



**SCHOOL RE-OPENING MODELS AND IMPLEMENTATION
APPROACHES DURING THE COVID-19 PANDEMIC**
A Global Analysis

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SCHOOL RE-OPENING MODELS AND IMPLEMENTATION APPROACHES DURING THE COVID 19 PANDEMIC - A GLOBAL ANALYSIS

BACKGROUND:

Earlier in the Spring of 2020, school gates around the world slammed shut. The COVID-19 pandemic has initiated unexpected and unprecedented changes to education around the world, impacting more than 1.5 billion students from preschool through higher education. For the first time in history, nearly all of the world's schools closed their doors, leaving millions of children deprived of formal access to learning. By early April, a shocking number of people were staying home as part of broader shutdowns to protect people from the novel coronavirus. The closure of schools is testing education systems' readiness and capacity to maintain student engagement and learning, and shedding renewed light on inequities that exist across and within countries that create barriers to quality education, especially for the most marginalized. The strong measures to control the virus worked in many places, noticeably decelerating the spread of COVID-19.

Throughout the world, the impact of school closures on student learning varies by socioeconomic status and the extent to which schools and school systems have the capacity to provide quality education remotely. As reported in a recent analysis of school closures and government responses to COVID-19, the learning gap between rich and poor is most likely grow during the pandemic; not just between high- and low-income countries, but also between high- and low-income regions and communities within countries.

As policymakers plan to reopen schools, learning from other countries' experiences that have already reopened will be especially useful. In this piece, Pakistan Alliance for Girls Education team has reviewed the experiences of Denmark and Finland, two of the first countries to plan for a gradual reopening of schools. Rather than drawing specific lessons or recommendations at this early stage, our goal is to share insights and raise questions to guide policymakers as they plan to reopen schools after the COVID-19 closures.

CONTEXT:

Schools are reopening in countries around the world in response to a substantial body of evidence that children are generally not affected by Covid-19 and it is insignificantly contagious when they get sick or infected. Authorities and policymakers globally also admit that school closures disseminate a long list of known and undetermined destruction to children and their social and emotional wellbeing.

Schools closed in many countries for an unspecified period of time during the COVID-19 pandemic as part of extenuation struggles to reduce transmission of this deadly virus. Currently, a number of countries have fully or somewhat moderately re-opened schools or are in the process of doing so. This document is a brief summary of the models and implementation approaches to re-opening schools that focuses on the methodologies used in selected 27 countries for which we were able to categorize and access data and information.

This is not a comprehensive survey of the methodologies or models applied in all identified countries that have re-opened schools. Our systematic search of the published and pre-print literature generated very few articles that address this topic and so this brief relies comprehensively on news articles and grey literature sources. It comprises of news articles, documents, blogs, reviews published in peer-reviewed journals or on pre-print servers, and other resources identified through the period of July.

CONTEMPLATIONS ON SCHOOL CLOSURES:

There is vigorous discussion and also an absence of scientific consensus about the vulnerability and exposure of young (school-age) children to COVID-19; their infectiousness, their role in further community transmission, and the impact of school closures and re-openings depending upon the subsequent transmission. There is also a strong debate about how pre-eminent it is to balance the potential benefit to decrease COVID-19 transmission by closing schools or considerably transforming the schedule of in-person learning against the very particular consequences of such measures on student learning; its indirect harms to students and the substantial encumbrance this places on parents and caregivers, particularly those who need to concurrently work concerns. The burden of these indirect effects is likely to fall disproportionately on poorer income families. This brief does not scientifically review these issues, but a model of interpretations related to this topic is included through an in-depth study of publications i.e. news articles, blogs, peer-reviews, etc. Many countries globally have applied localized or national school closures in response to the COVID-19 pandemic, with an approximation of almost 60% of enrolled children globally affected by school closures. An insignificant number of countries in regions with community transmission of COVID-19 never inflicted school closures. Sweden is most notable among countries that did not close all schools, although Sweden did close schools for secondary grade students between March 18 and June 4, 2020.

HOW SCHOOLS ARE OPERATING POST COVID-19?

