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**T7 Task Force Sustainable Economic Recovery**

**POLICY BRIEF**

**BUILDING RESILIENT EDUCATION  
SYSTEMS TO MITIGATE THE ADVERSE  
EFFECTS OF COVID-19 AND FUTURE  
DISRUPTIONS OF LEARNING**

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# Abstract

Natural disasters, violent conflicts, and health crises are becoming more frequent and severer. These events disrupt schooling, resulting in significant learning losses and larger learning disparities. Without a carefully planned scheme to mitigate the impact of these disruptions and recover learning losses, the disruptions will lead to significant scars, permanently lowering lifetime earnings and well-being of individuals and persistently depressing economic growth. Previous and current disruptions clearly demonstrate the need to build highly resilient education systems. A resilient education system can be prepared to protect students, staff and school infrastructure in the best possible way, continue learning processes in the face of school closures, and rapidly recover foregone and lost learning. The G7 and international organizations can partner with country governments to ensure high education system resilience.

# Challenge

Natural disasters, violent conflicts, and health crises are becoming more frequent and more severe. Climate change is causing hurricanes to move slower, have stronger winds, and have higher rainfall (Ornes, 2018). The number of armed conflicts in 2017 was 49, the highest since the end of the cold war, resulting in 69,000 deaths (Dupuy & Rustad, 2018). Between 2007 and 2019, there were six public health emergencies of international concern, causing more than 200,000 fatalities (Wilder-Smith & Osman, 2020). As of February 2022, the COVID-19 pandemic had infected over 392 million people, of which 5.7 million have died (WHO, 2022).

Each of these catastrophes disrupts education. Schools are destroyed (Akbulut-Yeksel, 2014). Public expenditure is shifted away from education (Lai & Thyne, 2007). The mental burden and often accompanying economic stress compromise children’s learning readiness (Lai & La Greca, 2020) and weaken support systems (Andrabi et al., 2020). Ultimately, children spend less time in school or drop out altogether (Bandiera, et al., 2018; Smith, 2021; Yao et al., 2021). The Covid pandemic has brought by far the longest and most widespread disruption. Between March 2020 and January 2022, school closure in G20 countries averaged 48 weeks (UNESCO Country Dashboard). In other countries, school closures reached 100 weeks over the period. It has brought the impact of education disruptions and the need for effective policy responses to the fore.

Prolonged education disruptions lead to learning losses. The concept covers two aspects of loss: (i) absolute loss, where a student forgets what she has learned, and; (ii) relative loss, where a student learns less in a year compared to previous cohorts. In all the countries where data are available, evidence shows significant learning losses at all income levels. Students in both developing and developed countries are affected. In Brazil, secondary school-age children learned about 75% less than in a normal year (Lichand et al., 2021). In South Africa, grade 2 students lost 60%-80% of a year’s learning (Ardington, Wills, & Kotze, 2021). Students in Germany and the United Kingdom experienced losses (Schult et al., 2022; Blainey & Hannay, 2021). In the Netherlands, eight weeks of learning from home resulted in no learning gains (Engzell et al., 2021). Ultimately, these lead to lifetime earning losses and lower economic growth that reach trillions of dollars (UNESCO, UNICEF, & World Bank, 2021).

These disruptions also increase learning disparities. Students from lower socioeconomic status consistently suffer larger losses (Moscoviz & Evans, 2022). In Pakistan, school closures resulted in boys regressing in absolute terms, while girls learned less (Crawford, Hares, & Minardi, 2021). Niger’s 1986 meningitis epidemic disproportionately affected primary school-aged girls (Archibong and Annan, 2017). Adolescent girls tend to have a short window of opportunity to get back to school before they are expected to marry and have children, so the school closures are likely to shorten their total years of schooling.

