



POLICY BRIEF

No. 11, August 2021

Education System Resilience for Cascading Risk Towards Sustainable Pathway

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Executive Summary

Education system is the backbone to develop the societal resilience as well as cornerstone to achieve sustainable development goals. Resilient education system tends to ensure the continuity and safety of the education during the disasters and associated cascading impacts as well as capacity to bounce back better. A proper plan to mitigate and manage hazards and resilient infrastructures in academic institutions protects many lives during crises and maintains resilience in the education system. Sustainable Development Goals (SDG) and Sendai Framework for Disaster Risk Reduction (SFDRR) have strongly projected the need for a resilience education system to ensure coherence in all development phenomena. Education for Sustainable Development (ESD) for 2030 also promotes the integration of sustainable development and the SDGs into education and learning, as well as ensuring the integration of education and learning into all activities that promote sustainable development and the SDGs. Education is one of the essential components which might be impacted by the cascading disasters at individual level and disrupt societal functioning. Henceforth, resilience in the education system is essential to maintain the continuous flow of delivering education, enhancing skills, contributing to economic prosperity, and refocusing efforts on a new path of growth that is more sustainable and can be achieved to their full potential.

This policy brief discusses the challenges on disaster education during multiple hazards, disruptive technologies and higher education diplomacy in the region and presents key recommendations to ensure resilient education institutions that will utterly contribute to the resilience education system. The education resilience and higher education institution consortium initiated under the ProSPER.Net supported joint project “Disaster Education for Integrating SFDRR And SDG In Asia” advocates the multidisciplinary disaster risk assessment and management approaches through the 2nd International Symposium on “Disaster Resilience and Sustainable Development” hosted by the Asian Institute of Technology.

Introduction

The United Nations has recognized education as a fundamental human right. Article 26 of the Universal Declaration of Human Rights has clearly stated that "Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit." Education is not a one-time injecting mechanism; it is a continuous process of reforming a human to stand up in a better position. SDG Target 4.7 describes to address the purpose and quality of education and it aims to achieve that, by 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development. In an educating process, the development of an individual is determined by many factors: environment, guidance, accessibility, affordability, and positionality. Moreover, access to secure learning spaces is important (Moriarty Kate, 2018). Educational facilities are considered as one of the critical infrastructures. UNDRR, (2019) has indicted educational facilities as a prime factor in disaster risk analysis. The report has also identified educational facilities as a social determinant in contributing to disaster risk. Tong et al., (2012) shows education institutions have suffered significant losses due to structural collapse. Disasters are damaging facilities and equipment that have hampered students' access to education and

forced them to be out of institutions for weeks, months or even years following a tragedy. Sharmin & Naznin, (2013); Tong et al., (2012) reflect the tragedy of educational discontinuity in a post-disaster context. Each day, the number of disasters faced by educational facilities across the globe is increasing. Houston, (2017) shows that educational institutions are largely exposed and vulnerable to both natural and anthropogenic hazards. To ensure the resilient infrastructure of all educational institutions; a global safety assessment of educational institutions was conducted as suggested by the ISDR Global Platform for Disaster Risk Reduction held in 2009 (Bastidas & Petal, 2021); however, nothing significant has been done to acquire a concrete plan as suggested in the report for safer educational institutions by many disaster-prone countries. In addition, the COVID-19 pandemic further pushed the education facilities into the risk zone. Subsequently, a scary fact is reflected in the (Nations, 2020), which states that closure of education facilities during the COVID-19 immensely impacted education. The SDG report 2020 has also assumed that the continuation of closures of facilities may reverse the years-long progress achieved in ensuring access to education.