There is a dearth of scientific unanimity about the impact of school closures and re-openings on community transmission of COVID-19. There is substantial apprehension about the indirect effect of school closures on students and parents. The methodologies of school re-opening involve reductions of class size, maintaining physical distance between students, and putting students in distinct groups with limited contact between groups to decrease the potential for wide-scale transmission within schools. Countries that have re-opened schools have established some degree of confounding start, stop, and break times within the school. A number of countries are using alternative shifts (morning, afternoon) or alternate days, while a smaller number of countries have retained comparatively normal school schedules. A number of countries have re-opened schools only for younger or older students in order to accommodate the proliferation in resources (classroom space, teachers, etc.) required for smaller class sizes. More countries have re-opened only for younger students than have re-opened only for older students. In a number of countries, face masks are compulsory for students and/or staff in schools, with an adaptability of the lower age limit for face mask requirements. However, some countries are not using facemasks as a part of their re-opening model. Efficient school-based testing for the COVID-19 virus or antibodies is being done on a small scale in a small class number of settings, but this approach is not widely executed at this time.

THE APPROACH TOWARDS RE-OPENING SCHOOLS AND SUBSEQUENT TRANSMISSION:

Since the preliminary round of school closures, many countries have re-opened schools using a wide range of models. Characteristics of these models that modify between countries include the affected grades (younger students only, older students only, or all students), schedules (reduced in-person time, alternating shifts, alternating days), and implementation of transmission control measures (class size reductions, physical distancing, face masks, hand washing, temperature checks, and viral or antibody testing).

AFFECTED GRADES:

Several, but not all, countries that have re-opened schools have done it for only a subset of grades. In most, this appears to be an effort to make available more classrooms to accommodate smaller class sizes. Many countries have re-opened schools only for younger children including Belgium, Denmark, France, Greece, Norway and Sweden initially while others have re-opened only for older

students, based on the conviction that older students would be more able to observe the physical/social distancing and transmission of control measures (Germany). A smaller number of countries have re-opened schools for all grades. France in “green zones”, Israel and Scotland recommended school re-opening by November 2020. Currently, Taiwan and Vietnam have proposed to re-open school in August.

SCHEDULES:

According to the data, many countries have followed alternative start times, break times, and dismissal times to maintain social distancing. Some countries have implemented alternative school schedules to accommodate smaller class sizes and to ensure safe social distancing. Germany, South Korea, and Scotland followed a model that allow students to attend alternate shifts i.e. morning and afternoon potentially whereas Belgium and Switzerland have alternate days model.

TRANSMISSION CONTROL MEASURES:

Many countries have introduced some combination of school-based measures intended to reduce transmission of COVID-19 among students and staff. These include the use of face masks with some variability in age requirements: Belgium, France, Germany, Israel, Japan, South Korea, Taiwan, and Vietnam. Belgium, Denmark, France, Germany, Greece, South Korea, Norway, Scotland and Switzerland have managed a reduced class size typically 10-15 students or approximately with 50% capacity. Israel, Sweden, Taiwan, and Vietnam have not reduced class size, many of which are relying on other measures to reduce transmission such as closing schools with confirmed cases and using desktop dividers to increase physical separation between classroom desks and cafeteria seating without increasing physical distance between students. Japan, South Korea, Taiwan, Vietnam required temperature checks at school entries. Routine screening for COVID-19 virus or antibodies is reported on a small scale in Germany. Israel, South Korea, New Zealand, and Germany reported systematic contact tracing in the event that a student or staff tests positive for COVID-19. There is limited data regarding the impact of school-reopening on COVID-19 transmission in the community. Based on the experience of four European countries Denmark, Norway, Sweden, and Germany, there is some evidence that school closures led to declines in the epidemic growth rates of COVID-19.

COUNTRY-SPECIFIC EXPERIENCE WITH SCHOOL RE-OPENING:

Re-opening of schools for all students in countries such as Denmark and Norway with low community transmission has not resulted in a significant increase in the growth rate of COVID-19 cases. Return of most students to school in countries like Germany with higher levels of community transmission has been accompanied by increased transmission among students, but not the school staff. After re-opening schools in Israel there have been a number of outbreaks of COVID-19 in schools that have resulted in school closures. In South Korea, schools in some areas were closed again after re-opening in response to surges in the number of COVID-19 cases in the community.