Without a specific effort to recover learning, these losses will be permanent. Simulations suggest that a third of a year’s worth of learning loss during Covid-induced school closures could reduce children’s long-term learning by a full year as they could not catch up and fall further behind (Kaffenberger, 2021). Permanent learning loss occurs even if education infrastructure is rapidly built back. Fourteen weeks of school closure during the 2005 earthquake in Pakistan led to a less learning equivalent to 1.5 years of schooling four years later (Andrabi, Daniels, & Das, 2020). Older students whose formal schooling has ended prematurely could be permanently disadvantaged in the labour market, unless they are given a compensatory opportunity to acquire work skills. Such lasting burdens on a generation due to global-scale disruptions like a pandemic will have lasting repercussions for the national and global economies through economic interdependence between countries.

# Proposal

The proposal consists of three areas: increasing preparedness during normal times, implementing early systematic response during a disruption, and recovering learning after a disruption. In practice, these steps should form a cycle and be accompanied by evaluations to enable continuous improvement.

## I. Prepare for Disruptions

1. Prepare a learning continuity plan for a resilient education system. Just as businesses have a business continuity plan, national and subnational education administration bodies should have a learning continuity plan. Business continuity is a firm's ability to continue or rapidly recover business operation up to a pre-defined level following a disruption. Similarly, learning continuity is the ability of an education system to continue service delivery at pre-defined acceptable levels during a disruption and also help students make up for any learning loss following a disruption. Since disruptions are likely to continue to happen with higher frequency and worsening severity, education stakeholders should invest in a learning continuity plan with preparedness actions. The plan should specify early responses and recovery actions as well as pre-defined acceptable target levels of learning, conditional on the nature and severity of the incident and the simulated degree of learning losses.
2. Identify and organize education support for learning continuity. These include recruiting volunteer tutors and others in the community (including parents) to assist teachers. Investing in appropriate physical infrastructure and educational equipment is necessary. Examples include earthquake-proofing school buildings, relocating schools away from flood-prone and tsunami-risk areas, and investing in remote technology and in training programs to use such technology during disruptions.
3. Just as business continuity planning is supported by many standards including those developed by the International Organization Standardization (ISO), learning continuity planning should be supported by standards and guidelines prepared by government. International organizations can collect and share good practices across countries and support the development of sample learning continuity plans to help governments, especially in low and middle-income countries.

## II. Implement Early Responses to Minimize Learning Losses

4. Determine the degree of learning disruption through a learning assessment. This should be done at two levels. At the national level, sample-based surveys of schools and students should be implemented. At the school level, teachers need to assess learning losses of individual students. These assessments must be low-stakes instruments since the aim is to determine appropriate responses and because students and teachers may be already stressed or even traumatized due to the disruption.
5. Implement remote learning approaches so children can continue learning outside their schools. The appropriate mode to use depends on specific context, such as the availability and reliability of Internet access, mobile phones, radio and TV connections, and learning materials including books in the home. Azevedo et al. (2021) estimate from recent household survey data that the share of households with computers and Internet connection in lower-income countries can be as low as 6 percent, thus weakening the effectiveness of remote mitigation efforts in those areas.
6. Provide work-skill training programs for older students whose schooling ends prematurely. Specific implementation would depend on the reliability and availability of training service providers, as discussed in the next section. In a country with a learning continuity plan or a well-developed school-to-work transition programs, these may already be in place and only need to be expanded to cover more youth. These programs should also be continued during the recovery phase.



### III. Recover Learning Losses

7. For younger students, the key challenge is to recover foundational skills, as these skills are the basis for future learning. Following the ALIGNS principle (Hwa, Kaffenberger, & Silberstein, 2020), the first step is to set clear goals for children’s learning progress in line with current learning levels. This must be informed by the learning assessments in the previous point. The second step is to align instruction with current learning levels and targeted learning progress. Afterwards, provide effective and coherent support to teachers and instructors to implement remediation (that is, helping students catch up the lost learning). The specific action depends on the capability of each education system. For example, in some countries this may involve simplifying the school curriculum or launching new education technology products. If executed effectively, student’s learning outcomes would not only recover but be on a higher trajectory than the pre-pandemic trend (Sacerdote, 2012; Kaffenberger, 2021).

