

# EFFECTIVENESS OF MULTIMEDIA STRATEGY ON ACHIEVEMENT IN DISASTER MANAGEMENT OF CBSE STUDENTS AT SECONDARY LEVEL

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*Abstract :* Kerala is mainly prone to high incidence of various types of disasters, not only natural hazards but also anthropogenic hazards too. According to Charles Fritz, disaster is an event, concentrated in time and space in which a society or a relatively self sufficient subdivisions of a society undergoes severe danger and incurs such losses to its members and physical appurtenances that the social structures in disrupted and the fulfillment of all or some of the essential functions of the society is prevented (Paul, 2011). More people are injured than die from the direct impacts associated with an extreme event. If the people are skilled in managing the disasters, the disaster vulnerability will reduce. Multimedia refers to content that uses a combination of different content forms. This contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material. Multimedia includes a combination of text, audio, still images, animation, video, or interactivity content forms. The Objective of the study is to compare the effectiveness of Multimedia strategy on achievement in Disaster Management with that of Conventional Activity method of teaching. The investigator adopted Experimental method for conducting the study. Population includes secondary school students of Kerala. The sample includes secondary school students. The investigator here satisfactorily concluded that multimedia have an important role in achievement in disaster management among the secondary school students.

***IndexTerms* - Multimedia Strategy, Disaster Management**

## **I. INTRODUCTION**

Man learns something every day and every moment. His entire life is education. Hence education is a dynamic and continuous process. It is concerned with ever growing society. Hence it is still the process of evaluation (Walia, 2003). Learning provides a key or structure to one's personality and behaviour. An individual starts learning immediately after his birth or in a strict sense even earlier when in the womb of the mother (Sharma, 2002). The teachers often continuously talk for an hour without knowing students responses

and feedbacks. The material presented is only based on lecture notes and textbooks. There may be insufficient interaction with students in the classroom. More emphasis has been given on theory without any practical and real life time situations. It is the learning from memorization but not understanding and gives more importance to marks rather than result oriented. Innovative methods of teaching are a goal of many educators.

## 11. Need and Significance of the study

The investigator hopes that the present study will be helpful to the school students, college students, B. Ed. trainees, teachers, professors and educationalists. The result of the study will reveals the importance of the applications of multimedia in teaching learning processes. Today, most of the people were depending upon the applications of multimedia for educational purpose. It is very helpful to transact knowledge in an effective manner. And also it is very helpful to develop skills in multimedia. The present study is highly related to daily life incidents. In the present scenario enhancing disaster management awareness is a must.

### 11.1. Statement of the Problem

The present study is entitled as “Effectiveness of Multimedia Strategy on Achievement in Disaster Management of CBSE Students at Secondary Level”.

## IV. Operational Definitions of key terms

### Effectiveness

The term “effectiveness” stands for the outcomes of the study which the influence of one factor on condition is dependent on the presence or absence of another factor or conditions.

### Multimedia

Multimedia is the technology engaging a variety of media, including text, audio, video, graphics and animation, either separately or in combination with computers to communicate ideas or to disseminate information.

### Disaster

Disaster is referred to us a sudden accident or a natural catastrophe that causes great damage or loss of life (Oxford Dictionary, 2013) .

### Disaster Management

Disaster management means managing resources and various responsibilities to deal with all humanitarian aspects of emergencies. This may include preparedness, response and recovery. The purpose of disaster management is to lessen the impact of disasters.

In this present study the investigator refers Disaster management to how one can manage and implement the action of plan with reference to earthquake, landslide, flood and anthropogenic disasters.

### Achievement in Disaster Management

The total score obtained by an individual as measured in the test constructed in Disaster Management covering instructional objectives, knowledge, comprehension, application, analysis, synthesis and evaluation.

### Secondary School

Any school recognized by the government of Kerala imparting instruction to students at terminal stages of school education comprising standard V111, 1X and X. Investigator selected standard 1X for the present study.

## V. Objectives of the Study

The major objectives of the study are,

- 1.To compare the effectiveness of Multimedia strategy on achievement in Disaster Management with that of Conventional Activity method of teaching.

2. To compare the effectiveness of Multimedia strategy on achievement in Disaster Management with reference to the following objectives,

- Remembering
- Understanding
- Applying
- Analysing
- Evaluating
- Creating

#### VI. Hypothesis

1. Multimedia strategy is effective on achievement in Disaster Management with that of Conventional Activity method of teaching.
2. Multimedia strategy is effective on achievement in Disaster Management with reference to the objectives,

- Remembering
- Understanding
- Applying
- Analysing
- Evaluating
- Creating

#### VII. Methodology in Brief

Experimental method was applied in this study. The study was conducted on a final sample of 100 students of standard 1X of two divisions. The tools used were Achievement test in Disaster Management and lesson transcripts based on Multimedia and Conventional method of teaching. The two divisions selected were compared on the basis of their previous achievement in Disaster Management and one division was considered as experimental group and the other was control group. The experimental group was taught with lesson transcripts prepared on the basis of Multimedia assistance and control group was taught in the conventional way. The same achievement test was given as post-test to both groups. The data collected were used for statistical analysis.

