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# Effectiveness of Intractive Multimedia Package on Disaster Management Learning Activities for School Students

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### ABSTRACT

India is considered as one of the most disaster-prone countries in the world. By seeing the vulnerability of the country to various hazards, the ministry of Home Affairs has decided to educate the youth to combat disasters. Government of India, Ministry of Human Resource Development recommended the board to introduce Disaster Management in education. Researches have stated that multimedia technology application can help the students to get experiential learning and making learners more self-reliant and proactive in their learning environment. In the view of the above, the investigator has developed and validated activity based Interactive Multimedia package on Disaster Management Learning Activities for school students. Quasi Experimental Pretest–Post test Experimental Research Method was used in the study with the sample of 62 Secondary School Students, purposive Sampling technique is used with the Tools Interacitve Multimedia Package–Developed and Validated by the investigator and Disaster Management Awareness and Preparedness Test-Constructed and Validated by the investigator. Arithmetic Mean, Standard Deviation, Test of Significance and Gain Ratio were Statistical Techniques used. The finding says that the Interactive Multimedia Package on Disaster Management learning activities significantly influence the Disaster Management Awareness and Preparedness among Secondary school students and equally influence and helped to improve the performance of the secondary school students irrespective of their personal variables.

**Keywords:** Disaster, youth, multimedia, learning, disaster management learning activities
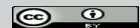
## Disaster

Disaster is sudden disastrous event and it causes great loss, damage, and destruction and devastation to life and properties of the people. The disaster cause immeasurable damage to the earth and life of the people and it also varies with the geographical location. Its influences the socio-economic, mental, political and cultural state of the affected areas.

It is also be termed as "a serious disruption of the functioning of society, causing widespread human, material of environmental losses which exceed the ability of the affected society to cope using its own resources".

Thus, we can define disaster as a hazard which cause heavy loss to life, property and livelihood.

## Meaning of Disaster

The word disaster is derived from the French word désastre (from Latin dis- ill) astro means star (from Latin *astrum*) (from Greek astron ster in Indo-European roots). In olden days it was believed that disasters were caused by some unfavourable starts.

In NCERT text book it says '"Disaster is an undesirable occurrence resulting from forces that are largely outside human control, strikes quickly with little or no warning, which causes or threatens serious disruption of life and property including death and injury to a large number of people, and requires therefore, mobilisation of efforts in excess of that which are normally provided by statutory emergency services".

In Tamil, there are many literal meaning for the word "disaster". It is used for events that create destruction, deep disasters, unbearable loss, calamity etc.

In general disaster is a major and serious problem occurring over a short or long period of time and it causes human, material, economic or environmental loss .

## Disaster Management

Disaster management, though a multi-disciplinary and multi-faceted function, is well handled through the right management techniques especially applicable in this field. Disaster management is more a key to warfare management. It also has all those aspects of management and warrants mobilization of resources and efforts at National Level. In warfare, the complexities are many and yet, enemy is known. Strengths, Weaknesses and possible actions of and enemy can be anticipated appropriate answers could be found at military, diplomatic and economic ends at strategic operational and tactical levels. In comparison, a disaster war is an unseen and mostly unpredictable enemy and the entire human race is more or less reactive to any disasters. Apart from natural causes, the human actions have also effects on disaster and render a society helpless. This makes Disaster management a complex and challenging field. A 100% safeguard is illusion; however minimizing of liabilities forced

by disasters is a bounden duty of each individual, group, organization and the nation as a whole. Many of times, people consider the two terms- Disaster Management and Disaster Mitigation. We need to have clarity in meaning and encompassment of both these terms.

