DISASTER MANAGEMENT THROUGH EXPERIENTIAL LEARNING

By

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ABSTRACT

Disasters can strike at any time, at any place. The world is becoming increasingly vulnerable to natural disasters. From earthquakes to floods and famines, mankind is even more threatened by the forces of nature. The Theme of the 2006 to 2007 International Day for Disaster Reduction was "Disaster Risk Reduction begins at schools" and numerous schools in South Africa have participated in 2006 & 2007 disaster risk reduction program conducted under the auspices of the United Nations international strategy for disaster reduction (UNISDR) mechanisms under the theme,"Towards a culture of risk reduction: Disaster Management begins at school". Disaster Management is best viewed as life skill and has maximum impact when taught through hands-on learning & experimentation, rather than teaching it solely as an academic subject. Therefore it includes carrying out disaster preparedness programmes including mock drills, first aid, search and rescue, swimming and crowd management training. As a rule, hands on experiential learning is the most effective way to educate life oriented subject like Disaster Management. Therefore, ideally a disaster relevant curriculum would not only teach knowledge of the natural hazards themselves, but also would involve students in a more hands on practical application in identifying hazards and risks and how to deal with them. This could include visits to and by the institutions dealing with various aspects of hazards and disaster risk management. This paper focuses on Disaster Management and experiential learning, Empowering the younger generation on the preventive aspects, the types of services and learning to be rendered in a disastrous situation and the need for humanistic approach in dealing with disasters through experiential learning. Also the role of teacher and learner in experience based learning situation and some educational implications are explained.

Key words: DM-Disaster Management, Experiential Learning, WMD-Weapons of Mass Destruction.

INTRODUCTION

Disaster risk is on the rise throughout the world. Over the past three decades the economic losses and the number of people who have been affected by natural disasters have increased more rapidly. The physical, social and economic losses caused by these disasters are particularly harsh for developing countries since they have a long-range effect in the developmental process. The impact of the disasters are deeply related with the socio economic condition, culture and climate of the communities.

In any disaster situation anywhere in the world be it a human induced or natural-children are among the most vulnerable groups, especially if the disasters occur during functional hours of a school. If we critically examine the victims among the affected children, we find that girls are more affected. Some of the incidents were large number of school children were killed are the Lyete mudslide in the Philippines, Pakistan Earthquake, Gujarat Earthquake, Kumbakonam Fire Tragedy, Thattekkad Boat Tragedy etc. Similarly in several other incidents, youth / young people were able to save several lives. From the above we can conclude that children are prone to any type of disasters and if they have been imparted with appropriate information, skills and knowledge on disasters, they can save their own lives as well as the lives of others.

Disasters are defined as "A serious disruption of the functioning of a community or a society causing wide spread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources." It can be broadly classified as Natural, Manmade or Artificial. Based on the nature of occurrence they may be Sudden-on-set &

Slow-onset disasters. Natural disasters include-earthquakes, hurricanes, floods, drought, cyclones & Manmade Disasters are Weapons of Mass Destruction (WMD), which may be biological, Chemical or nuclear including, plague, Anthrax, nuclear attacks , rail and road accidents.

Disaster Management and Experiential Learning

Disaster Management

The actions taken by an organization in response to unexpected events that are adversely affecting people or resources and threatening the continued operation of the organization-Disaster management includes the development of disaster recovery plans, for minimizing the risk of disasters and for handling them when they do occur, and the implementation of such plans. Disaster management usually refers to the management of natural catastrophes such as fire, flooding, or earthquakes. Related techniques include crisis management, contingency management, and risk management. It is "A planned approach for prevention of disaster, preparedness and response to disaster and recovery following disaster." Disasters can be viewed as a series of phases on a time continuum. Different phases of DM are preparedness/Mitigation (before), Response (during) and Recovery or Rehabilitation (after). Identifying & understanding these phases helps to describe disaster related needs and to conceptualize appropriate DM activities. First and foremost integrating DM in School Curriculum to empower the younger generation on the preventive aspects, the types of services to be rendered in a disastrous situation and the need for humane approach form part of curriculum. We need to encourage innovation and experimentation through timely curricular interventions. Here Emphasis may be on awareness and sensitization of students and teachers on various hazards and preventive and precautionary measures on various hazards. Transaction of the curriculum should provide a joyful experience for the students by the use of case studies, projects, success stories, Anecdotes, regular participation in mock drills & minimum emphasis on learning of concepts. It should involve local bodies, family, community and fire and safety service personnel.