Below is country-wise explanation on how the schools operated and sustained after the re-opening.

COUNTRIES	EXPLANATION
CHINA	<p>In late January, China instituted a lockdown for the 11 million residents of Wuhan, where the novel coronavirus outbreak originated. Due to lockdown measures, some 200 million students transitioned to online learning in February, the Washington Post reported. On March 18, China reported no new local coronavirus cases for the first time since the outbreak and has gradually lifted restrictions in the weeks since.</p> <p>While schools in nine mainland provinces reopened for graduating students in early April, according to the South China Morning Post, UNESCO's data shows that most schools remained closed in larger regions. High school seniors in Beijing, Shanghai, and Guangzhou returned to school on April 27 to prepare for their college entrance exams.</p> <p>Schools in Beijing closed again in response to another outbreak, The New York Times reported on June 16, after almost two months without any new cases. Less than a month later, Beijing Municipal Health Commission reported only one new case. The June outbreak consisted of more than 328 new cases and no deaths. A month later, Beijing announced when students will return to school, per Xinhua News Agency. High school seniors will begin on August 29, while elementary and middle school students will return on three different dates: August</p>

	<p>29, September 1, and September 7. Kindergarteners will go back to school on September 8 and September 11.</p> <div data-bbox="502 322 1359 434" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools in China closed again after another outbreak due to schools re-opening.</p> </div>
SWEDEN	<p>Sweden did not close schools for students in kindergarten through grade 9 in response to the COVID-19 pandemic. Schools were closed for students in upper secondary grades from around March 18, 2020 through June 14, after which schools were reopened for all students. No major adjustments to class size, lunch policies, or recess rules were instituted. Seroprevalence surveys conducted by the Swedish Public Health Agency found that the antibody prevalence in children/teenagers was 4.7% compared with 6.7% in adults age 20-64 and 2.7% in adults age 65-70. The relatively high rate in children suggests there may have been significant spread in schools.</p> <div data-bbox="502 1149 1359 1261" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The surge in positive results of COVID-19 cases suggests there may have been significant spread in schools.</p> </div>
DENMARK	<p>After a closure of schools that started around March 16, 2020, Denmark re-opened schools for children under 11 years of age on April 15, 2020 in response to early evidence that very few children get severely ill from COVID-19. Primary school children were the first to return to school, and students are kept in small groups with minimal contact with others outside their group. “Micro-groups” of students arrive at a separate time, eat lunch separately, stay in their own zones in the playground and are taught by one teacher. These groups consist of approximately 12 students, which was determined based on the maximum number of students that could occupy a room while maintaining sufficient physical distance between students and teachers. This has required dividing classes and teaching staff. Because many schools are designed to include both primary and secondary school children, limiting re-opening of</p>

schools to primary grade students has allowed for sufficient physical classroom space to accommodate the small class sizes. Without this approach, schools would need to have morning and afternoon shifts. Students are assigned their own desks, which are spaced 6 feet apart from each other. During recess, children are allowed to play only in small groups. Handwashing and sanitization are an additional component to school re-opening. Students are asked to wash their hands hourly. Students and staff are not asked to wear face masks. In the context of low community transmission, school re-opening in Denmark has not resulted in a significant increase in the growth rate of COVID-19 cases.

Five weeks after students returned to school, Peter Andersen, an infectious disease epidemiology and prevention doctor told that reopening didn't exacerbate the virus.

The school re-opening in Denmark didn't exacerbate the virus.

GERMANY

Schools in Germany were closed starting around March 3, 2020 and began reopened around May 4 for older age students. Students are assigned their own fixed desks that are spaced at least 6 feet way from other desks. The fixed location of desks combined with student seating charts can be used by contact tracers if necessary. School days have been shortened and are supplemented with online lessons. This allows multiple groups of students to share classrooms, which are allowed to hold no more than 10 students. In at least some schools, students are being tested for COVID-19 every 4 days, with a negative test allowing students to attend school without a face mask.⁸ In the context of moderate community transmission, school re-opening in Germany has been accompanied by increased transmission among students, but not school staff.

