

Disaster Risk Reduction in Fiji's School Curriculum¹

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Abstract

Fiji suffers many millions of dollars of losses almost annually on account of disasters. Human life loss is also a matter of grave concern. A contributory factor for the heavy losses the country faces is a lack of awareness on disasters. This paper examines the treatment of Disaster Risk Reduction (DRR) in Fiji's Primary Education Curriculum. It establishes that the treatment of disasters in the curriculum, as it existed in 2014, was casual at best. The paper proposes that Fiji needs to thoroughly review its curriculum and include DRR as a core element in the school education process.

Introduction

Disasters today have become more severe and frequent. They continue to wreak havoc particularly on small island nations. Countries which have realized that disasters are impediments to growth and development are investing heavily in technological aspects in areas of better weather predication capabilities, early warning systems and national disaster risk reduction framework. One important area that needs to be strengthened is disaster education in schools. Some nations are starting to adopt and include this in their national curriculum. Fiji has so far not made any attempt to offer in its curriculum in either primary schools or secondary schools.

Most disasters common to Pacific islands have emerged from rivers and oceans. In 1994, the United Nations estimated that in the then past 20

years, nearly three million lives were lost to natural disasters, and 800 million people affected (Katayama, 1994). In Fiji, tropical cyclones account for 50 percent of all disasters, followed by floods at 33 percent, earthquakes at 8 percent and drought at 5 percent (Lal, 2009). For small island nations, disasters place significant burden in their growth and development.

One important commitment which emerged from the second session of the United Nations global platform for disaster risk reduction in 2009 was that by 2015, disaster risk reduction should be included in all schools' curriculum (Unicef, 2012). Later, the third session of the *Global Platform for Disaster Risk Reduction* held in Geneva in 2011 focused on raising awareness of child-centered approach to DRR and for stronger commitment from governments, donors and agencies to take appropriate steps to protect children and engage in DRR and climate change adaptation (UNISDR, 2011). One important direction emerging from international disaster risk reduction platforms is that natural disasters need to be formally taught in schools thereby enabling children to be actively involved in disaster risk reduction by being proactive participants and learners. The power of knowledge has indeed saved many lives. The 2004 Indian Ocean Tsunami saw a young British girl at a tourist resort in Phuket, Thailand recognizing the turbulent sea and loud noise of the waves; she immediately knew that a tsunami was approaching and quickly alerted her parents and others which resulted in hundreds of lives being saved. The girl had learned about tsunamis in classes at her school. In-depth understanding of the nature of disasters from an early age is crucial. In Japan, children know precisely what to do in case of a tsunami. In Fiji, it has been recorded that people including children, tended to run towards the shores on hearing of tsunamis.

Fiji does not have a structured disaster risk reduction curriculum for schools. This paper addresses this issue and explores the reasons why Fiji should have a DRR curriculum and how it could be effectively implemented.

School Curriculum in Fiji

In Fiji the 'Curriculum Development Unit' is responsible for implementing the national curriculum. The Ministry of Education draws up policies picking recommendations from education commission reports. A number of education commissions and education reports for the development of education informed the Ministry since 1908, with the most recent one being in 2000. Since the 1969 Education Commission, there have

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been reviews of specific aspects of the education system. It was in 1999 that a strategic education plan was formulated to provide greater focus and direction on educational planning in government (Report of the Fiji Islands Education Commission, 2000). In 2008, the Minister for Education stated that the current curriculum, much of which has been in existence since 1990's and some even dating back to the 1970's, was outdated (Fiji Times, 17 July). In 2012, the Vice Chancellor for Fiji National University also stated that Fiji's curriculum is outdated, that the curriculum department must recruit experts and the curriculum be made more relevant to keep up with local and global developments (Fiji Times, 12 May 2012).

