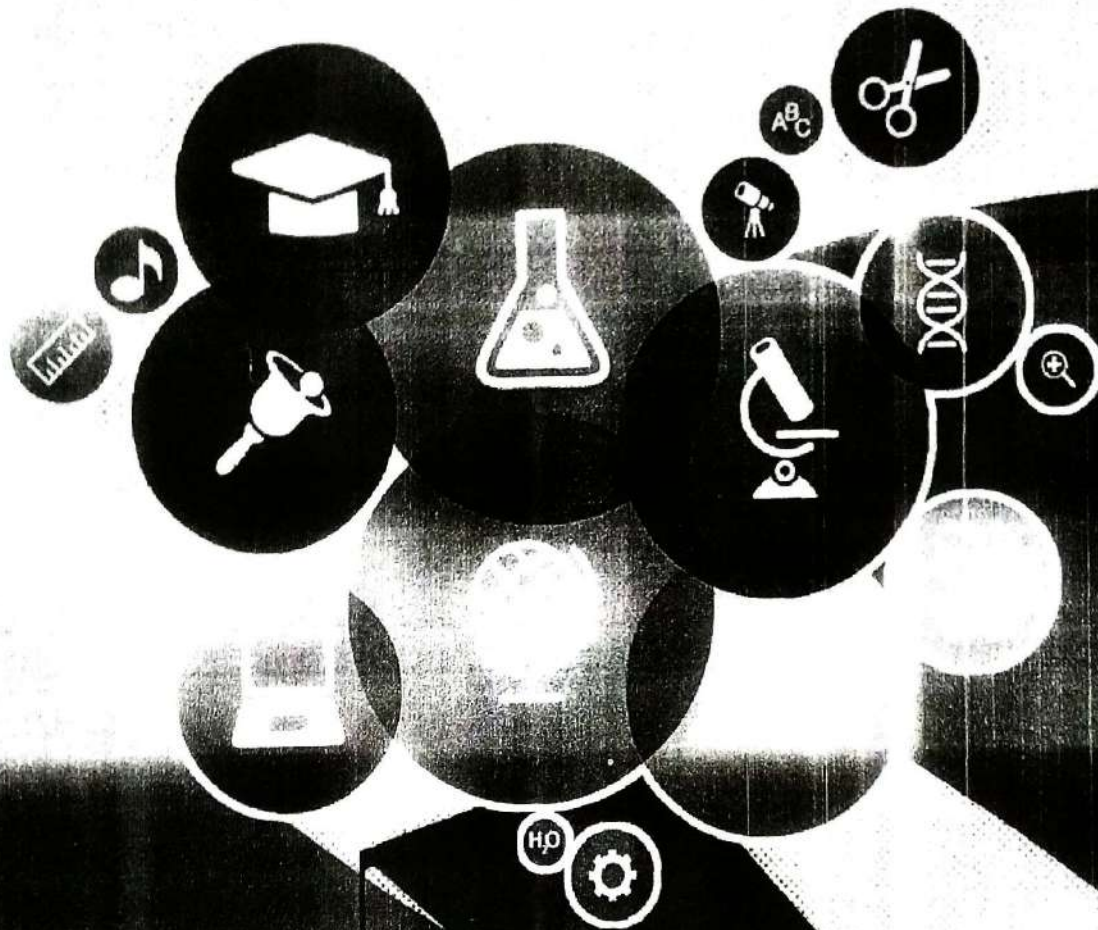


Multi - Disciplinary Scenario of  
**HIGHER EDUCATION  
IN INDIA**



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# DEVELOPING MATHEMATICS INSTRUCTIONAL E-LEARNING MATERIAL AND STUDYING ITS EFFECTIVENESS FOR VI STD. STUDENTS OF MARATHI AND SEMI ENGLISH MEDIUM SCHOOLS IN LATUR DISTRICT

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## Abstract

The instructional e-learning material plays important roles in changing how teachers teach and how students learn. We all teachers know that it is very difficult to give direct experiences to the students in classroom. But such type of experiences is very essential for giving motivation to the students to learn new concepts in Mathematics. The main purpose of instructional e-learning material is to deliver the content or information through relative instruction devices like computer, mobile, internet, television, CD, DVD and pen drive through the help of computer applications.

**Keywords:** e-learning, Mathematics

## Introduction

A new UNESCO publication (2009) report that the changing roles of teachers should be brought about by the use of e-learning strategies in schools. The changing roles of teachers have moved from being "informer" to becoming "facilitator". For present research researcher has prepared Mathematics instructional e-learning material on basis of individual self-placed e-learning offline module. If teachers starting to use instructional e-learning material in classroom for teaching and learning. The effectiveness of learning process will increase to a great level. Instructional e-learning material will also create a good learning environment which will help the students to learning jolly.