#### VIII. Tools used in the study

Lesson Transcripts based on Multimedia.

Lesson Transcripts based on Conventional Activity method.

Achievement test in Disaster Management.

## Consolidated results of Adjusted Means of the Post –test Scores of pupils in

## Control and Experimental Groups

| Categories of objectives | Groups       | N  | Mx   | My    | My.x  | T value | Level of significance         |
|--------------------------|--------------|----|------|-------|-------|---------|-------------------------------|
| All categories together  | Experimental | 40 | 3.62 | 20.07 | 15.75 | 4.18    | significant at 0.01 level     |
|                          | Control      | 40 | 3.55 | 12.90 | 9.66  |         |                               |
| Remembering              | Experimental | 40 | 0.28 | 2.18  | 0.01  | 5.5     | significant at 0.01 level     |
|                          | Control      | 40 | 0.22 | 1.37  | 0.04  |         |                               |
| Understanding            | Experimental | 40 | 1.82 | 9.72  | 9.72  | 9.53    | significant at 0.01 level     |
|                          | Control      | 40 | 1.86 | 6.86  | 6.86  |         |                               |
| Applying                 | Experimental | 40 | 0.63 | 3.35  | 3.35  | 5.83    | significant at 0.01 level     |
|                          | Control      | 40 | 0.65 | 2.3   | 2.30  |         |                               |
| Analysing                | Experimental | 40 | 0.28 | 1.57  | 1.57  | 7.18    | significant at 0.01 level     |
|                          | Control      | 40 | 0.27 | 0.78  | 0.78  |         |                               |
| Evaluating               | Experimental | 40 | 0.3  | 1.52  | 0.02  | 6.21    | Not significant at 0.01 level |
|                          | Control      | 40 | 0.27 | 0.65  | 0.005 |         |                               |
| Creating                 | Experimental | 40 | 0.28 | 1.71  | 0.01  | 7.7     | significant at 0.01 level     |
|                          | Control      | 40 | 0.26 | 0.92  | -0.78 |         |                               |

## IX. Major Findings

Major findings from the analysis of test scores are given below

### Findings emerged from the analysis of Pre-test and Post-test scores using the Test of significance.

The mean post-test scores of experimental group that was taught through Multimedia Strategy assisted learning is found to be higher than that of the Control group which was taught through conventional method. This shows the effectiveness in teaching Disaster Management with Multimedia strategy assisted learning over Conventional method.

The critical ratio of the mean value of post test scores of Experimental group and Control group indicates that Experimental group has significant improvement in their achievement after the experiment. This indicates the advantage of Multimedia Strategy assisted learning over Conventional method.

The gain scores of the Experimental group and Control group when subjected to the analysis of Critical Ratio showed that there is significant difference between their achievements in the mean gain scores. This data testifies the advantage of Multimedia Strategy assisted learning over Conventional method of teaching.

The analysis of variance of pre-test and post-test scores of pupils in Experimental and Control group showed that there is no significant difference between the two groups. This also testifies the effectiveness of Multimedia assisted learning.

The analysis of covariance of pre-test score and post-test scores of pupils in Experimental and Control groups showed that there is significant difference between the two groups. This implies that the Experimental group exceeds Control group in their achievement.

The t-value for adjusted mean achievement of Experimental group and Control group were found to be significant at 0.01 level. This reflects that adjusted mean achievement scores of the group taught through Multimedia assisted learning differ significantly from the adjusted mean achievement scores of group thought through conventional method. The adjusted means achievement of the students taught through Multimedia assisted learning gained significantly higher scores than those taught conventional method.

## X. Educational Implications of the study

- Students can explore more about the materials related to that study.
- Knowledge in multimedia may leads to motivation for learning.
- Students can update their knowledge with the help of internet.
- Multimedia assisted teaching may enhances the education of disabled children.
- Awareness in multimedia may helps to improve the teaching skills of teacher trainees.

## Conclusion

When a teacher designs an instruction plan for teaching, it is necessary to include not only the target goal of the unit but also other related goals determined by types of teaching tools and teaching materials. The purpose of Multimedia assisted learning is to study the effectiveness of teaching. The investigator believes that the findings of the study are helpful in improving the usage of multimedia for educational purpose. The major conclusions that are arrived at in the present study are noted below,

1. Multimedia assisted learning of investigation is more effective than Conventional method of teaching on achievement in Disaster Management of secondary school students.
2. Multimedia assisted learning of investigation is more effective than Conventional method of teaching on achievement in Disaster Management under the category of objectives- Remembering, Understanding, Applying, Analyzing, Evaluating and Creating

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