## Implementation

### Disruption Preparedness

The first step is to review the effects of previous disruptions, and the impact of mitigation and recovery efforts. Vulnerability assessments across geographic areas, proneness to disruptions, different ethnicities or socioeconomic status are needed. A systematic approach calls for education leaders, along with education stakeholders, to develop and test a plan that would minimize the disruption of student learning, while also protecting the physical and mental well-being of students and their families. The plan should be differentiated according to the severity, scale and duration of the emergency, but it should also not be too complex as to delay or paralyze implementation. After a draft plan is available, further assess the capacity and willingness of education stakeholders to implement the plan, and the availability and distribution of resources to execute it, including technological resources and communication infrastructure. Finally, undertake periodic training and drills for schools. The plan should also be incorporated into teacher training programs and the training of school leaders.

In settings that are prone to natural disasters such as floods, flood hazard maps indicating geographical areas where such floods have occurred in the past can be used as a tool for planning where extra resources are needed to prevent education disruption (Ahmed, Ashikuzzaman, & Nisha, 2016). For example, instead of closing classes in flood-prone areas, those classes can be transferred, as planned, to nearby schools that are not flooded using double shifts. In another example, constructing school buildings on a high ground and with sufficient distance from coastlines could protect the school from being destroyed in case of a tsunami (Sakurai et al., 2018).

### Early Responses and Recovery

Implementation must be tailored to the capacity, opportunities, and constraints of the context. One-size-fits-all solutions or silver bullets do not exist. Since the short-term imperative is to recover learning, system capability should be taken as given. Therefore, start with assessing the capability of the education system. Afterwards, determine the best action that be done given the capability. As an example, different recovery

actions can be undertaken depending on the feasibility to implement teacher training, availability of technology, and reliability of community support (Angrist et al., 2021; Beatty et al., 2020).

Priority recovery actions include remediation, simplifying the curriculum, and differentiating and adapting teaching to students’ levels, to ensure all learners acquire foundational literacy and numeracy. Actions can begin as soon as the worst of a crisis is over. Different professions and community members, and that of the private sector, nonprofit organization and governments should be involved. An all-hands-on-deck approach enables a faster and broader recovery. Primary school teachers can use the assistance of parents and university students to accelerate the recovery of basic skills. Health professionals can diagnose physical and psychological traumas suffered by students and teachers. Engineers can assess the post-crisis safety of school infrastructure. IT professionals can ensure that the computer and communications systems used by schools are functional.

The table below provides examples of actions that can be implemented given the capability of the education system.

	Implementation in a Low-Capability System	Implementation in a High-Capability System
<b>Preparedness</b>	<ul style="list-style-type: none"> <li>• Learning continuity planning with support from external experts and stakeholders</li> <li>• Training programs for teachers, school leaders, community or volunteer tutors on content of learning continuity plan</li> <li>• Involvement of professionals (psychologists, health professionals, IT professionals) and community volunteers as part of Learning Teams</li> <li>• Relocation of school infrastructure in less disaster-prone areas</li> </ul>	<ul style="list-style-type: none"> <li>• Learning continuity planning based on previous experience, largely internally driven</li> <li>• Professional or educated youth tutors</li> <li>• Communicate learning continuity plan broadly</li> <li>• Involvement of professionals (psychologists, health professionals, IT professionals) as part of Learning Teams</li> <li>• Investment in disaster-resistant school infrastructure</li> </ul>
<b>Early responses</b>		
National survey of learning levels	<ul style="list-style-type: none"> <li>• Periodic community-based learning assessments</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic nationally representative household surveys, or stand-alone surveys</li> </ul>
Classroom formative assessment	<ul style="list-style-type: none"> <li>• Short, uniform assessment of foundational skills with specified intervals</li> </ul>	<ul style="list-style-type: none"> <li>• App-based, adaptive assessments</li> </ul>
Remote learning	<ul style="list-style-type: none"> <li>• Phone, radio, or television-based programs</li> <li>• Parental or sibling involvement limited to ensuring foundational skills retention</li> <li>• Toll-free helpdesks</li> </ul>	<ul style="list-style-type: none"> <li>• Computer-adaptive learning software</li> <li>• More comprehensive parental and community involvement</li> </ul>