## Objectives of Research Study

- To develop instructional e-learning material for VI Std. students studying in Semi English medium.
- To develop instructional e-learning material for VI Std. students studying in Marathi medium.
- To find the effectiveness of the developed instructional e-learning material for VI Std. students of Semi English medium.
- To find the effectiveness of the developed instructional e-learning material for VI Std. students of Marathi medium.

## Hypothesis of Research Study

### a) Research hypothesis

1. The Mathematics instructional e-learning material when used as a method of instruction on VI Std. students of Semi English medium will be more effective than the traditional teaching methods.

2. The Mathematics instructional e-learning material when used as a method of instruction on VI

Std. students of Marathi medium will be more effective than the traditional teaching methods.

3. The Mathematics instructional e-learning Material is effective for VI Std. students of Semi English medium.

4. The Mathematics instructional e-learning Material is effective for VI Std. students of Marathi medium.

### b) Null hypothesis

1. There is no significant difference between pre-test and post-test scores of VI Std. students on all achievement levels (high, average, low) of experimental group of Semi English medium.

2. There is no significant difference between obtained pre-test and post-test scores of VI Std. students on all achievement levels (high, average, low) of control group of Semi English medium.

3. There is no significant difference between obtained post-test scores of VI Std. students on all achievement levels (high, average, low) of experimental and control group of Semi English medium.

4. There is no significant difference between obtained pre-test and post-test scores of VI Std. students on all achievement levels (high, average, low) of experimental group of Marathi medium.

5. There is no significant difference between obtained pre-test and post-test scores of VI Std. students on all achievement levels (high, average, low) of control group of Marathi medium.

6. There is no significant difference between obtained post-test scores of VI Std. students on all achievement levels (high, average, low) of experimental and control group of Marathi medium.

7. There is no significant difference between obtained post-test scores of VI Std. students on all achievement levels (high, average, low) of Semi English medium and Marathi medium of experimental group.

## Variables

In present research dependent variable is test score in term of post-test and independent variables are instructional e-learning material and achievement level (High, average, low).



### Methodology of Research Study

The present research has experimental research. By using purposive sampling method the researcher has selected 200 students' four schools of Latur city. And these groups are equally divided in to four groups out of them 100 students from Semi English medium and 100 students from Marathi medium for the research study.

### Tools and Technique Used for Research Study

In present research researcher has used opinionnaire for student and teachers, achievement test and mental arithmetic test for data collection. For data analysis researcher has used statistical technique for percentage and t-test.

### Main findings

- Teaching Mathematics through instructional e-learning material has comparatively effective than traditional teaching method for VI students on all achievement levels (high, average, low) of Semi English medium.
- Mathematics instructional e-learning material has effective for VI Std. students on all achievement levels (high, average, low) of Semi English medium.
- Teaching Mathematics through instructional e-learning material has comparatively effective than traditional teaching method for VI students on all achievement levels (high, average, low) of Marathi medium.
- Mathematics instructional e-learning material has effective for VI Std. students on all achievement levels (high, average, low) of Marathi medium.
- Content of instructional e-learning material has relevant, clear, appropriate and arranged properly.
- The images and text presented in mathematics instructional e-learning material for each slide has easily readable and properly explained.
- Colour, animation and videos will be help to develop student's interest in learning Mathematics.
- Explanation for every chapter has meaningful and assignment appropriate for learning objectives.

- The overall embedded Mathematics instructional e-learning material has easily assessable and user guide will be helpful for new user or learner.
- The content used in Mathematics instructional e-learning material has related to Mathematics VI Std. text book.
- With the help of Mathematics instructional e-learning material teacher can easily show hard concept repeatedly and chapter become easier for student.
- Teaching through Mathematics instructional e-learning material reduced the burden of student about content.
- Mathematics instructional e-learning materials learning activity will be improves knowledge, skills in Mathematics subject creating more opportunities to interactive with students.
- Mathematics instructional e-learning material will be helpful to increase achievement of the student and developing their subject interest.
- Mathematics instructional e-learning material has effective tool for Mathematics teaching and learning for of VI Std.

### Conclusion

It can be concluded from the present study that it has become necessary to use Mathematics instructional e-learning material in the classroom teaching for VI Std. students and it requires lot of research. The research in this field will definitely help the teachers to know how to use Mathematics instructional e-learning material in the classrooms teaching for VI Std. students in a effective and efficient way.

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