

# An Eyesight on Educational Benefits of Multimedia in Teaching & Learning.

Nagesh Salimath, Hemalatha K, Dr.Jitendra Sheetlani

**Abstract**— Multimedia as the name itself suggests use of many media into one. It can be in the form of graphics, text, sound etc. When all these are put together then it is termed as multimedia. It is important to know how much these are useful to us in the teaching and learning process. It has lot of impact on the human race especially in the field of education. Multimedia is a skill that each and every individual must possess.

Further ICT is also fast changing the world and creating a generation that is media-hungry and technologically savvy. The ability to incorporate these multimedia elements along with the interactive features will definitely change the way the teachers teach and students learn.

**Index Terms**— *Technology, Traditional method, Modern method, Elements, Tools.*

## 1 INTRODUCTION

In the traditional practice of teaching learning process the teacher instructs the students by giving lectures, providing notes, explaining using overhead transparencies etc.. the same courseware if it is taught using multimedia may be a mobile smart phone, projector, computer, laptop etc. The content will be more interactive and interesting as well. This will change the way we communicate with each other. In this Paper We have tried to explain how both the teachers and students can take the benefit of multimedia using e-learning and virtual class room.

## 2. GLOBAL ASPECTS OF MULTIMEDIA:

Multimedia finds its applications in various field like education, art, entertainment, engineering, medicine, mathematics, business, scientific research. Multimedia is rapidly changing the curriculum in almost all the universities.

## 3. TEACHING SYSTEM:

It can be categorised as

- a. Traditional Teaching Method
- b. Modern Teaching Method

### 3.A TRADITIONAL TEACHING METHOD:

Here the teaching learning happens between the four walls of a classroom. It is a teacher dominated interaction where the students are just passive listeners. In this method of teaching the teacher instructs the students by giving lectures, providing notes, etc., Here the whole responsibility lies on the teacher to ensure that the student has understood the concepts. In addition to this method we can consider the technology as a complement which aids in the teaching and learning process and makes it more interactive.

### 3.B MODERN TEACHING METHODOLOGY:

Unlike traditional methodology, modern methodology is more student centred. The teacher's main role is to "help learning happen" which includes involving students in what is going on, by enabling them to work at their own speed, by not giving long explanations, by encouraging them to participate, talk, interact, do things etc. To do this the teacher can make use of the multimedia technology as the complementary tool for effective teaching.

## 4. DIFFERENT ELEMENTS OF MULTIMEDIA:

Elements of multimedia used in education include text, video, sound, graphics and animation.

**4.A TEXT:** It is most important as it provides the important information.

**4.B SOUND:** Sound when synchronized to the screen display enables teachers to present a lot of information.

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• **Nagesh Salimath** - *Research Scholar, Computer Science*  
Sri Satya Sai University of Technology & Medical Sciences,  
Sehore, (M.P)-466001 Contact: 9886600040  
Email: [nash.salimath@gmail.com](mailto:nash.salimath@gmail.com)

• **Hemalatha K** - *Lecturer in Computer Science,*  
HKES Sree Veerendra Patil College, Sadashionagar, Bangalore-84  
Contact: 9886193258 Email: [hmlata.kalaskar@gmail.com](mailto:hmlata.kalaskar@gmail.com)

• **Dr. Jitendra Sheetlani**  
Dean & Associate Professor, School of Computer Application  
Sri Satya Sai University of Technology & Medical Sciences,  
Sehore, (M.P)-466001 Contact: 8085459756 Email: [dr.jsheetlani@gmail.com](mailto:dr.jsheetlani@gmail.com)

**4.C VIDEO:** The representation of information by using the visualization capabilities of video can be immediate and powerful. It provides the exciting possibilities in the field of education.

**4.D ANIMATION:** Animations are primarily used to demonstrate an idea or illustrate a concept. Video is usually taken from life. Animations are taken from drawings.

**4.E GRAPHICS:** They provide the most creative possibilities for a learning session. They can be photographs, drawings, graphs from a spreadsheet, pictures from the CD's or something from the internet.

## 5. EXAMPLES OF MULTIMEDIA:

### 5.A DESKTOP PUBLISHING:

It is a software that allows to prepare the data ready to be published format. What DTP does is it puts the text, pictures, graphs, and charts all in one document and makes the look of the document more attractive. Here you can change the font size, font style etc. and as far as the pictures are concerned you can put the text to it, rotate it, change the shape and size etc.

Some of the DTP software's are Adobe In design, Adobe Page maker, Microsoft Publisher, Microsoft Word, Open office, Scribus.

### 5.B PRESENTATION SOFTWARE:

One of the best-known presentation software's is the Microsoft PowerPoint presentation. Here in this software along with the text and graphics we can also integrate the sound and movies as well. But one thing to kept in mind is a good layout and design which leads to effective presentation.

### 5.C PORTABLE DOCUMENT FORMAT FILES:

It is generally known as the pdf file. Original file is in some other form and it is converted to pdf format, which means that you are converting to a pdf form. For this you require a software called Acrobat Reader which is free. If you want to integrate sounds, videos, etc. then you can install a latest version called Adobe Acrobat Reader which is not free.

## 6. DELIVERING MULTIMEDIA:

Depending in the situation we can connect our computers or laptops to the data projector and have a wonderful presentation.