Disaster Management has different stages. If we compare any disaster with an event then we can understand them correctly. Any event has a preparatory phase where we prepare to execute the event. The next phase of any event is the actual execution when the event is conducted. The third phase is when we take all actions to wind up the event by taking stock of material and finances and close the event. If a cricket or a football match is an event, then the teams are selected and they practice for the match. They also plan their strategies. All this is part of the preparatory- phase. On the day of the match, the players actually play and dynamically attempt to win using all their skills and tansies, their power and coordination. This is called the Execution phase. After the match, we take a stop there and see where we have to stand and make changes to our future team compositions and strategies. This is the Post Event Phase. Disaster management also goes through these phases. The name of the stages are phases are: Pre-disaster stage/phase (Preparatory Phase), Active Disaster Phase Known as 'During Disaster Phase' (or 'Execution Phase) and Post Disaster phase. The phases are explained here under and also indicated in the diagram. These phases partly run sequentially and partly simultaneously, when we consider a multi-disaster scenario. Every major disaster invariably triggers a secondary disaster. Thus, while on phase of the first disaster is being processed; some other phase of another disaster is processed. While we fight a disaster through execution Phase, we simultaneously prepare for the next one, whether both these disasters are connected or not. These processes are repetitive and the end point of one process often merges and overlaps beyond the starting point of another phase.

## Disaster Mitigation

The term relates to the activities that fall in the implementation category. While Disaster Management activities encompass the entire gain of the three phases, the mitigation encompasses the last two phases. The better the management, grater are the chances of reduction in liabilities. However, this can only happen if the management correctly executes the mitigation and takes timely and accurate decisions, keeps good control and directs all the efforts adequately. In mitigation, pre-disaster phase is not actively included. Also, the development stage of post-disaster phase is not really part of mitigation. We can thus say that mitigation forms part of overall management and it's the implementation face of the disaster management.

## Disaster Management at Indian Context

In India there are some Government Agencies and non-Government Agencies working for disaster management. India has passed disaster management act in 2005.

❖ National centre for disaster management, New Delhi

❖ The centre is Providing training programme for senior and middle level administrative government officers to sensitize them for disaster mitigation

❖ National information center for earthquake engineering – IIT Kanpur

❖ Disaster management institute Bhopal

❖ M.P. Disaster management institute was established by the M.P. Government in the background of Bhopal Gas tragedy

❖ Disaster migration Institute Ahmedabad, Gujarat

❖ Disaster mitigation institutes and its mission is to equip the disaster victims

❖ Environment Protection training and Research institute Hyderabad

❖ EPTRI provides training and construct assessment and safety control

❖ Gujarat State Disaster management Authority

❖ The government of Gujarat has established the Gujarat state disaster management Authority on Feb. 2001 to co-ordinate the comprehensive earthquake and recover

❖ Help line for Gujarat earthquake victims

❖ Helpline number is given for earthquake relief and rehabilitation in Gujarat

❖ Joint assistance center - Gurgaon Haryana

❖ Central for disaster management -Pune Maharashtra

❖ The center for disaster management was setup at Yeashada (Yeashwantrao Chvhan. Development administration)

❖ Sikkim Manipal University of Health Medical Technological Science. Tadong, Gantok, Sikkim

❖ PRT institute of Post Graduate Environmental Education &Research New Delhi

❖ Central Board of Secondary Education, New Delhi

❖ Indira Gandhi National Open University, New Delhi

❖ National Civil Defense College, Nagpur, Maharashtra

❖ International & National organization providing support

❖ Indian Red Cross Society

❖ Indian Institute of Tropical Meteorology

❖ UNDP India

❖ Tata Energy Research Institute

❖ Housing and Urban Development Corporation Ltd.

❖ Ministry of Urban Development

❖ These Agencies are working for Disaster Management in India

**Methods of Teaching Disaster Management among School Children**

Four different methods can be used to teach disaster and other crisis management to young children. They are as follows:

1. Promotion method,

2. Learning by doing, method

3. Informal education method and

4. Formal education method.

   (Khorram-Manesh, 2017).

**Interactive Multimedia**

Interactive media is any computer-delivered electronic system which allows the user to control, combine, and manipulate different types of media, such as text, sound, video, computer graphics, and animation. Interactive media is developed by integrating computer, memory storage, binary data, telephone, television, and other information technologies. The common applications of interactive multimedia includes training programs, video games, electronic encyclopaedias, and travel guides.