Investing in the structural strengthening of educational institutions is essential to safeguard students and the community: to maintain educational continuity during and after the crisis (Sharmin & Naznin, 2013). A strong policy addressing the preparedness and contingency plan of educational facilities to tackle disaster and its continuance, can help the regular functioning of educational facilities despite any context or situation. A robust operational regulation supported by a proper assessment of possible hazards and assurance of mitigation and preparedness activities can support strengthening the capacity of educational institutions to be functional. The policy brief aims to advocate for robust policies and a standard operating procedure that address the need of educational institutions to be functional despite any situation. In this regard, the policy brief urges regional, National, and local governments to ensure an appropriate disaster management policy to address multi-hazard crises in the education facilities by providing them a fearless environment to utterly focus on their motto to develop quality human resources. Technological developments and introduction of disruptive technologies are always exciting and aspiring, which provide us an opportunity for an untapped potential for tackling challenge for higher education in terms of teaching, learning and research. While using the opportunities for resilient education system exploring and leveraging the potential of technology, accessibility and affordability might have disproportionate impacts at the societal level having a great risk of exacerbating divides. Thus, we need to consider the opportunities to be explored and at the same time to advocate and raise awareness of the important global challenges and risks related to digital transformation in order to close gaps, avoid biases and ensure an inclusive, fair, ethical and human-centred approach to digitalization.

Challenges in Managing Educational Institutions During Disaster

In recent years with the onset of the COVID-19 pandemic, the global communities experienced the most tragic moment ever in humankind. The decade also faced some major natural and human-induced disasters in regional and national levels. The UNDRR data shows that in the last twenty years (2000-2019), the global communities have experienced 7,348 natural disasters, which took the lives of 1.23 million and affected 4.03 billion people (CCRED, 2019). According to UNICEF, between 2015 -2019, educational institutions of 93 countries faced either sort of disaster which impacted the education of thousands of students. Additionally, educational institutions are also being used as a community shelter in many disasters affected places. So, in both cases, an individual's education has always been compromised during disasters. At the end of April 2020, COVID-19 pandemic forced educational institutions to shut down in 186 countries, affecting approximately 74 per cent of total enrolled student population (Di Pietro et al., 2020).

Even though educational institutions are at high risk, many have not implemented effective emergency preparedness measures. Shah et al., (2018) pinpoints that many educational institutions from lower- and

middle-income countries lack; contingency plan, evacuation routes, emergency equipment and resources, and disaster preparedness guidelines. Though progress can be noticed in disaster education, the eye of policymakers is yet not zoomed in to the safety governance of educational institutions. Ensuring disaster management policy not just ensures implementation of disaster education, but also creates a base of safety for students, faculties, and as well as for communities. Bisri & Sakurai, (2017) highlight the need for policy instruments to ensure safety in educational institutions and demand for ministerial-level regulation combined with a local regulation ensuring all kinds of resources to have resilient infrastructures for academic institutions. The availability of policy directives or action plans at the institution is essential to bridge the gap between national policy and local disaster education and response.

Amid COVID-19 pandemic, to ensure education continuity, most educational institutions made an emergency transform, or an unplanned and sudden shift, from traditional to distance learning, which is the so-called Emergency Remote Learning (Khlaif, Salha, & Kouraichi, 2021). In the meantime, the pandemic has posed immense stress on school administration, where the administration staff was also forced to switch to the work-from-home mode while the technology, infrastructure and finance needed for a smooth adaptation to the crisis were not necessarily present. As a result, short-term supporting measures such as supply of digital learning devices, financial support to schools and students, funds for safety and cleaning equipment were introduced in some countries to help schools maintain their operations and activities (OECD, 2020).

The SDG and SFDRR have prioritized the education and education institutions as a significant indicator and stakeholder contributing to achieving resilient and sustainable development (Pal, Shaw, et al., n.d.). The impact on education correlates with the employment and livelihood of many individuals too. The regular functionality of educational institutions cannot be ignored; having resilient education institutions play a vital role in the psychological and social aspects of the community by protecting the young minds from many distractions invited by disasters. The formulation and endorsement of the advocated policy is essential for profound changes as aimed by SDGs and SFDRR. The endorsement of required policies is a pillar of the resilience education system (Pal, Dhungana, et al., n.d.). However, in most of the lower-income countries, especially in the Asian region, where the privatization of education is booming, rather than financial difficulties, the lack of sensitization, policy influence from private sectors, and weak political will is creating a barrier in formulating and endorsing the required policies.