Following a spike in coronavirus cases, some schools and day care centers in the German state of North Rhine-Westphalia were ordered to close on June 17. Nearly 500,000 students in Berlin and millions more

	<p>across the country returned to school less than two months later on August 9. In Berlin, students are masking up in the halls, but not during class or recess.</p> <p>North Rhine-Westphalia schools will reopen for middle and high school students on August 12. Students are required to wear face masks in class until the end of August. At the same time, two schools in Mecklenburg-Western Pomerania closed the week of its reopening because of a spike in new coronavirus cases in the region.</p> <div data-bbox="502 667 1359 734" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools re-opening in exacerbate the virus.</p> </div>
NETEHLAND	<p>Elementary schools in the Netherlands began to reopen on May 11, per Reuters. Schools opened with coronavirus safety measures like staggered attendance and teachers wearing face masks. Schools closed for most in mid-March because of the coronavirus, but some students of essential workers were able to attend. The following month, high schools began to reopen and elementary schools fully opened, Reuters reported.</p> <p>While many middle and high school students are expected to return to school in mid-August, 25% of Dutch schools don't have adequate ventilation, NL Times recently reported about the possibility of the poor ventilation leading to further spread of the coronavirus, the research from the Eindhoven University of Technology backs this. While schools could easily open classroom windows in the summer, the concern is that in the winter, having open windows is not feasible.</p> <div data-bbox="502 1668 1359 1780" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools are still closed without any further notice of re-opening.</p> </div>
HUNGARY	<p>Schools in Hungary began to reopen on June 2, Xinhua News Agency reported. Schools closed in mid-March because of the coronavirus</p>

	<p>pandemic. Schools were reopened for small groups, and students weren't required to attend.</p> <p>About a month earlier, graduating students took exams in-person with social distancing measures like having only 10 students in each room, per Reuters. Schools are set to reopen on September 1 for the new school year, according to a July Reuters report.</p> <div data-bbox="502 577 1359 689" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools are set to re-open on September 1st, 2020 after the global lockdown.</p> </div>
CZECH REPUBLIC	<p>The Czech Republic allowed graduating students to return to school to prepare for exams on May 11, per Brno Daily. The country reopened elementary schools for children in small groups on May 25, but attendance was not mandatory.</p> <p>Schools will not fully reopen until September, Reuters reported in April. They'll have sanitation regulations in place, as per expats. Schools were ordered to close indefinitely because of the coronavirus pandemic from March 10.</p> <div data-bbox="502 1317 1359 1429" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools will re-open on September 1st, 2020 after the global lockdown.</p> </div>
NORWAY	<p>In response to the COVID-19 pandemic, schools in Norway were closed on March 11, 2020. Re-opening of schools started on April 20 for kindergarten students followed on April 27 by students in grades 1 through 4. The government recommended that classes be limited to no more than 15 students. Special precautions include having children wash their desks daily. Some schools have divided their playgrounds. School for students in grades 5 and above and universities remain closed. In the context of low community transmission, school re-opening in Norway has not resulted in a significant increase in the growth rate of COVID-19 cases. To encourage social distancing, the government has urged schools to divide classes into groups of no more than 15 and have children wash</p>

	<p>their desks daily, among other precautions. Middle and high schools reopened on May 11, per Reuters.</p> <div data-bbox="502 322 1359 432" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The school re-opening in Norway has not resulted in a significant increase in the growth rate of COVID-19 cases.</p> </div>
<p>FRANCE</p>	<p>Starting on May 11, 2020 nursery and primary schools were re-opened across much of France. On May 18, schools were re-opened for students age 11 to 15 years old only in “green zones” where community transmission was limited. The president of France announced that schools for students 15 to 18 years old would re-open on June 22. Class sizes have been reduced and face masks are mandatory in secondary schools. About a week after 1.4 million students went back to class in May, the country confirmed 70 new cases of coronavirus in schools.</p> <p>Two weeks into June, France's primary and middle voluntary school attendance policy became mandatory, The Guardian reported, but upper high schools remain closed.</p> <div data-bbox="502 1223 1359 1285" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools have re-opened after May 11th, 2020 and are on.</p> </div>
<p>PORTUGAL</p>	<p>Daycares and high schools reopened in Portugal on May 18. High schools reopened for students in their last two years of coursework. Elementary and middle school students remained remote for the rest of the school year. Portugal closed schools in March to prevent the spread of the coronavirus, per Reuters.</p> <div data-bbox="502 1749 1359 1812" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools, daycares and high schools re-opened in May.</p> </div>
<p>BELGIUM</p>	<p>Schools in Belgium were re-opened starting on May 18, 2020, with all nursery schools open by June 2, followed by all primary school grades</p>