		<ul style="list-style-type: none"> <li>• <i>Government-provided internet credits</i></li> </ul>
Assistance for youth	<ul style="list-style-type: none"> <li>• <i>Subsidize firms for employing and training youth</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Provide work-skill training vouchers, allowing youth to select training from wide-ranging private providers</i></li> </ul>
<b>Recovery</b>		
Remediation	<ul style="list-style-type: none"> <li>• <i>Mobilize community or volunteer tutors</i></li> <li>• <i>Encourage parent or sibling engagement</i></li> <li>• <i>Institute longer school days and double-shifts</i></li> <li>• <i>Phone, radio or television-based learning programs</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Mobilize professional or educated youth tutors</i></li> <li>• <i>Learning teams</i></li> <li>• <i>Computer-adaptive learning, app to suggest teaching materials</i></li> </ul>
Simplifying curriculum, adapting instruction to learning levels	<ul style="list-style-type: none"> <li>• <i>Teaching scripts, structured pedagogy</i></li> <li>• <i>Group students by skill levels, not by grade</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Computer-adaptive learning</i></li> <li>• <i>New curriculum accompanied with teacher training and coaching</i></li> </ul>

For youth, the first immediate action that could be taken by the government is to partner with the private sector to provide on-the-job training, equipping youth with job-specific skills for older students who ended schooling prematurely during school closure. Secondly, the government could also provide vouchers that such students can use to learn general skills at private training providers. The latter would also serve as the foundation for the government to encourage continuous skills upgrading beyond formal schooling.

To achieve the above, the government could alternatively provide subsidies to employers who train apprentices or trainees practically in the workplace. The subsidy to the employer may also capture a component to compensate for reduced working hours because of the training engagement. Another option is to provide trainees with vouchers that can be used to attend training or short courses offered by professional training agencies that have been curated by the government. A complementary policy would be to provide a bursary or stipend directly to the trainee to compensate for income forgone. This is particularly an option to train those who need to earn an income while in training.

In Indonesia, the *Prakerja* (pre-employment) program, which began in 2020 and was adapted to be one of the government's pandemic response policies, has curated training programs from 180

providers and reached 11 million youth. The program increased entrepreneurship by 30% and income by 8% (Said, 2021).

### **Improving the Capability of Education Systems**

Ultimately, the preparedness and specific actions that an education system could execute when facing a disruption depend on its capability. Capability is defined as the level of acceptance of a problem, the authority to take ownership of the problem and search for potential solutions, and the ability to design and implement the solutions (Andrews, Pritchett, & Woolcock, 2017).

Capability is also related to an education system's financial resources.

Capability improvements can be achieved through learning by doing. Initially, building capability requires high-touch support from external parties, gradually declining to low-touch support as capabilities develop. Pitfalls such as premature load bearing, where a low capability system is asked to do too much too soon, must be avoided (Pritchett, 2019).

### **International Cooperation**

International cooperation in times of educational disruptions should be leveraged, balancing between assistance and country ownership. Countries should have a significant role in determining which assistance to receive and directing where it should go, to avoid unnecessary duplication as well as omission.

The G7 should encourage multilateral development banks (MDBs) to help developing countries build back with more resilient education systems in order to address future crises. As just mentioned, an area of MDBs' contribution is to assist the developing country governments to support practitioners and policymakers to develop quality plans for learning continuity. Another is to finance education infrastructure investments that are informed by vulnerability assessments. The MDBs should also help the governments in mitigation and recovery from learning losses. That is, they can play critically important roles in assisting developing country governments in assessing learning losses, providing work-skill training programs, and taking remediation and other recovery actions as soon as possible, thereby mitigating the potentially tremendous and lasting impact of learning losses across the world. Last but not least, they can help establish a global community of practice, involving charitable organizations, the private sector, donor agencies, universities and other non-governmental organizations to find out what works and can be scaled in which context.