Simply, it refers to the different ways in which people process and share information, or how they communicate with one another.

**Elements of Interactive Multimedia**

Interactive medium has one or more of the following elements:

❖ Moving images and graphics

❖ Animation

❖ Digital Text

❖ Video

❖ Audio

A user can participate by manipulating one or more of these elements,

Studies show that Interactive multimedia has positive influence in learning since it gives a rich platform for the students. Hence the researcher has chosen to develop interactive multimedia

package on disaster management for school children. The researcher wanted to ascertain first how far the students are aware of disaster and disaster management and intended to develop an interactive multimedia package to create awareness among them.

## Audio

Audio element includes speech, music and other types of sounds and it is used to enhance the usual multimedia environment In digital audio, the sound signals are represented as a series of binary data. i.e. Zeros and ones and the same can be understood by the computer easily

## Text

The usual text with variety of fonts, colors and background feature in all of the multimedia titles and the output appear far better than the printed text.

## Graphics

Graphics includes images,photos ,art works and pictures.

## Animation

It is the most interesting component of the multimedia computing. Animation is created by some specialized software and it make artificial movements of texts or objects, created in virtual environments. But it is a time-consuming process and it needs artistic capability of the designer and developer.

## Video

The video clips are organized as a single sequential stream of information and it can be played back without a hitch.

## METHODOLOGY

### Objectives of the Study

### Major Objectives

1. To develop and validate the Interactive Multimedia package on Disaster Management Learning Activities for secondary school students.
2. To find out the effectiveness of Interactive Multimedia package on Disaster Management Learning Activities in creating Disaster Management Awareness and Preparedness among Secondary school students.

## Minor objective

1. To find out the effectiveness of Interactive Multimedia package on Disaster Management Learning Activities in creating Disaster Management Awareness and Preparedness among Secondary school students with reference to their personal variables viz., Gender, Locality, Type of School, Medium and Personal Experience of Disaster.

## Research Question

Will the Interactive Multimedia package developed on Disaster Management Learning Activities be a valid and effective tool for the secondary school students in creating Disaster Management awareness and preparedness?

## Hypotheses

1. There is no significant difference in pretest and post test score of Disaster Management Awareness and Preparedness among Secondary school students.

2. There is no significant difference in Pretest score of Disaster Management Awareness and Preparedness among Secondary school students.

2. There is no significant mean gain score difference in Disaster Management Awareness and Preparedness among secondary school students with respect to their personal variables Viz. Gender, Locality, Type of School, Medium and Personal Experience of Disaster.

## Research Procedure at a Glance

| Method | Quasi Experimental Pretest –Post test Experimental Research Method | | |
|---|---|---|---|
| **Population** | Secondary School Students | | |
| **Sample** | 62 tenth standard students | | |
| **Sampling Technique** | Purposive Sampling | | |
| **Variable** | **Independent Variable** | **Dependent Variable** | **Personal Variable** |
| | Interactive Multimedia Package on Disaster Management Learning Activities | Disaster Management Preparedness and Awareness | Gender<br>Locality<br>Type of School<br>Medium<br>Personal Experience of Disaster |

| Tools Used | 1. Interacitve Multimedia Package –Developed and Validated by the investigator |
| | 2. Disaster Management Awareness and Preparedness Test-Constructed and Validated by the investigator |
| Statistical Techniques | 1. Arithmetic Mean |
| | 2. Standard Deviation |
| | 3. Test of Significance |
| | 4. Gain Ratio |

## Method of Study

The methods adopted by the researcher for present study is Quasi Experimental One group pretest post- test design.

## Experimental Method

The investigator has chosen the experimental method and it involves manipulating one variable to and to determine the changes in one variable cause changes in another variable.. The experimental design adopted for the present study is "Quasi Experimental One group pre test- post test design", because experimentation is the most scientifically sophisticated research method in Humanities. Based on this the investigator has prepared the interactive multimedia package with help of technical experts and subject experts. Pretest was conducted to test the entry level knowledge on Disaster Management Awareness and Preparedness among the tenth standard students. The interactive multimedia package on Disaster Management Learning activities was developed to create awareness about disaster management. After the intervention the post-test was conducted to evaluate the Knowledge level on Disaster Management Awareness and Preparedness among tenth standard students. There are several threats to any experimental research that are likely to affect the results of the study. Therefore, these threats were carefully controlled in the present study.