An examination of the primary and secondary school curriculum in 2014 was conducted. It was established that disaster topics were not covered in anything more than a casual reference in primary schools. Floods and cyclones were taught in social studies but lacked depth and details. The formation of disasters, detection, their impact and ways in which impacts could be minimized, precautionary measures taken, etc., were limited. In Year Eight Social Science Prescription, under the content 'Place and Environment', some world environmental issues were mentioned but this again was limited in coverage. Similar limitation was found at Year Seven level. In the Year Eight Health Science curriculum, under 'safety and first aid', earthquake and fire hazards were prescribed and content such as safety during and after the event covered. Year Eight Basic science curriculum had one unit on weather where wind and air movement, air pressure, thunder and tropical cyclones were prescribed. Concepts included formation, wind description and types of damage caused by cyclone. Year Seven Basic Science curriculum touched on different types of pollution and effects on health. At lower grades, limited content on disasters was found.

It is proposed that at this level, students must be taught details of common natural disasters that affect Fiji such as flooding, tropical cyclones, storm surge, drought, and potential disasters such as earthquake and tsunami. Ample local material is available which can provide excellent aid in getting students to appreciate and understand the concepts. There is also ample e-learning materials and graphic online materials on disasters. These have not been incorporated in the curriculum.

This neglect seems to be neither deliberate nor voluntary. For, quite surprisingly, the Education Commissions of 1969 and 2000 do not contain any specific recommendation of the need to implement disaster curriculum in Fiji's education system. One of the 2000 Commission report recommendation that broadly gives some direction for change to the curriculum but does not precisely indicate the inclusion of DRR in the cur-

riculum is: 'The primary curriculum be remodelled to allow for more flexibility for individual schools and teachers, the incorporation of more local cultural knowledge, particularly indigenous knowledge, and more integration of subjects areas across the curriculum' (2000: 91).

In 2007, an international workshop organized by NDMO and UNCRD on disaster education and school safety in Fiji found that there was 'no systematic approach to [introducing] disaster education in primary and secondary education' and that curriculum officers and experts in the ministry of education acknowledge that there is no thought of comprehensive disaster risk management while developing current school curriculum and text books'.

The reason for non-inclusion of disaster curriculum in Fiji's education system clearly is that decision makers have not taken disasters seriously enough. The laid back approach of decision makers and them treating disasters as 'one-off events', seems to have diluted the desire to take strong and proactive approach to disaster education. The complexities and costs of disaster and climate change impacts on Pacific Island Nations has not been given much prominence until lately. Fiji's education curriculum needs to be at pace not only with local and international developments but also with environmental changes.

Why Disaster Risk Reduction (DRR) Curriculum in Schools?

The impact and frequency of disasters are higher now compared to the last 30 years. The number of disasters has grown in the last 40 years; there were fewer than 100 disasters in 1975 while there were more than 400 in 2005 (IEG, 2003). According to the United Nations Office for Disaster Risk Reduction, in 2011 alone, there were 302 hazards that caused over 30,000 lives and affected 206 million people with damages of over US \$366 billion (UNISDR, 2012). Annually, economic losses amount to hundreds of billions of dollars; this is projected to double by 2030 (Prevention Web, 2013).

Pacific Islands have suffered greatly with increasing population, rapid urbanization and settlement in vulnerable areas and development. Reddy (2000), reveals that cyclone Kina losses in 1992/1993 amounted to 7.1% of Fiji's GDP and that disasters can be very damaging if they hit the engine of growth of any economy. Small islands have small economic bases, mostly relying on agriculture and tourism, both of which are vulnerable sectors of the economy especially in disaster situations. In spite of occasional relatively high GDP per capita, the economies of small island nations tend to be extremely vulnerable (Briguglio, 1993). Tropical cy-

clones and storm surges emanating from the ocean have significant impacts on small nations. As noted above cyclones and floods account for 88% of all disasters in the Pacific.

Disasters have become part of life for people in the Pacific. Only recently have people and nations begun to put up plans and coping strategies which suits best at the time depending on the disaster. With the extent of damages incurred from disasters, it can be fairly well justified to state that there are serious problems with our disaster management planning and implementation.

Implementing DRR curriculum

Education of disasters must start from an early age in schools. The UNISDR in its guideline for disaster prevention strongly recommended, as early as 1976, that disaster prevention measures should begin at school. In order to prevent serious negative impacts of disasters, the root cause of disasters must be first understood. It is possible to prevent the disastrous effects of disasters and mitigate consequences only when the patterns and behaviour of disasters and their effects are fully understood. Education is thus the key to changing the mindset of people to tackle disasters rather than relying on authorities to provide support during and after disasters. Such short term measures are not appropriate in tackling disasters when it inflicts major damage to the economy and more so to the lives of people. The trend so far in Pacific Island nations is for people to rely on the state for relief, rehabilitation, early warnings and every other aspect of procedures surrounding disasters.

