in the dataset. The countries analysed are: Albania, Angola, Argentina, Armenia, Australia, Austria, Bahrain, Belgium, Benin, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Canada, Chile, Colombia, Côte d'Ivoire, Croatia, Cyprus, Denmark, Dominican Republic, Ecuador, Egypt, Arab Rep., El Salvador, Estonia, Eswatini, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Guinea-Bissau, Honduras, Hungary, India, Indonesia, Iran, Islamic Rep., Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Korea, Rep., Kyrgyz Republic, Latvia, Lithuania, Malaysia, Mali, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, North Macedonia, Norway, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russian Federation, Rwanda, Saudi Arabia, Senegal, Serbia, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Togo, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, and Vietnam.
2. The number of deaths is the total number of confirmed COVID-19 attributed deaths to date, expressed as a percentage of the population (deaths per 100,000 of population). Limited testing and challenges in the attribution of the cause of death means that the number of deaths may not be an accurate count of the true number of deaths from COVID-19. Source: <https://ourworldindata.org/coronavirus>.
3. For % change in GDP, we used Q2, Q3 (and limited Q4) 2020 data, compared with the corresponding quarter in the previous year and then averaged the result over the quarters available for each country. Source: <https://www.theglobaleconomy.com>.
4. We counted days when school systems (pre-primary, primary, and secondary levels) were closed or only partially open and refer to these as disrupted school days of learning. This total includes weekends and shorter holidays, but longer planned vacations have been excluded. Students in closed systems may have access to distance learning. Students in partially open systems may be in school full time or have access to hybrid learning depending on their age and/or where they live in a country. Sources: <https://en.unesco.org/covid19/educationresponse> and [Insights for Education](#).
5. Daily cases refer to the average number of new daily cases per hundred thousand of population averaged over the past seven days. Source: <https://ourworldindata.org/coronavirus>.
6. Correlation was tested using the Pearson Correlation Coefficient between three variables: disrupted school days (as described in point 4 above), % change in GDP, and COVID-19 deaths.
  - In the case of disrupted school days and % change in GDP, there is a weak correlation with a value of  $r(99) = .28, p = 0.4\%$ .
  - In the case of disrupted school days and deaths per 100,000 of population, the correlation was not significant ( $r(99) = .05, p = 62.3\%$ ).
  - In the case of % change in GDP and deaths per 100,000, we found a weak correlation of  $r(99) = .34, p = 0.1\%$ .
7. Our references below are based on a regular review of ministry reports, country response plans and policies, press and social media. Because of the rapidly evolving nature of the pandemic, we utilise a higher number of news reports rather than relying only on peer reviewed journal articles.



# APPENDIX C

## References

1. Crowder, B., Harb, D., Bollington, A., O'Malley, E.E., Grob-Zakhary, R., *COVID-19 and Schools: What We Can Learn from Six Months of Closures and Reopening*, Insights for Education, 2020, <https://education.org/facts-and-insights>.
2. Alwan, N.A., Burgess, R.A., Ashworth, S., et al, 'Scientific consensus on the COVID-19 pandemic: we need to act now', *Lancet*. 2020, 396(10260):e71-e72, <http://ees.elsevier.com/thelancet/www.thelancet.com>, accessed 29<sup>th</sup>, December, 2020.
3. *The Global Economic Outlook During the COVID-19 Pandemic: A Changed World*, World Bank, 2020, <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>, accessed 29<sup>th</sup>, December, 2020.
4. Regan, H., George, S., McKenzie, S., Vera, A., *Mongolia shuts schools as it goes on high alert for coronavirus*, CNN, [https://edition.cnn.com/asia/live-news/coronavirus-outbreak-01-27-20-intl-hnk/h\\_2555bcb4b394c8c559ada9a9b5c2792a](https://edition.cnn.com/asia/live-news/coronavirus-outbreak-01-27-20-intl-hnk/h_2555bcb4b394c8c559ada9a9b5c2792a), accessed December 29, 2020.
5. *China coronavirus: Lockdown measures rise across Hubei province*, BBC News, 23<sup>rd</sup> January, 2020, <https://www.bbc.com/news/world-asia-china-51217455>, accessed 29<sup>th</sup>, December, 2020.
6. UNESCO, *School closures caused by Coronavirus (Covid-19)*, UNESCO, <https://en.unesco.org/covid19/educationresponse>, accessed December 29, 2020.