Experiential Learning

As Observed by Stephen Brookfield (1983) the term experiential learning is being used with two connotations. On the one hand, it is used to describe the learning where a student acquires and applies knowledge, skills and feelings in an immediate and relevant setting. It thus involves direct encounter with the phenomena being studied rather than merely thinking about the encounter or only considering the possibility of doing something about it (Borzak, 1981). The second connotation of experiential learning is education that occurs as a direct participation in the events of life" (Houle, 1980). According to Hoover and whitehead (1975), experiential learning exists when a personally responsible participant cognitively, effectively, and behaviorally processes knowledge, skills and/or attitude in a learning situation characterized by a high level of active involvement. It is learning that is achieved through reflection upon everyday experiences and is the way that most of us do our learning. The Principles of experiential learning are used in designing experiential education programs. Emphasis is placed on nature of participant's subjective experiences.

DM learning activities seeks to develop in children the knowledge, skills, values and attitudes needed to face a disastrous situation. The learning activities are designed to

- start from what children already know as a basis for exploring the new ideas and perspectives,
- encourage them to participate actively in discussions;
- Learn from each other as much as possible;
- Reflect on the activity performed;

Attitudes and values related to communication, critical thinking, responsibility, tolerance and respect for others cannot be taught; they must be learned through experience. For this reason activities on DM promote cooperation, participation and active learning. They aim at holistic engagement of child's head, heart and hands. Only a child who feels empathy for other human beings will take personal responsibility to help the disaster victims. These activities should bring in humanistic values in learners.

Selecting Activities

The facilitator has a variety of factors to consider in determining which activities to take up. Most important of these considerations are before selecting activities, the facilitator first needs to know the children going to be involved.

- What are their levels of development, interests, concerns and learning styles?
- Are there conflict and problem within the groups?
- Do these children face particular issue or problems within the community?
- How much do the children already know about the activities/ topic?

Learning Objectives

The facilitator should know the learning objectives to be attained through the particular activity. Some activities can be used to increase the general understanding of the topic and it must be directed to the themes that are close to children or an issue in the group, the community or the world.

Learning Sequence

Lasting knowledge, skills, values and attitudes are never achieved in a single activity. Select activities that form a series whether based on a particular theme or the development of certain competencies. This series might extend over a month, a school term or even a whole year.

Learning Cycle

Activities on DM may be based on learning cycle by Kolbs (1984) with five phases.

Although in Figure 1 all the phases may not be always in this order, they are implicitly present in every activity. The methodology of experiential learning permits children to develop and change knowledge, skills, attitudes and values in a safe environment that is both challenging and fun. Because it validates the child's experience and encourages children to take responsibility for their own learning. Thus the experiential learning enhances participation, self-reliance and self confidence, Each phase of this cycle honors children's live experience while challenging them to articulate, observe, reflect, question

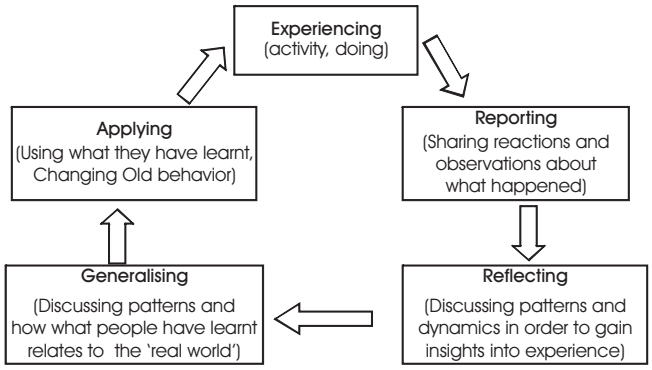

Figure1. Kolbs learning Cycle (1984)

and draw conclusions.