Disaster education, in the long term, is expected to bring about ownership of people and children of measures necessary to prevent impacts of disasters and evacuation procedures. Knowledge of disasters saves lives. In Indonesia, for example, over 80,000 people fled the shore for nearby hills through the knowledge of one community which judged the sea and buffaloes behaviour before the massive 2004 Indian Ocean Tsunami (Clinton, 2005). Similarly, the awareness of a young British girl in Phuket, which she gained in school helped save 100's of lives after she alerted her parents and others of the imminent tsunami. There are other examples where children's knowledge has proven to be vital in saving lives during disasters.

DRR education is about saving lives, and more. It is one which also gives insight to broader learning outcomes which would be useful for their entire lives. Knowing DRR concepts and their application to specific hazard preparedness and mitigation in relation to disasters and climate

change would allow for better choices which the educated will make. They also allow for better understanding of child rights in disaster situations. Those educated in disasters would also have a better understanding of local and international humanitarian response mechanisms, thereby more effectively seeking and utilising disaster relief assistance. Those educated in disaster management would have a better understanding of conflict management during disasters. Education will also create a better appreciation of the relevance and application of traditional and scientific knowledge. Ultimately education will also provide for a better relationship of humans with nature.

Fiji, a country of volcanic mountains and smaller islands made of raised limestone and coral islands, physically isolated in the Pacific Ocean, is prone to hazards such as tropical cyclones, storm surges and tsunamis. So far, tsunamis have not had any real impact on Fiji. But their impact on Samoa (2009), where over 100 people had died, and which also caused major panic in Tonga, is illustrative. Earlier, in 2003, in Santa Cruz, Solomon Island, 6 people died from a tsunami which was generated from a 8.0 magnitude earthquake in the South Pacific (Australia News); this tsunami caused panic in Fiji as police had to clear people from Suva foreshore who had gone down to 'watch' the tsunami despite warnings. The impact of disasters such as tropical cyclones and storm surge is always potentially high. One way of reducing their impacts is through acquiring knowledge on the nature of each disaster.

The United Nations has strongly recommended countries to include DRR in the school curriculum. Many nations, including a number in Asia, have worked towards including DRR in their national curriculum under UNICEF support. Japan is one nation which is widely known to be a proactive nation in disasters. It includes considerations of all aspects of various natural disasters in all aspects of its life, including planning infrastructure like schools. Its education system stresses general safety of students in everyday life, traffic safety, and DRR. Numerous aspects of DRR is embedded in Social studies, Science, Geography, Physical and Health Education, Technologies and Home Economics.

The approach of embedding, also called infusing, DRR concepts is a useful way of treating DRR education. The other extreme is to have a specific subject on disasters, in which knowledge from other subject areas are infused. The risk of the later approach is that the education may turn out to be seen as a task to get a pass grade in, without the generation of real drive and passion on the matter. The dedicated subject approach, however, would create a notable profile in the matter. There are in-between options between these two extremes. What approach is selected

ultimately depends on the expertise of the curriculum developers. What is important for the moment is to create a commitment towards including disaster education in school curriculum in Fiji.

Conclusion

Disasters cannot be isolated from the lives of people, particularly the Pacific people. Given the evidences of the incidences and tragic impacts of disasters across the globe, and in recent years in the Pacific as well, denying disasters and/or their impacts would be a losing proposition. Climate change has placed a heavier burden along the way. Fiji's approach to dealing with disasters now must be ever-superior. A comprehensive curriculum on Disaster Risk management is the way to improve people's ability to manage disaster risks and overcome disaster losses and damages. Many nations have realized this and are mainstreaming disaster management or have already embedded it in their national curriculum. Including this in the curriculum will have multiple benefits for Fiji. Whichever approach policy makers take to include disaster education in the curriculum, they must remember that delays in commencing work in this direction will continue to raise risks for every one in Fiji.

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