7. UNESCO, *Adverse consequences of school closures (COVID-19 Education Response)*, UNESCO, 2020, <https://en.unesco.org/covid19/educationresponse/consequences>, accessed 29<sup>th</sup>, December, 2020.
8. Azevedo, J.P., Hasan, A., Goldemberg, D., Iqbal, S.A., Geven, K., *Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A Set of Global Estimates*, World Bank, June 2020, <https://www.worldbank.org/en/topic/education/publication/simulating-potential-impacts-of-covid-19-school-closures-learning-outcomes-a-set-of-global-estimates>.
9. Giattino, C., Ritchie, H., Roser, M., Ortiz-Ospina, E., Hasell, J., *Excess mortality during the Coronavirus pandemic (COVID-19)*, Our World in Data, 2020, <https://ourworldindata.org/excess-mortality-covid>, accessed 28<sup>th</sup> December, 2020.
10. *Which countries have protected both health and the economy in the pandemic?*, Our World in Data, <https://ourworldindata.org/covid-health-economy>, accessed 7<sup>th</sup> January, 2021.
11. *Vietnam schools close to prevent coronavirus outbreak*, The Star, <https://www.thestar.com.my/news/regional/2020/02/03/vietnam-schools-close-to-prevent-coronavirus-outbreak>, accessed 29<sup>th</sup> December, 2020.
12. Penn, M., *How Some Asian Countries Beat Back COVID-19*, Duke Global Health Institute News, 2020, <https://globalhealth.duke.edu/news/how-some-asian-countries-beat-back-covid-19>, accessed 29<sup>th</sup>, December, 2020.
13. New Zealand Ministry of Education, *Urgent Response Fund (COVID-19)*, New Zealand Ministry of Education, 2020, <https://www.education.govt.nz/covid-19/urgent-response-fund/>, accessed 28<sup>th</sup> December, 2020.
14. New Zealand Ministry of Education, *New Zealand: Attendance under COVID-19*, New Zealand Ministry of Education, <https://www.educationcounts.govt.nz/statistics/attendance-under-covid-19>, accessed 28<sup>th</sup> December, 2020.
15. Børne- og Undervisningsministeriet, *Hotline og hjælp*, Børne- og Undervisningsministeriet, <https://www.uvm.dk/aktuelt/i-fokus/information-til-uddannelsesinstitutioner-om-coronavirus-covid-19/hotline-og-hjaelp>, accessed 29<sup>th</sup> December, 2020.
16. *Here's how Denmark safely reopened schools in a pandemic without requiring masks*, SFGATE, <https://www.sfgate.com/science/article/How-Denmark-safely-reopened-schools-no-masks-15493094.php>, accessed 29<sup>th</sup> December, 2020.
17. Japan Ministry of Education, Culture, Sports, Science and Technology, *Measures for infectious diseases related to the new coronavirus*, Japan Ministry of Education, Culture, Sports, Science and Technology, 2020, [https://www.mext.go.jp/a\\_menu/coronavirus/index.html#a002](https://www.mext.go.jp/a_menu/coronavirus/index.html#a002), accessed 29<sup>th</sup> December, 2020.
18. Norwegian Institute of Public Health, *Nye veiledere for barnehager og skoler*, FHI, <https://www.fhi.no/nyheter/2020/nye-veiledere-for-barnehager-og-skoler/>, accessed 8<sup>th</sup> January, 2021.
19. The Office of the Prime Minister in Norway, *New national restrictions*, The Office of the Prime Minister in Norway, 26<sup>th</sup> October, 2020, <https://www.regjeringen.no/en/aktuelt/new-national-restrictions/id2776995/>, accessed 29<sup>th</sup> December, 2020.
20. Mokhtar, F., Sybilla, G., *Should Schools Close to Fight Virus? These Places Say No*, Bloomberg, 2020, <https://www.bloomberg.com/news/articles/2020-03-27/should-schools-close-to-fight-virus-these-countries-say-no>, accessed 29<sup>th</sup> December, 2020.
21. *Emergency declared for Tokyo, Kanagawa, Saitama and Chiba*, The Japan Times, <https://www.japantimes.co.jp/news/2021/01/07/national/japan-coronavirus-emergency/>, accessed 8<sup>th</sup> January, 2021.