Major Discourses from Disaster Resilience and Sustainable Development 2021

It was discussed in the earlier policy recommendations that the robust regional network with the collective capacity of Higher Education Institute (HEI) network bridge the knowledge gaps and challenges for individual educational institutions to restructure and introduce multidisciplinary and transdisciplinary DRR and sustainability education in the region at all levels. The educational diplomacy for resilient education system in the region promoted through the multi-institutional and multidisciplinary international event. The 2nd International Symposium on Disaster Resilience and Sustainable Development and five webinars on DRR Education series put together number of HEIs in the region and hundreds of experts from diversified fields. Education system resilience came as a common discussion points across the forum. It is essential to have resilient HEI for education continuity and to maintain the coherence in the societal functions to promote core values of education (Bartusevičienė et al., 2021). Building academic alliances for promoting sustainability paradigm in postgraduate education and research for Disaster Resilience through DRR Webinar and International Symposium reflected the following major areas of concern.

1. The fundamental priorities of DRR and targets of SDGs are intertwined, therefore identifying specific opportunities to mainstreaming of DRR to achieve SDGs are paramount.
2. Education should also play a role in building knowledge, skills, and attitude to reduce disaster risk as help in risk informed decision making. Paradigm shift for education system from crisis centric to risk centric approach is necessary to help improve education system resilience.
3. Safety Resilience Index of educational institutions should be incorporated with technology and innovations to control internal and external factors and analyze natural conditions.
4. Stronger connections among the health sciences, natural and social sciences, and engineering are required to build a practical framework for disaster risk management and provide opportunities for multidisciplinary participation in science and technology to collaborate.
5. Educational institutions are significant for building public awareness and preparation before a disaster, therefore develop a network and capacity to bridge the gap and explore the possibility of meaningful collaboration.
6. There is a need to improve the institutional frameworks to create a safe enabling environment for resilient education infrastructures to withstand multiple hazards. In addition, there is an emerging need for collaboration between educational institutions and local governments in managing emergencies which helps to increase the capacity of educational institutions and community groups.
7. Communicating risks and intervention is very crucial in risk reduction and management; local context and experiences of communities can provide clear manifestations of risk-related behaviors and adaptive capacities.
8. Post Recovery and Rehabilitation strategic plans for Building back better to cope with the changes in learning mode ensure quality education.

Policy Recommendations for Education Resilience

Resilient educational institutions are the foundation for a resilience education system. In addition, endorsement of required policies ensures safer communities and contributes to society's sustainable growth. It is essential to bridge the gaps and create mutual understanding of local as well as global challenges to determine the key values and principles that are pivotal in order to shape a meaningful, digital future for the common global good, regardless of our physical base. Experiences and risk perception can both be a source of vulnerabilities as well as a source of adaptive strategies for the educational institutions affected by disasters.

- The national government should have guidelines and institutional frameworks to create a safe, enabling environment and ensure that the safety protocols approve all educational facilities.
- National and Regional governments must promote the network of higher education institutions for peer-learning and collaborate for a safety resilience index to ensure a safer learning environment.
- Education institutions should promote disaster education to enhance the risk perception of students.
- Educational institutions conduct risk assessments annually and should have a contingency plan to overcome any sort of disaster.
- HEI can act as a primary hub to inoculate the long-term sustainable and resilient development goals envisioned by the SDG and SFDRR.
- Leveraging Academic Diplomacy to Strengthen Climate Risk Management in the Asia through the collaborative approach between academia and practitioners.

- Contemporary education strategies need policies to adapt digital technologies along with organisational ethics and policies on data management for online teaching, learning and student consultation.
- Institutional governance is the need to adjust disruptive technology and education adaptation.
- 'Financial investments' to adapt digital transformation for Education System resilience need to be outlined at the institutional level to minimise the barrier to digital transformation.
- Unprecedented technological development and application to higher education need revise national frameworks, policies and regulations considering conducive to transformation, the 'national financial frameworks' were considered as the most important constraint in all regions.
- Education system resilience needs focus on quality and equity, regulations, structures and specific education policies and to improve education in the country.

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