## Geographical Area of the Study

Tamil Nadu was highly affected by tsunami in the year 2004, more than 10,776 people were subjected to death and 5,640 people were missing in Tamil Nadu. Again Tamil Nadu and Andhra Pradesh were severely affected by Laila cyclone on 17th May 2010. Cuddalore district and Union territory of Pondicherry were drastically affected by Thane cyclone in December 2011. Nilam cyclone affected Tamil Nadu on 28th October 2012 and 21 people passed away. Hence East Coast of Tamil Nadu was selected for this study.

## Population and Sample of the Study

The population of the study constituted secondary school students those who are studying in Tamil Nadu Government and Aided Schools.

## Sample

## Sampling Design

In present research, researcher has used purposive sampling method for the selection of sample.

## Sampling of the study

## 1. Selection of school.

The schools were selected based on the following criteria:

   (i)   The proportion of boys and girls in the class.
  (ii)   Daily attendance of the students.
 (iii)   Suitable timing of the school.
  (iv)   Locality and background of the students.
   (v)   Feasibility for conducting the experiment.
  (vi)   Availability of computer and LCD.
 (vii)   Permission accorded from the school authorities.

By considering the above, the researcher selected the schools that would serve the purpose among the short listed school.

The investigator collected Data from 62 tenth standard students studying in the east coastal government and Aided schools.

## Sample Distribution

**Table 1:** Distribution of Sample

| Sl. No. | Place | School Name | Total |
|---------|-------|-------------|-------|
| 1 | Vettaikaran Eruppu – Nagapattinnam | Annai Velankanni Matric School | 8 |
| 2 | Vettaikaran Eruppu – Nagapattinnam | Government High School | 15 |

| 3 | Nagoor | Government High School | 20 |
| 4 | Muttom - Kanyakumari | All saints High school | 9 |
| 5 | Colachel Kanyakumari | St. Mary's High school | 10 |
| | | Total | 62 |

## Variables of the Study

The investigator has selected three types of variables viz., one is Independent variable, dependent variables and other is personal variables.

Independent Variable : Interactive Multimedia Package on Disaster Management Learning Activities

Dependent Variable : Disaster Management Awareness and Preparedness

Personal Variables : Gender, Locality, Type of School, Medium and Personal Experience of Disaster

## Tools Used for the Study

1. Interactive Multimedia Package on Disaster Management Learning Activities.
2. Disaster Management Awareness and Preparedness Test.

## Data Collection

This data collection process of this research study consists of two phases. In each phase the same tool was administered to the students and their responses are obtained.

**Phase: I**

**Pre test**

The Disaster Management Awareness and Preparedness Test was administered to know the entry level knowledge of the tenth standard school students.

**Phase: II**

**Implementation Interactive Multimedia Package on Disaster Management Learning Activities**

The students were learned the Disaster Management concepts through interactive learning activities developed in the Multimedia Package.

**Phase III**

**Post test**

In the third phase, the post-test was conducted to find out how far the Disaster Management

Awareness and Preparedness has been created among them after they learned through the Interactive multimedia package.

## Statistical Techniques Used

In this study the investigator applied Descriptive and Differential Statistics. Mean and Standard Deviation were used as descriptive statistics. "t-test"was used as differential statistics.

Gain ratio was calculated to find out the effectiveness of interactive multimedia package in creating the preparedness and awareness on disaster management in school students.

## Gain Ratio

After phase III, with the score of pretest and post-test gain ratio was calculated using the following formula:

$$\text{Gain Ratio} = \frac{\text{Post-test score} - \text{Pre-test score}}{\text{Maximum possible score} - \text{post-test score}} \times 100$$

## Descriptive Analysis of Sample

Population and Sample distribution were denoted by Descriptive Analysis. The distribution of the sample is given in terms of percentage which will provide easy interpretation.