22. Save the Children, *Save our Education: Responding to the education crisis in Burkina Faso*, Save the Children's Resource Centre, [https://resourcecentre.savethechildren.net/node/18445/pdf/save\\_our\\_education\\_national\\_advocacy\\_briefing\\_template\\_burkina\\_faso\\_final\\_eng.pdf](https://resourcecentre.savethechildren.net/node/18445/pdf/save_our_education_national_advocacy_briefing_template_burkina_faso_final_eng.pdf), accessed 30<sup>th</sup> December, 2020.
23. *Education Cannot Wait Interviews H.E. Mr. Stanislas Ouaro, Minister of National Education and Literacy, Burkina Faso*, Inter Press Service, <https://www.ipsnews.net/2020/12/education-cannot-wait-interviews-h-e-mr-stanislas-ouaro-minister-national-education-literacy-burkina-faso/>, accessed 30<sup>th</sup> December, 2020.
24. *Côte d'Ivoire children head back to school after COVID-19 shutdown*, CGTN, <https://newsaf.cgtn.com/news/2020-05-26/Cote-d-Ivoire-children-head-back-to-school-after-COVID-19-shutdown--QN5ss604HC/index.html>, accessed 30<sup>th</sup>

## ONE YEAR OF SCHOOL DISRUPTION

- December, 2020.
25. *WFP Côte d'Ivoire Country Brief, September 2020 - Côte d'Ivoire*, ReliefWeb, <https://reliefweb.int/report/c-te-divoire/wfp-c-te-divoire-country-brief-september-2020>, accessed 30<sup>th</sup> December, 2020.
  26. *Mali Teachers Strike Over Virus Concerns As Schools Reopen*, Barron's, <https://www.barrons.com/news/mali-teachers-strike-over-virus-concerns-as-schools-reopen-01591122005>, accessed 29<sup>th</sup> December, 2020.
  27. *Transitional President in Mali appoints new Prime Minister, top UN official tells Security Council*, UN News, <https://news.un.org/en/story/2020/10/1074992>, accessed 30<sup>th</sup> December, 2020.
  28. Murphy, G., *Minister would seek advice about keeping schools open if Ireland moves to Level 5*, *Irish Examiner*, 16<sup>th</sup> October, 2020, <https://www.irishexaminer.com/news/arid-40066046.html>, accessed 29<sup>th</sup> December, 2020.
  29. Claeson, M., Hanson, S., *Comment: COVID-19 and the Swedish enigma*, *Lancet*, 2020;6736(20):2020-2021, [http://dx.doi.org/10.1016/S0140-6736\(20\)32750-1](http://dx.doi.org/10.1016/S0140-6736(20)32750-1).
  30. *Sweden Closes High Schools Until Early January to Stem COVID-19 Infections*, Voice of America, <https://www.voanews.com/covid-19-pandemic/sweden-closes-high-schools-until-early-january-stem-covid-19-infections>, accessed 29<sup>th</sup> December, 2020.
  31. Peterhans, F., *Mask requirement is the lesser evil*, LCH, 2020, <https://www.lch.ch/aktuell/detail/maskenpflicht-ist-das-kleinere-uebel>, accessed 29<sup>th</sup> December 2020.
  32. *Coronavirus: Macron declares second national lockdown in France*. BBC News. <https://www.bbc.com/news/world-europe-54716993>, accessed 29<sup>th</sup> December, 2020.
  33. *Europe Keeps Schools Open, not Restaurants, Unlike U.S. cities*, The New York Times, <https://www.nytimes.com/2020/11/30/world/europe/france-covid-schools.html>, accessed 8<sup>th</sup> January, 2021.
  34. Malkin, E., *Covid fatalities soar in Mexico as president condemned for inaction*, The Guardian, 2020, <https://www.theguardian.com/world/2020/dec/23/mexico-coronavirus-amlo-cases-deaths>.
  35. Parks, K., *Coronavirus in South America: Amid Chaos, Uruguay Gets It Right*, Bloomberg, <https://www.bloomberg.com/news/articles/2020-06-30/in-midst-of-covid-chaos-one-latin-american-nation-gets-it-right>, accessed 29<sup>th</sup> December, 2020.
  36. *Uruguay: Faced with the outbreak, Lacalle Pou restricts night activities but they continue face-to-face classes*, Inspired Traveller, <https://www.inspiredtraveler.ca/uruguay-faced-with-the-outbreak-lacalle-pou-restricts-night-activities-but-they-continue-face-to-face-classes/>, accessed 29<sup>th</sup> December, 2020.