## 7. TOOLS OF MULTIMEDIA:

- 7.1 Painting and drawing tools.
- 7.2 3D modelling and animations tools.
- 7.3 Image editing tools.
- 7.4 Sound editing tools.
- 7.5 Animation Video and digital movie tools.

### 7.1 PAINTING AND DRAWING TOOLS:

Used in technical drawing, logs, advertisements etc.  
Example: Coral Draw.

### 7.2 3D MODELLING TOOLS:

Used in creating Webpages, designing advertisements, cartoon films and also for training programmes.  
Example: 3D Studio Max.

### 7.3 IMAGE EDITING TOOLS:

You can edit text and images and use filter effects thus manipulate the images with special effects and techniques.  
Example: Adobe Photoshop and Paint Shop Pro

### 7.4 SOUND EDITING TOOLS:

Used to record your own music, sound or voice. You can edit and mix the sound with any other audio and also give effect to it.  
Example: Cool Edit, Sound Forge

### 7.5 ANIMATION, VIDEO AND DIGITAL MOVIE:

Used for digital filtering for having special effects. These are digital video editing tools.  
Example: Adobe Premiere, Media Studio Pro, Macromedia Flash

## 8. HOW MULTIMEDIA CAN BE INCORPORATED INTO LEARNING?

There are various ways of incorporating multimedia into learning process. Few of them are as listed below.

### 8.1 E-Learning:

### 8.2 Virtual Class Rooms

### 8.3 Using Smartphones

**8.1 E-LEARNING:** It is a learning which happens completely using the electronic media. It is an access to educational curriculum outside the class room.

Here the learning is delivered online, via the internet, can be a distance education, online, internet learning. Something which just happens outside the classroom. Sometimes it can happen in real time where the teacher and student can login at the same time or you can learn at your own pace. If it is real time, you can ask questions, raise queries and get the response immediately. Benefits of these are also numerous.

You can read it whenever you have time at your own pace all without travelling to the classroom.

### 8.1.A. NPTEL – NATIONAL PROGRAMME ON TECHNOLOGY ENHANCED LEARNING-IIT MADRAS:

The National Programme on Technology Enhanced Learning (NPTEL), a project funded by the Ministry of Human Resource Development (MHRD), provides e-learning through online Web and Video courses in Engineering, Sciences, Technology, Management and Humanities. This is a joint initiative by seven IITs and IISc Bangalore.

NPTEL provides free online courseware in the form of web courses and video lectures. These lectures utilize a multitude of facilities of the video medium such as chalk-and-talk, tablet writing, power point, two and three dimensional animations, interactive codes, etc. Each course comprises approximately 40 video lectures of about 1 hour duration.



Text transcriptions of all the video lectures are available on the official NPTEL website in the following formats:

- audio file (mp3 format)
- transcript (pdf format)
- subtitles to all videos

### 8.1.B SPOKEN TUTORIALS - IIT BOMBAY:

Spoken Tutorial Forums is a friendly online discussion forum.

The Spoken Tutorial project is the initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India.



**8.2 VIRTUAL CLASS ROOM:** It is an advanced learning environment created using internet, computers, video conferencing in which either the teacher is not present as in the case of remote learning or the students are not present as in the case of distance education.

In case of a virtual class room

- Video Presentations with powerful functionality allows the user for easy viewing of slides, share internet access and other documents
- You can as well view the live demonstrations.
- Teacher can access each student by assigning the lab activity and the student can absorb the classroom style of mentoring.

**8.3 USING SMART PHONES:** Smart Phones when connected to the internet can do wonders for you. You can browse through the websites, do the notes, research on any topic, share the information, send SMS, text discuss by chat. You can as well set reminders, organize schedules in variety of ways. Teachers can use the facility of free group messaging to create group chat rooms for classes etc.

## 9. CONCLUSION:

Multimedia is a big boon to the education sector. In traditional teaching, the students are just passive listeners. They just have to listen to the lecture of the class teacher. It is a one-way communication. The whole responsibility lies on the shoulders of the class teacher to make the student learn. Here only the listening skills are developed.

When the same unit when taught differently using the above said multimedia technologies, the session becomes more interesting and understandable. Learning becomes easier. The concepts that are taught includes various elements of multimedia, thus improving not only the listening skills but also visual, reasoning and comprehensive skills as well.

Though the benefits of using multimedia are enormous but still there are few points which cannot be ignored. The curriculum should be designed in such a way that it should integrate the essence of multimedia into it. The teachers as well as

the students also have to update their skills to use the multi-media for effective teaching and learning.

Could a teacher be called as a facilitator? Considering the learning process that is taking place through the technology, excessive knowledge is explored through multimedia by the learner. A teacher in this mode of teaching is not only the source of contributing knowledge to the learner, She/he plays the role of guiding and facilitating the learner to explore multimedia technology. Hence, I believe a teacher could be called as a facilitator.

In the traditional teaching learning process, restricted time frame is allotted by the educational system, which creates limitations in gaining adequate knowledge. Multimedia technology in teaching learning breaks monotony and gives a larger time and space for a learner to be equipped with the skills required.

In E-Learning, We feel proud to state that we been established a Local Chapter for NPTEL-IIT Madras & Started up Spoken Tutorials Project from IIT Bombay at our Institution & we are SPOC(Single Point of contact) & even the Mentor of that course from "HKES Sree Veerendra Patil Degree College of Science, Arts & Commerce, Bengaluru.

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