**Disasters and educational infrastructure - Part II**

Dr Murad Ali

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In Pakistan, there are about 23 million children that are out of school, and 22 million children are enrolled in low-quality government schools.

The country’s National Human Development Report (NHDR) estimates that “at the current annual growth rate of net school enrolments, it will be 2076 before Pakistan can achieve its goal of zero out-of-school children”.

Given the bleak status of the education sector in the country and the fact that 37,597 education institutes were partially or fully damaged, killing thousands of students and teachers and disrupting the studies of millions of students in the three major natural disasters Pakistan witnessed during the last two decades – the 2005 earthquake, the 2010 floods and the 2022 floods – this study has explored the factors that contribute to the vulnerability of state-run educational institutions.

Focusing on the public-sector infrastructure, particularly education institutes in Malakand division, the study has found that there are two major factors that make government-run schools extremely vulnerable to natural disasters.

The first is the issue of site selection for such critical public infrastructure. And the second is the problem of substandard and poor-quality construction. This article will discuss these two challenges in detail.

The first challenge is how a particular site is selected for a school or college. During interviews with various officials in the education department, it was found that the relevant technical staff from this department have a minimal say in site selection. For instance, before starting work, no geotechnical investigation, topographic survey, hydro study or resistivity assessment is carried out to ensure that the chosen soil/site is suitable for the proposed building.

In the case of site selection for school buildings, officials in the education department stated that because land is scarce and very precious/expensive in the Malakand division, the government does not purchase land for education institutes, particularly in rural areas.

The norm is that land for school building is donated by land owners who get jobs in the same building in return. Hence, people mostly ‘donate’ land, which is not very expensive or agriculturally or commercially productive, and such pieces of land are situated either at the bank of a river or nullah or near a hill or a mountain. Buildings constructed on such land are specifically prone to various hazards. To come up with resilient buildings which can withstand natural hazards, the government must make viable investments and ensure that the site of the building is not vulnerable to floods or other such hazards.

An official in Swat gave the example of Government High School Tirat in Madyan area which was built at the cost of Rs70 million, but has been washed away by flash floods. Now, finding a suitable site for the school is a daunting task as the same site is vulnerable to flash floods flowing from the hilly area.

Another critical factor leading to the vulnerability of school buildings is substandard and poor construction practices. The findings reveal that for the overall lack of quality and standards in construction, the two main actors responsible are contractors and the Communication and Work Department (C&W) According to an official in Swat’s education, the government body which is primarily responsible for the enforcement of building codes and bylaws is both complacent and accomplice as it does not perform its duties to ensure that buildings meet the required strength and standards.

However, an official in the C&W department shared that our infrastructure is vulnerable to disasters due to the fact that contractors lack the required expertise and technical skills needed to implement a particular project. He admitted that it is the duty of the C&W department to enforce building codes and ensure that construction work meets the required benchmarks, also keeping in mind the seismicity of the region. At the same time, the official also stated that the department lacks capacity as it does not have enough human resources to effectively supervise quality control.

Regarding disaster resilient infrastructure, one official in the education department categorically stated that as long as C&W exists in its current form, hit by corruption and inefficiency, we can never say that our schools are secure and our children are safe in these ill-planned and poorly constructed state-managed schools. And since contractors are too powerful as they belong to certain political parties or are active politicians and have strong links in the bureaucracy and government, it is nearly impossible to hold them accountable.

Because of these factors, construction of such buildings rarely meets quality standards. As per the estimates of an official in the education department, 60 per cent school buildings in Malakand are old. And the remaining 40 per cent are new, but they are also of low standard and are vulnerable due to their substandard construction. He explained that though various actors/officials of different departments are engaged, contractors and officials in the C&W department are majorly responsible for the construction of public infrastructure, and hence they need to be held accountable in the case of any failure.

Public-sector infrastructure, especially education institutes, are more prone to both natural and human-induced hazards. During the 2005 earthquake and the 2010 and the 2022 floods, school buildings could not withstand the ferocity of the disaster. The findings of this research reinforce what the NDMA identified a decade and a half ago that extremely substandard construction practices, fragile natural environment, poor communication infrastructure and lack of critical facilities aggravate vulnerabilities of communities. The document clearly asserts that it is important to “construct all new schools, colleges, universities and other educational buildings located in hazard-prone areas to higher standards of hazard resilience”. However, this is not the case, as highlighted by the current study, which focuses on the Malakand division.

The 2022 floods and its aftereffects in terms of casualties and damage to physical infrastructure are a reminder that Pakistan is vulnerable to recurring natural disasters. Like other sectors of the economy, education infrastructure frequently bears the cost of such hazards due to lack of resilience. Not only is the safety of education institutes vital for the continuation of academic activities, but school buildings also play a critical role in such calamities and can be utilized in disaster-and-emergency situations.

In its ‘Monsoon Contingency Plan 2022’, the PDMA has appropriately underlined the significance of school buildings for both pre-disaster activities – such as raising awareness and disseminating essential information – and post-disaster scenarios for evacuation and relief activities. The report adds that the elementary and secondary education (ESE) department has the largest network of buildings and the greatest number of employees in the district. Schools can be used for raising awareness about disaster preparedness, evacuation, first aid, and the ‘Do’s and Don’ts’ during a disaster.

To make our education institutes more resilient in the face of natural calamities, the relevant government bodies should enforce laws and rules related to seismicity, better sites’ selection and quality construction. This will ensure the safety of our future generations in nature-induced calamities.

Concluded

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The writer holds a PhD from Massey University, New Zealand. He teaches at the University of Malakand.

He can be reached at: muradali.uom@gmail.com