  37. *Iran to reopen schools in low-risk regions*, Xinhua, [http://www.xinhuanet.com/english/2020-09/02/c\\_139335376.htm](http://www.xinhuanet.com/english/2020-09/02/c_139335376.htm), accessed 8<sup>th</sup> January, 2021.
  38. Biller, D., *Brazil's Bolsonaro makes life-or-death coronavirus gamble*, Associated Press. <https://apnews.com/article/b21a296383694c6726d03e027134daf1>, accessed 29<sup>th</sup> December, 2020.
  39. Cláudia, L., *Crivella closes schools, but allows malls to operate 24h for Christmas shopping*, G1, 2020 <https://g1.globo.com/rj/rio-de-janeiro/noticia/2020/12/04/governo-e-prefeitura-do-rio-anunciam-novas-medidas-contra-a-covid-19.ghtml>, accessed 29<sup>th</sup> December, 2020.
  40. *Este es el semáforo del regreso a la "nueva normalidad."*, El Universal, 2020, <https://www.eluniversal.com.mx/nacion/politica/este-es-es-el-semaforo-del-regreso-la-nueva-normalidad>, accessed 29<sup>th</sup> December, 2020.
  41. *How Teachers' Unions Are Influencing Decisions on School Reopenings*, Education Week, <https://www.edweek.org/teaching-learning/how-teachers-unions-are-influencing-decisions-on-school-reopenings/2020/12>, accessed 30<sup>th</sup> December, 2020.
  42. MCH, *COVID-19 IMPACT: School District Status Updates for Fall 202*, MCH, 2020, <https://www.mchdata.com/covid19/schoolclosings>, accessed 30<sup>th</sup> December, 2020.
  43. *New York City public schools will begin to reopen with weekly COVID-19 testing*, Reuters, <https://uk.reuters.com/article/uk-health-coronavirus-usa-new-york/new-york-city-public-schools-will-begin-to-reopen-with-weekly-covid-19-testing-idUKKBN2890RY>, accessed 30<sup>th</sup> December, 2020.
  44. New York City Department of Education, *COVID-19 Information & Updates (mandatory COVID-19 testing)*, New York City Department of Education, 2020, <https://www.schools.nyc.gov/school-life/health-and-wellness/coronavirus-update>, accessed 30<sup>th</sup> December, 2020.
  45. *Can't decide whether to send your kids back to school? Here's what the experts say*, CBC News, <https://www.cbc.ca/news/canada/ottawa/ottawa-students-back-to-school-faq-things-to-consider-1.5682313>, accessed 8<sup>th</sup> January, 2021.
  46. *In Canada, a Push to Keep Schools Open in Second Lockdown*, The New York Times, <https://www.nytimes.com/2020/11/23/world/americas/Canada-virus-schools-open.html>, accessed 8<sup>th</sup> January, 2021.
  47. *LILLEY: Province makes right decision in keeping southern Ontario schools closed*, Toronto Sun, <https://torontosun.com/opinion/columnists/lilley-province-makes-right-decision-in-keeping-southern-ontario-schools-closed>, accessed 8<sup>th</sup> January, 2021.
  48. Marroquín, C.P., Domínguez, A., *Edwin Asturias presenta detalles de cómo sería el regreso a clases en el 2021*, *Prensa Libre*, 1<sup>st</sup> December, 2020, <https://www.prensalibre.com/guatemala/comunitario/edwin-asturias-presenta-detalles-de-como-seria-el-regreso-a-clase-en-el-2021/>, accessed 29<sup>th</sup> December, 2020.
  49. Chile Ministry of Education, *Mineduc fija el 1 de marzo inicio del año escolar 2021*, Chile Ministry of Education, <https://www.mineduc.cl/mineduc-fija-el-1-de-marzo-inicio-del-ano-escolar-2021/>, accessed 29<sup>th</sup> December, 2020.
  50. Larreta, H.R., *Coronavirus: Todos los cambios en CABA para la escuela, colonias de verano, turismo, restaurantes y espectáculos*, *Página12*, November 2020, <https://www.pagina12.com.ar/308575-coronavirus-todos-los-cambios-en-caba-para-la-escuela-coloni>, accessed 29<sup>th</sup> December, 2020.

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