Experiencing

In this phase the learner actively experiences an activity such as field trips or mock drills on DM. In DM mock drill, children are made to experience the various aspects or activities such as how to conduct search and rescue operations during disasters, How first aid can be given depending on the disastrous situation?, Helping the seriously injured with medicines, food and water etc.

Reporting

In this phase children are encouraged to articulate their feelings and reactions on the mock drills or field trip on DM. It includes restructuring the experience, making connections to prior knowledge or skills, testing understandings, and making decisions about how to apply the knowledge and skills in a new situation. Various methods for promoting reflection are oral conversations, such as informal debriefing sessions followed by the experimental activities and written responses to experiences through diaries, journals, portfolios and student exhibits, which may include text pictures and photos. For example the 'debriefing and evaluation 'section of each activity. Children respond to questions such as "How was this activity for them?", "How did they feel during this experience? Or what happened during the mock drill or field trip? Such open ended questions invite a wide range of personal opinions in a non-judgmental context.

Reflecting

Reflecting Phase moves children beyond the experience of the activity to its conceptual implications. Children are

made to reflect on the actions performed by them in mock drills. Asking questions such as "Have they experienced something like this in their life before? How is it related to their life? helps children make connections to real life.

Generalizing

In this phase children connect the experience of the activity to the real world in general and especially how people react to disaster that occurs in their life. Learning which has occurred in this way may result into the formation or strengthening of various rules of thumb or generalizations about what to do in different situations. The learner will be able to say what actions to take in a Disastrous situation.

Applying

Equipped with an understanding of general principles the learner proceeds to the last step of cycle of its application through action in new circumstance within the range of generalization. Here children explore what they themselves can do to address DM issues.

Although activities in DM are intended to engage children, they are purposeful, offering children a chance to apply what they have learned to their social environment.

Experiential Educators

An Experiential Educators role is to organize and facilitate direct experiences of phenomenon under the assumption that this will lead to genuine learning (meaningful and long lasting). This often requires preparatory and reflective exercises. Teachers are facilitators who prepare, present and coordinate the activities and create an environment where children can learn, experience and experiment. The facilitator sets the stage, creating a setting for DM mock drills and other activities where children are the main actors' on this stage. The success of any activity depends principally on the tact, skill experience of the facilitator. He must be skilled and need to understand the developmental level of the group and select or adapt activities to match their physical, cognitive, emotions and social development. They should be capable of engaging their students in some of the decision-making and problem solving activities. In addition teachers facilitate the transfer of learning from the experiential activity to the real world, structure the process of reflection for the learners in order to derive the most learning from the experience and ensure that the learning outcomes are reached. In general teacher's role is to develop methods for engaging the learners in experience that provide them with access to knowledge and practice in particular skills and disposition.

Learners

Learner must occupy the centre stage of the classroom activity. Students engage in interdisciplinary exploration, collaborative activity and field based opportunities for experiential learning. Experiential learning requires the learner play an active role in the experience and that the experience is followed by reflection as a method of processing, understanding and making sense of it. Learner become more active and involved, with additional responsibility and ownership over the process of learning, whether in an outdoor education program or in the school. Leaner's role is one of engagement and deliberation- a continuous cycle of action and reflections or praxis as defined by Paulo Freire. All learners in any experiential learning environment need to examine their roles as learner, professional and citizens. It connects students directly to community groups and society in general.