**Table 1:** Distribution of Sample with Respect to Gender

| Gender | No. of Sample | Percentage |
|--------|---------------|------------|
| Male | 38 | 61.3 |
| Female | 24 | 38.7 |

The table 1 shows that the sample constitutes 61.3% male and 38.7% female students.

**Table 2:** Distribution of Sample with Respect to Locality

| Locality | No. of Sample | Percentage |
|----------|---------------|------------|
| Rural | 34 | 54.8 |
| Urban | 28 | 45.2 |

The table 2 shows that the sample constitutes 54.8 % students from rural areas and 45.2% students from urban areas.

**Table 3:** Distribution of Sample with Respect to Type of School

| Type of School | No. of Sample | Percentage |
|---|---|---|
| Government | 35 | 56.5 |
| Aided | 27 | 43.5 |

The table 3 reveals that 56.5 % of students from Government schools, 43.5 % of the students from Government Aided schools.

**Table 4:** Distribution of Sample with Respect to Medium

| Medium | No. of Sample | Percentage |
|---|---|---|
| Tamil | 33 | 53.2 |
| English | 29 | 46.8 |

The table 4 shows that the sample constitutes 53.2 % of Tamil Medium students and 46.8% English Medium students.

**Table 5:** Distribution of Sample with Respect to Personal Experience of Disaster

| Personal Experience of Disaster | No. of Sample | Percentage |
|---|---|---|
| Yes | 20 | 32.3 |
| No | 42 | 67.7 |

The table 5 reveals that 32.3 % of students have got the real-life experience during disaster and 67.7 % of students do not have the disaster experience.

## INFERENTIAL ANALYSIS

### Hypothesis 1

There is no significant difference in pretest and post test score of Disaster Management Awareness and Preparedness among Secondary school students.

**Table 6:** Mean difference between pretest and post-test score of the secondary school students with regard to their Disaster Management Awareness and Preparedness

| Variable | Category | N | Mean | Standard Deviation | 't' value | Result |
|---|---|---|---|---|---|---|
| Disaster Management Awareness and Preparedness (Total) | Pretest | 62 | 21.95 | 4.604 | -37.958 | Significant at 0.05 level |
| | Post test | 62 | 52.58 | 3.490 | | |

From the table 6, it may be concluded that, since the value obtained (37.958) is more than the

table value (1.96) the difference in performance between the Pre- test and Post- test scores is significant at 0.05 level. Thus, the null hypothesis is rejected and research hypothesis is accepted. Hence, the Interactive Multimedia Package on Disaster Management learning activities significantly influence the Disaster Management Awareness and Preparedness among Secondary school students and it is also found that the students have better score in their posttest, which infers that the Interactive Multimedia package has improved the Disaster management awareness and preparedness of the students.

## Hypothesis 2

There is no significant difference in Pretest score of Disaster Management Awareness and Preparedness among Secondary school students.

**Table 7:** Mean difference in Pre - test score of Disaster Management and preparedness of secondary school students with respect to their Personal Variables

| Sl. No. | Variable | Category | N | Mean | Standard Deviation | 't' value | Result |
|---------|----------|----------|---|------|--------------------|-----------|--------|
| 1 | Gender | Male | 38 | 21.74 | 4.712 | -0.459 | Not Significant |
|   |        | Female | 24 | 22.29 | 4.506 |        |        |
| 2 | Locality | Rural | 34 | 21.76 | 4.723 | -0.350 | Not Significant |
|   |          | Urban | 28 | 22.18 | 4.530 |       |        |
| 3 | Type of school | Govt. | 35 | 22.80 | 4.303 | 1.676 | Not Significant |
|   |                | Aided | 27 | 20.85 | 4.825 |       |        |
| 4 | Medium | Tamil | 33 | 22.85 | 3.817 | 1.660 | Not Significant |
|   |        | English | 29 | 20.93 | 5.244 |       |        |
| 5 | Personal Experience of Disaster | Yes | 20 | 21.95 | 4.861 | -0.002 | Not Significant |
|   |        | No | 42 | 21.95 | 4.537 |        |        |

Table 7 indicates mean difference in pretest score of Disaster Management Awareness and Preparedness among secondary school students with respect to their personal variables Viz. Gender, Locality, Type of School, Medium and Personal Experience of Disaster.