	<p>by June 8. Classroom size is limited to no more than 10 students. Schools are using split schedules with students attending on alternate days. Teachers are encouraged to wear a face mask if social distancing is not guaranteed. Children are grouped by class throughout the school day, including on the playground. Since the start of August, the country has seen between 300 and 900 new cases each day. Niel Hens, a biostatistician from Belgium's Group of Experts for the Exit Strategy, recently told Radio 1 that schools may go back to a partial reopening in September based on the country's current coronavirus cases. Middle and high school students would have staggered attendance while elementary students would all return to school but be limited to lunch and socialization inside their classroom bubble.</p> <div data-bbox="502 869 1359 976" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Schools may go back to a partial reopening in September based on the country's current coronavirus cases.</p> </div>
SWITZERLAND	<p>Switzerland Schools reopened in Switzerland on May 11, 2020 with strict social distancing measures in place. Many schools have reduced class sizes in half and students attend in-person classes only 2 days per week to allow for space for the smaller class sizes. Desks have been moved further apart and tape marks have been placed on the floor to aid students in maintaining appropriate physical distance. Hand sanitizing stations have been added throughout schools. School re-opening for students in grade 10 and above and for university students was delayed until June 8.</p> <div data-bbox="502 1641 1359 1749" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Schools were re-opened but delayed to open for university students until June 8.</p> </div>
GREECE	<p>Greece Kindergarten and primary school students in Greece returned to school starting on June 1, 2020. Class sizes are limited to 15 students and desks are spaced 1.5 meters apart. Breaks are staggered to allow for physical distancing on playgrounds.</p>

	<p>On August 9, Greece reported more than 200 cases in one day, per U.S. News. That's the highest number of new cases the country has reported in a day since the pandemic began. Vassilis Kikilias, the country's Minister of Health, said there will be new measures in place to prevent the spread of the virus soon.</p> <div data-bbox="502 483 1358 595" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Greece reported more than 200 cases in one day after the school re-opening.</p> </div>
BELARUS	<p>Schools in Belarus only closed for three weeks due to the coronavirus pandemic, the Associated Press reported on April 20. The students' scheduled break was extended by two additional weeks. Students weren't required to return to school, Education Minister Igor Karpenko told the AP.</p> <div data-bbox="502 1039 1358 1151" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools are still closed without any further notice of re-opening.</p> </div>
AUSTRIA	<p>Austria opened schools to graduating students on May 4 with social distancing measures, per Reuters. Some schools held classes in a gymnasium to allow for social distancing. Other students between 6 and 14 years old returned to school on May 18. Classes were split in half with scattered attendance to allow for social distancing. Austrian schools closed in March to prevent the spread of the coronavirus, Reuters reported on March 11.</p> <div data-bbox="502 1684 1358 1796" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools are still closed without any further notice of re-opening.</p> </div>
CROATIA	<p>Schools in Croatia reopened on May 11, but the majority of coursework remains online, per Croatia Week. Younger students have both in-</p>

