Disaster Prevention in Schools

To date, international studies suggest that school-based disaster risk education may be an effective strategy in promoting community-wide risk reduction actions, including mitigation, preparedness and insurance purchase. Ronan and Johnston (2001) found that children involved in hazard education programs demonstrated "more stable risk perceptions, reduced hazard-related fears, and a much greater awareness of important hazard-related protective behaviours" when compared with children who had not experienced hazard education programs.

Later studies found that an "emergency management" style program and integrated interaction between children and parents increased home-based preparedness (Ronan and Johnston, 2003). Mitchell et al. (2008) found that in El Salvador and New Orleans, youth played important roles as informants in informal and formal communication networks. In fact, Anderson (2005) and Sharpe (2008) argue that excluding youth from the disaster planning process ignores their potential role as educators, advocates, and as active voices in protective actions.

Clearly, school-based education material that centre on protective measures - including preparedness measures, insurance coverage, and mitigation - can be an important strategy for increasing community-wide preparedness. Yet, in a stocktaking of disaster risk education worldwide, Wisner (2006) found that most school-based education failed to integrate studies of hazards in science classes with preparedness and drills that could improve a child's sense of efficacy and reduce hazard-related fears. Despite growing knowledge about how to successfully create public education messages for earthquake preparedness, increasing preparedness remains a significant challenge. However disaster risk education can be improved through strategies such as experiential learning - a process which can and should put drills at the centre of the learning cycle.

Case Study Number One

The students observed knew what to do in terms of "drop, cover and hold on" - although it should be noted that 15 year old students find it hard to understand the types of desk used in US high schools (see graphic right). After the simulated earthquake had passed students were evacuated outside to the school field for registration. When leaving the classroom the teacher was last out, marked the door with an "x" to indicate the class had been cleared and there were no casualties. The door was locked behind to prevent anyone else from entering. One of the students that left the building was the "head teacher" in the event of a real earthquake. The head teacher had a print out of her class with photographs of students so that she could quickly note any absent or missing students. This was the last help provided for her but she had done this herself - as a drill exists in the practice and a logical future step for each class teacher to have a set inside their emergency folder, covering every class.

The assembly area had six shade structures dotted about the place at regular intervals. The principal was the Incident Commander and informed students that the quake drill had started. After the drill was over students returned to classes.

Gap Analysis

Persistent areas of concern related to awareness and learning from school drills in Taiwan were uncovered in both school-site observations as well as through an open debriefing:

1. Wide participation is needed for successful school disaster prevention and response planning. This includes leadership from school board members and administrators as well as initiative from teachers and students. Also, both can and should include students, parents, and community members much more frequently.

2. The principles underlying "Drop, Cover, and Hold" is got down, make your small, keep your head and neck covered are not well-understood and therefore not performed well in settings without desks or tables. (Teacher desks need to also have a clear space underneath)!

3. Teachers during the drill are not properly trained. It would be a good idea to train the teachers how to conduct a drill effectively.

4. Drills require realism and variety in order to maximize their effectiveness. Scenarios should include elements of the unexpected that require improvisation. Drilling with advance notice, during a predictable period of the school day, seriously limits learning opportunities.

5. For students the learning experience can be significantly enriched through experiential learning, including school and community disaster prevention activities, and activities to coincide with and follow the drill itself (some of these are outlined in recommendations below).

6. Child-to-family transmission of disaster prevention lessons holds powerful and untapped potential.

7. Students with disabilities may have very specific needs in case of emergency which should be addressed in advance of the drill. This is especially the case for special education teachers and parent advocacy groups who might initiate and promote.

References:


The future: Participatory Action Research could be used to evaluate the effect of experiential learning. This process would critically examine the social and environmental conditions as the basis for improving them. However the questions need to come from the children themselves: Are we safe? What have we learned? Have we made changes at home or at school that help us to not only be prepared, but to thrive and emerge stronger?

The perspectives of both researchers and the children's perspectives on a research question may change while carrying out action research and this change is desirable. This approach emphasizes the importance of children as researchers and agents of change in their environment and is a child-based approach to Disaster Risk Reduction.

The present: Persistent areas of concern related to awareness and learning from school drills in Taiwan were uncovered in both school-site observations as well as through an open debriefing:

1. The need for separate request and re-uniﬁcation gates so that students can be identiﬁed and re-united with family. A list of dead and missing students should NOT be posted at the front of the school as this will lead to traumatic and stress, which would be extremely difﬁcult to manage.

2. Students need water to be provided, even if it is just a drill.

3. Students need to be involved more than just as passive observers. Being used as ‘victims’ merely reinforces this as a stereotype and does not bode well for future education projects for preparedness which may lead to a view that preparation and safety is the concern of others – teachers, emergency services and the government – an external locus of control.

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5. Again, for students the learning experience can be significantly enriched through experiential learning, including school and community disaster prevention activities, and in an effort to follow the drill itself (see recommendations below).

The recommendations:

1. In Taiwan students acted as ‘victims’ while teachers acted as ﬁrst-aiders, search and rescue and ﬁre suppression teams. Although a level of realism was reacted by this approach students were principally passive observers.

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