The values obtained (-0.459, -0.350, 1.676, 1.660 and -0.002) are less than the table value (1.96). Hence, the difference in performance in Pre- test score of Disaster Management and preparedness among secondary school students with respect to their personal variables are not significant at 0.05 level. Thus, the null hypothesis is accepted and research hypothesis is rejected. Hence, it is concluded that, the sample are equally selected and all the threats are controlled to know the true effectiveness of the interactive Multimedia package on Disaster Management learning activities.

## Hypotheses: 3

There is no significant mean gain score difference in Disaster Management Awareness and Preparedness among secondary school students with respect to their personal variables Viz. Gender, Locality, Type of School, and Personal Experience of Disaster.

**Table 8:** Mean gain score difference in Disaster Management Awareness and Preparedness among secondary school students with respect to their personal variables Viz. Gender, Locality, Type of School, Medium and Personal Experience of Disaster

| Sl. No. | Variable | Category | N | Mean | Standard Deviation | 't' value | Result |
|---|---|---|---|---|---|---|---|
| 1. | Gender | Male | 38 | 31.05 | 6.147 | 0.657 | Not Significant |
| | | Female | 24 | 29.96 | 6.747 | | |
| 2 | Locality | Rural | 34 | 31.21 | 6.347 | 0.785 | Not Significant |
| | | Urban | 28 | 29.93 | 6.406 | | |
| 3 | Type of school | Govt. | 35 | 29.77 | 5.678 | -1.215 | Not Significant |
| | | Aided | 27 | 31.74 | 7.091 | | |
| 4 | Medium | Tamil | 33 | 29.97 | 5.955 | -0.870 | Not Significant |
| | | English | 29 | 31.38 | 6.806 | | |
| 5 | Personal Experience of Disaster | Yes | 20 | 29.70 | 7.057 | -0.792 | Not Significant |
| | | No | 42 | 31.07 | 6.030 | | |

Table 8 indicates mean gain score difference in Disaster Management Awareness and Preparedness among secondary school students with respect to their personal variables Viz. Gender, Locality, Type of School, and Personal Experience of Disaster.

The values obtained (0.657, 0.785, -1.215, -0.870, -0.792) are less than the table value (1.96). Hence, the difference in performance between the Pre- test and Post- test scores is not significant at 0.05 level. Thus, the null hypothesis is accepted and research hypothesis is rejected. Hence, it is concluded that the Interactive Multimedia Package on Disaster Management learning activities equally influence and helped to improve the performance of the secondary school students irrespective of their personal variables.

## GAIN RATIO

**Table 9:** Gain Ratio of the Disaster Management Awareness and Preparedness score

| Variable | Gain Ratio in Percentage |
|---|---|
| Disaster Management Awareness and Preparedness | 87.38 |

Gain Ration of 87.35% in Disaster Management Awareness and Preparedness obtained confirms that the secondary school students are significantly benefited through Interactive Multimedia package on Disaster Management Learning Activities.

**Findings and Interpretations**

1. The Interactive Multimedia Package on Disaster Management learning activities significantly influence the Disaster Management Awareness and Preparedness among Secondary school students and it is also found that the students have better score in their post-test, which infers that the Interactive Multimedia package has improved the Disaster management awareness and preparedness of the students**.**

2. Hence, it is concluded that the Interactive Multimedia Package on Disaster Management learning activities equally influence and helped to improve the performance of the secondary school students irrespective of their personal variables.

3. Gain Ratio of 87.35% in Disaster Management Awareness and Preparedness obtained confirms that the secondary school students are significantly benefited through Interactive Multimedia package on Disaster Management Learning Activities.