	<p>person and online coursework, and older students have online coursework aside from art, lab, and clinical classes.</p> <p>Croatian schools closed for two weeks to prevent the spread of the coronavirus, Reuters reported in March. The following month, Lockdown was extended until May, Reuters reported in April.</p> <div data-bbox="502 506 1359 613" style="border: 1px solid black; padding: 5px;"> <p>The schools are operating online without any notice on re-opening of schools.</p> </div>
TURKMENISTAN	<p>Turkmenistan didn't close schools entirely amid the pandemic. According to the Washington Post, the country extended its break. Students went back to school on April 6 after an additional week of break, per Chronicles of Turkmenistan. The country has not reported any coronavirus cases and banned the use of the word "coronavirus," NPR reported on March 31.</p> <div data-bbox="502 1135 1359 1296" style="border: 1px solid black; padding: 5px;"> <p>The schools were re-opened on April 6th, 2020 and has not reported any coronavirus cases. Turkmenistan banned the use of the word "coronavirus"</p> </div>
FINLAND	<p>Schools in Finland began to reopen in mid-May with social distancing measures like staggered recess. Schools closed for children over 10 in March over coronavirus concerns, and students under 10 were advised to stay home too.</p> <div data-bbox="502 1709 1359 1816" style="border: 1px solid black; padding: 5px;"> <p>The schools are still closed without any further notice of re-opening.</p> </div>

<p>THAILAND</p>	<p>Thailand reopened schools on July 1, per Reuters, with safety measures like temperature checks and makeshift partitions between desks.</p> <p>Thai schools closed over coronavirus concerns on March 18. Next week, schools will reopen without social distancing requirements after the nation went two months without a single local transmission of the coronavirus, Bloomberg reported on August 7.</p> <div data-bbox="504 562 1361 674" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Schools will reopen without social distancing requirements on August 31, 2020</p> </div>
<p>JAPAN</p>	<p>Schools in Japan were closed on March 2, 2020. The Prime Minister announced on March 24 that the order closing schools would not be extended, leaving decisions about re-opening schools up to local municipalities.¹⁰ The Ministry of Health issued guidelines for school reopening that includes measures such as opening windows to ventilate classrooms, maintaining physical distance, checking temperatures daily, and wearing face masks.</p> <p>On July 11, The Post reported that many schools that reopened in May were no longer implementing staggered attendance. Across the country, schools are shortening summer break to make up for lost learning time.</p> <div data-bbox="504 1406 1361 1518" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Schools re-opened in May and didn't see any rise in COVID-19 cases.</p> </div>
<p>NEW ZEALAND</p>	<p>New Zealand Schools re-opened in New Zealand on May 14, 2020 following closures that started on March 24. Parents who are not comfortable sending their children back to school are allowed to make “transition arrangement” with their school. ¹⁹ Early childhood centers record information about students that would be needed for contact tracing.</p>

	<p>Schools reopened to all students on May 14, per Vox. Schools offered to make accommodations for parents who were concerned with bringing students back at that time.</p> <p>Three months later, the nation's Ministry of Health reported that New Zealand hasn't seen a new local case of coronavirus in 100 days.</p> <div data-bbox="502 539 1359 651" style="border: 1px solid black; padding: 5px;"> <p>Schools re-opened in May and didn't see any rise in COVID-19 cases.</p> </div>
SOUTH KOREA	<p>South Korea Schools began re-opening in late May, 2020. In the Seoul metropolitan area, limits have been placed on the proportion of the student populations allowed to be present at one time, with high schools limited to two-thirds of their student population and kindergartens, elementary, middle, and special education schools limited to one-third of their students at a time. Physical distancing measures have been put in place, including the use of plastic desktop dividers in classrooms and lunchrooms in many schools. The Korean CDC asked all school staff and students to wear face masks in school and to follow hygiene measures like coughing into their arms and washing hands. Temperature checks are required upon entering school buildings. In the event that someone inside a school is confirmed to have SARS-CoV-2 infection, all staff and students are sent home wearing masks and an epidemiological investigation and disinfection is initiated. Soon after the start of re-opening, a number of schools closed again and others postponed re-opening in response to a surge in new COVID-19 cases.</p> <div data-bbox="502 1693 1359 1805" style="border: 1px solid black; padding: 5px;"> <p>Schools were closed again after re-opening due to the rise in COVID-19 cases.</p> </div>
LITHUANIA	<p>Kindergartens in Lithuania began to reopen on May 18, Lithuanian Radio and Television reported. The country closed schools to prevent the spread of the coronavirus on March 12, per Reuters. The new school year</p>