# References

- Ahmed, J.U., Ashikuzzaman, N.M. and Nisha, N. (2016). Understanding operations of floating schools: A case of Shidhulai Swanirvar Sangstha in Bangladesh. *South Asian Journal of Business and Management Cases*, 5(2), pp.221-233.
- Akbulut-Yuksel, M. (2014). Children of war the long-run effects of large-scale physical destruction and warfare on children. *Journal of Human resources*, 49(3), 634-662. <http://jhr.uwpress.org/content/49/3/634.short>
- Andrabi, T., Daniels, ., and Das, J. (2020). *Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005*. RISE Working Paper 20/039. [https://doi.org/10.35489/BSG-RISE-WP\\_2020/039](https://doi.org/10.35489/BSG-RISE-WP_2020/039)
- Andrews, M., Pritchett, L., and Woolcock, M. (2017). *Building State Capability: Evidence, Analysis, Action*. Oxford: Oxford University Press. <https://bsc.cid.harvard.edu/building-state-capability-evidence-analysis-action>
- Angrist, N., de Barros, A., Bhula, R., Chakera S., Cummiskey, C., DeStefano, J., Floretta, J., Kaffenberger, M., Piper, B., and Stern, J. (2021). Building back better to avert a learning catastrophe: Estimating learning loss from Covid-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery. *International Journal of Educational Development*, 84: 102397. <https://doi.org/10.1016/j.ijedudev.2021.102397>
- Archibong, B. and Annan, F. (2017). Disease and Gender Gaps in Human Capital Investment: Evidence from Niger's 1986 Meningitis Epidemic. *American Economic Review*, 107(5): 530-35.
- Ardington, C., Wills, G., and Kotze, J. (2021). COVID-19 learning losses: Early grade reading in South Africa. *International Journal of Educational Development*, 86: 102480. <https://doi.org/10.1016/j.ijedudev.2021.102480>
- Azevedo, J.P., Hasan, A., Goldemberg, D., Geven, K. and Iqbal, S.A. (2021). Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates. *The World Bank Research Observer*, 36(1): 1-40.
- Bandiera, O., Buehren, N., Goldstein, M., Rasul, I., and Smurra, A. (2018). The Economic Lives of Young Women in the Time of Ebola: Lessons from an Empowerment Program. The World Bank, Africa Gender Innovation Lab.
- Beatty, A., Pradhan, M., Suryadarma, D., Tresnatri, F.A., & Dharmawan, G.F. (2020). *Recovering learning losses as schools reopen in Indonesia: Guidance for policymakers*. RISE Programme in Indonesia. Jakarta: SMERU Research Institute.
- Blainey, K., and Hannay, T. (2021). The Impact of School Closures on Autumn 2020 Attainment. RS Assessment from Hodder Education
- Crawford, L., Hares, S., and Minardi, A.L. (2021). New data on learning loss in Pakistan. <https://www.cgdev.org/blog/new-data-learning-loss-pakistan>