Earth quake Mock drill- experiential learning

As per the order of Government of Kerala disaster mock drills were conducted in various schools in 2005 at various levels namely primary, secondary and higher secondary. One such situation of Earth quake Mock drills (which was not reported) conducted in vocational higher secondary school, Pilicode in 2005 involved 120 students of high school and higher secondary levels. Before the mock drill the programme coordinator conducted sensitization with the teachers and students on earthquake so as to identify / clarify the roles and responsibility of each individual. Preparation of the schools safety plan was done. Constitution of two teams –Search and Rescue, First Aid by the senior students(NCC) consisting of 15 in First Aid and 20 in search and rescue and training were given to them by Master trainers and Fire Service personnel, Doctors and Paramedical staff with the assistance from district authorities. Pre-identification of students in a class was done to remain inside the class as injured victim.

The Principal of the School acted as the programme

coordinator. The programme coordinator's role was to coordinate the smooth conduct of the overall drill and make sure that drill proceeds as planned and the set objectives were achieved. He initiated the drill by giving signal, monitored the sequence of events and conducted a debriefing and critique with all personnel involved. Programme management team leaders included class teachers of each class in their own class, the Physical Education teacher with teacher No 1 at the play ground, teacher No 2 and 3 at the verandah for safety evacuation, teacher No 3 and 4 to head the Search and Rescue team, teacher No 5 and 6 to head the First Aid team, teacher No.7 and 8 to evaluate the drill. The programme management team leaders role was crucial as they directed the students when to act when their turn comes. The Evaluation team presented themselves in the site followed actions and evaluated the events as per the timing and submitted their reported to the programme coordinator at the end.

Conduct of the drill

Programme coordinator gave instruction to the Peon to ring the bell with unusual sound for one minute. All teachers and students and other staff made drop cover hold position till the end of bell. Drop(kneel) down to the desk/table; hold one leg of the desk/table tightly and put one palm/ bag/ book on back of the head. Safety evacuation of the students were done as per the instruction of the Teacher No.2 and class teacher with a planned and disciplined manner by putting bag on the head to pre-identified open field and standing in class wise queue. The class teacher took the head count and tallied with the attendance sheet and informed to Physical Education Teacher about the absentees. Teachers those who head the search and rescue gave the command for search and rescue operation. The First Aid team performed the First Aid activities. Evaluation team submitted the report to the programme coordinator. At the end the programme coordinator had a debriefing session with the teachers.

After the drill the students were directed to go to their respective classes with their class teachers. They were asked to write a report on the drill. The class teacher of the class asked some questions where the students were made to reflect on the experience they got from the drill. Through the interactions between them they came to some generalizations about earth quake disasters in general, what are the probable precautionary measures that can be taken when an earth quake occurs?, How to communicate during disaster?, about first aid and search and rescue operations. Thus debriefing and reflection on the mock drill was done so that they can apply the knowledge they gained through the mock drill whenever a similar situation occurs.

Educational Implications

Some of the implications of learning DM experientially are

- All senses are involved in the learning process, so learning becomes concrete;
- Foster multiple intelligence and constructivism in learners;
- Encourage application of learning to real life situations;
- Help transference of learning from activities to real life situations;
- Encourages Gestalt views of learning;
- Promotes cooperative learning in learners;
- Increases the students problem solving ability and critical thinking skills;
- Students learn multiple ways of seeking solution to a problem;
- Reflective practices are encouraged to link real life situations.
- Inculcate humanistic values in learners.

Conclusion

It is said that accidents do not happen but they are caused. Advance planning, effective implementation strategies, development of right attitude for safety, coordination and co-operation with agencies working in this area are important for ensuring safety in schools. DM mock drills through Experiential learning is participative, interactive, and applied in a way that it works through the learners subjective experience and it allows contact with the environment, and exposure to processes that are highly variable and uncertain, involves the whole-person; where learning takes place on the affective and behavioral

dimensions as well as on the cognitive dimension. The experience given to the learners need to be structured to some degree; relevant learning objectives need to be specified and the conduct of the experience needs to be monitored. Students need to evaluate the experience in the light of theory and in the light of their own feelings. And, process feedback needs to be provided to the student by the experiential educators to compliment the outcome feedback received by the students. When implemented properly DM based experiential learning can be much more powerful than the passive classroom learning as it promotes both individual and social transformation.

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