**Educational Implications of the Present Study**

1. The knowledge regarding disasters and disaster management can be imparted to the students and people who are not aware of the management strategies to safe guard their lives and possession.

2. Since the students get multiple sensory experiences through interactive multimedia learning, the learning becomes concrete.

3. Enable the teachers and students in coastal areas to realize the importance of the study on disaster and disaster management.

4. This study suggests the government to encourage the educational technologist to produce technology based self-learning packages on Disaster and Disaster management contents for students and teachers by providing funds. So that it helps the present generation to safe guard themselves against disaster.

5. The study helps the students to do their best to mitigate the damaging effects of a natural disaster.

**Relevance of the Present Study for Policy Making**

1. The present study helps the students, teachers and policy makers in developing a specific school disaster Management plan which will suits the needs of each school in terms of preparedness, response and recovery.

2. Disaster Management learning activities pursues to develop in children the attitude, Skills, Values and knowledge needed to face a disastrous situation and environment.

3. Furthermore, the Disaster Management activities for student will be integrated into the curriculum and to the specific school development plan.

## Relevance of the Present Study for Society

The present study paves the way for preparing the community and building Disaster resilient societies and safe lives by educating the younger generation through the Multimedia Package. The educated school children can help the society in the following ways:

1. The school students can understand the disaster and various preventive measures that can be taken them to handle them better

2. The students can understand the natural calamity and they will follow the dos and "don'ts" of a natural calamity or accident.

3. The students can become a part of "rescue teams" and they will involve and participate in the rescue team to save people during an emergency.

4. The trained students will implement the first aid mechanism for the needed people during an emergency time.

## Recommendations of the Present Study

1. *Disaster Management Plan:* The Government should take necessary steps in designing a disaster Management plan which suits the needs of each school in terms of preparedness, response and recovery.

2. *Awareness Campaigns:* Awareness campaigns and sensitization program on disaster management should be conducted for the students, Teachers and the People in the disaster prone areas at least once in a year.

3. *In service Training:* During in service training for teachers training on disaster management can be given. In this way the knowledge on disaster management can be transmitted to every child by the teachers.

4. *Camps:* Students should be given training to protect themselves from disaster through special camps.

5. *Tree Planting:* Government should take initiative to help, educate, and guide the students and teachers in educational institution in the disaster prone area to plant trees like bamboo and mangrove trees.

6. *Opening Caution Centres:* More number of caution centers in and around disaster prone areas should be started to create awareness on disaster and disaster management among the people.

7. ***Disaster Management:*** Both Government and Non-Governmental organization should have a disaster committee that actively function at time of disaster and take effective actions.

8. ***Co-curricular Activities:*** Co-curricular programme on disaster and disaster management should be conducted in all educational institutions.

9. ***Street Theatres:*** Government and Non-Governmental Organizations should take initiatives to educate the people in the disaster prone areas through street theater which will be more effective in creating awareness among illiterate adult and common public.

## CONCLUSION

India is considered as one of the most disaster-prone countries in the world. By seeing the vulnerability of the country to various hazards, the ministry of Home Affairs has decided to educate the youth to combat disasters.. Government of India, Ministry of Human Resource Development recommended the board to introduce Disaster Management in education. Researches have stated that multimedia technology application can help the students to get experiential learning and making learner s more self-reliant and proactive in their learning environment. In the view of the above, the investigator has developed and validated activity based Interactive Multimedia package on Disaster Management Learning Activities for school students. The secondary school students gained knowledge on Disaster Management Awareness and Preparedness by using this Interactive multimedia Package.

## ACKNOWLEDGEMENTS

I register my heartfelt thanks to Mr. J. Dominic Arockiaraj, Research Assistant for his sincere, thorough and constant support provided throughout the project works without which the project might not have been reality. I would like to thank all the Head masters and Headmistress of Government and Aided school for permitting me to conduct my research in their school and providing me the sample of school students willingly. I extend my profound thanks to the tenth standard students for accepting to participate in this experimental study and cooperating with me throughout the period of data collection.

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