- Dupuy, K., & Rustad, S. A. (2018). Trends in armed conflict, 1946–2017. *Conflict Trends*, 5, 2018. <https://reliefweb.int/sites/reliefweb.int/files/resources/Dupuy%2C%20Rustad-%20Trends%20in%20Armed%20Conflict%2C%201946%E2%80%932017%2C%20Conflict%20Trends%205-2018.pdf>
- Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences*, 118(17), e2022376118. <https://doi.org/10.1073/pnas.2022376118>
- Global Education Evidence Advisory Panel. 2022. *Prioritizing Learning during COVID-19*. World Bank, UNICEF, and FCDO.
- Hwa, Y, Kaffenberger, M., and Silberstein, J. (2020). Aligning levels of instruction with goals and the needs of students (ALIGNs): Varied approaches, common principles. RISE Insight Series. 2020/022. <https://riseprogramme.org/publications/aligning-levels-instruction-goals-and-needs-students-aligns-varied-approaches-common>
- Kaffenberger, M. (2021). Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss. *International Journal of Educational Development*, 81: 102326.
- Said, A.A. (2021). *Riset Harvard-MIT: Kartu Prakerja Tambah Pendapatan Bulanan Rp 122.500*. <https://katadata.co.id/agustiyanti/finansial/61a757efeb39a/riset-harvard-mit-kartu-prakerja-tambah-pendapatan-bulanan-rp-122500>
- Lai, B.S., & La Greca, A. (2020). Understanding the Impacts of Natural Disasters on Children. *Child Evidence Brief*, 8. <https://www.srcd.org/research/understanding-impacts-natural-disasters-children>
- Lai, B., & Thyne, C. (2007). The effect of civil war on education, 1980-97. *Journal of Peace Research*, 44(3): 277-292. <https://doi.org/10.1177/0022343307076631>
- Lichand, G., Doria, C.A., Neto, O.L., & Cossi, J. (2021) *The impacts of remote learning on secondary education during the pandemic in Brazil*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3841775](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3841775)
- Moscoviz, L., & Evans, D.K. (2022). *Learning Loss and Student Dropouts during the COVID-19 Pandemic: A Review of the Evidence Two Years after Schools Shut Down*. Center for Global Development. <https://cgdev.org/sites/default/files/learning-loss-and-student-dropouts-during-covid-19-pandemic-review-evidence-two-years.pdf>
- Ornes, S. (2018). How does climate change influence extreme weather? Impact attribution research seeks answers. *PNAS*, 115(33): 8232-8235. <https://www.pnas.org/doi/pdf/10.1073/pnas.1811393115>
- Pritchett, L. (2019). *The big stuck in state capability and premature load bearing, some new evidence*. <https://buildingstatecapability.com/2019/07/05/the-big-stuck-in-state-capability-and-premature-load-bearing-some-new-evidence/>
- Sacerdote, B. (2012). When the Saints Go Marching Out: Long-Term Outcomes for Student Evacuees from Hurricanes Katrina and Rita. *American Economic Journal: Applied Economics*, 4(1): 109-135. doi:10.1257/app.4.1.109.
- Sakurai, A., Bisri, M.B.F., Oda, T., Oktari, R.S., Murayama, Y., Nizammudin, & Affan, M. (2018). Exploring minimum essentials for sustainable school disaster preparedness: A case of elementary schools in Banda

Aceh City, Indonesia. *International Journal of Disaster Risk Reduction*, 29: 73-83.  
<https://www.sciencedirect.com/science/article/abs/pii/S2212420917301723>

Schult, J., & Lindner, M. A. (2022). Did students learn less during the COVID-19 pandemic? reading and mathematics competencies before and after the first pandemic wave.

Smith, W.C. (2021). Consequences of school closure on access to education: Lessons from the 2013–2016 Ebola pandemic. *International Review of Education*, 67: 53–78. <https://doi.org/10.1007/s11159-021-09900-2>

UNESCO Country Dashboard—Covid-19 Response <https://covid19.uis.unesco.org/global-monitoring-school-closures-covid19/country-dashboard/>

UNESCO UNICEF World Bank: <https://www.unicef.org/reports/state-global-education-crisis>

WHO. (2022). *Weekly epidemiological update on COVID-19*. Edition 78. 8 February 2022  
<https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---8-february-2022>

Wilder-Smith, A., & Osman, S. (2020) Public health emergencies of international concern: A historic overview. *Journal of Travel Medicine*, 27(8): taaa227. <https://pubmed.ncbi.nlm.nih.gov/33284964/>

World Bank. (2018) *Learning to realize education's promise*. Washington DC: World Bank.  
<https://www.worldbank.org/en/publication/wdr2018>

Yao, H., Memon, A.S., Amaro, D., Rigole, A., Abdou, Y.D. (2021). Public health emergencies and school attendance: What the Ebola crisis can teach us about the coming post-COVID education landscape. *International Journal of Educational Development*, 85: 102457.  
<https://doi.org/10.1016/j.ijedudev.2021.102457>

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