	<p>will begin in classrooms on September 1, according to Baltic News Network. In areas where there are at least 16 coronavirus cases per 100,000 people, face masks will be mandatory. In areas where there are at least 25 cases per 100,000 people, schools may shift to remote coursework.</p> <div data-bbox="502 488 1359 595" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools are set to re-open on September 1st, 2020 after the global lockdown.</p> </div>
POLAND	<p>Schools in Poland began to reopen for 7 to 10 year-olds at the end of May with social distancing measures like having only 12 students per class and about five feet between desks, Notes from Poland reported on May 25.</p> <p>Poland closed schools in March to prevent the spread of the coronavirus, Reuters reported on March 11. In early August, the country saw record-high numbers for new coronavirus cases.</p> <div data-bbox="502 1171 1359 1279" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The schools are still closed without any further notice of re-opening.</p> </div>
VIETNAM	<p>Vietnam Starting on May 18, 2020, schools in Vietnam were reopened and students without a fever were allowed to return to class. Mandatory temperature checks are conducted at the entrance to the school. Facemasks are required throughout the school day. Attempts are made to maintain physical distancing.</p> <div data-bbox="502 1619 1359 1727" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Schools re-opened in May and didn't see any rise in COVID-19 cases.</p> </div>
TAIWAN	<p>After learning of the coronavirus outbreak, Taiwan took swift action to contain its spread.</p>

	<p>Taiwan never officially closed schools but did extend winter break by 10 days in February in order to disinfect education facilities, distribute medical supplies, and implement new procedures for schools with confirmed coronavirus cases. Schools now conduct temperature checks, and some have employed plastic tabletop desk partitions as an added security measure.</p> <div data-bbox="502 521 1359 589" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Taiwan didn't close schools at all.</p> </div>
<p>SINGAPORE</p>	<p>Singapore closed schools along with most workplaces to prevent the spread of the coronavirus, Reuters reported on April 3.</p> <p>Students in Singapore went back to school on June 2 with new measures to prevent the spread of the coronavirus, like wearing face masks and having their temperatures checked, per Reuters. At one school Reuters went to, students had staggered recesses and sat far apart in the school cafeteria.</p> <p>About six weeks later, Bloomberg reported that the schools will quarantine students and teachers if cases arise rather than closing schools entirely. Staggering student's recess and lunchtimes have made this possible.</p> <div data-bbox="502 1451 1359 1563" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Schools re-opened in June and didn't see any rise in COVID-19 cases.</p> </div>

WHAT LIES AHEAD?

In much of the world, schools that closed in March remained closed through the summer break, and autumn will see a wave of re-openings. For millions of especially vulnerable children, however, the disruption may resume back. Many low-income countries lack the resources to shrink class sizes or provide everyone with masks and so are uncertain to reopen in the midst of a pandemic. In June,

Bangladeshi Prime Minister Sheikh Hasina said schools will likely stay closed until the danger of COVID-19 has passed. Similarly, officials in the Philippines said in-person schooling will not resume until there is a vaccine to protect against COVID-19.

In other places, from Mexico to Afghanistan to the United States, planning for fall 2020 is progressing. In the United States, school districts are releasing a patchwork of plans, which often comprise hybrid models of virtual learning with small in-person classes. Whether those plans sufficiently protect children, staff, and communities from COVID-19 will depend on how case numbers look as school re-opening approaches. This reality was pitched into unambiguous relief late last month, when Arizona's governor announced he would delay in the state's school reopening by at least 2 weeks, to 17 August, because of a rise in cases.

The experiments will continue until the situation is in control. Yet scientists grieve that as before, it may not generate the details they crave about infection patterns and paths of transmission. Collecting data from school children comes with layers of complication beyond those of traditional pediatric research. In addition to seeking consent from parents and children, it often requires consent from teachers and school administrators who are already overwhelmed by their new reality. Integrating research, the only sure way to gauge the success of their varied strategies may be too much to ask. Based on initial experiences, it does not look like there has been a destructive effect on the spread among school children or in the society in general.

Conclusively, and to end with an optimistic note, the steady re-opening of schools after the crisis provides an unparalleled opportunity to reconsider the routine occurrences of students and teachers. With students having had to take a key role in their own learning and teachers having had to acclimate themselves to virtual teaching, we hope that upon returning to school, the communication between teachers and students will be more appealing, with teachers devoting lesser time teaching and an added time in enabling students skill sets.

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