

## Multimedia Information Technology A Continuum to Education

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### Abstract

The scenario of the recent past reflects the higher education institutions endorsing the integration of multimedia based information technologies in the classroom thereby enhancing the learning environment. Kothari Commission (1964-66) and National Policy on Education too have laid emphasis on '*burden free education and joyful learning*'. It is an established fact that bombardment of information through making the curriculum content-heavy has only stressed students. Therefore, the challenges faced by the present day teacher educators are – how to make the teaching-learning a joyful learning experience and more so on making the future teacher educators and teachers to understand the worth of real integration of multimedia and technology in the teaching-learning process. This paper emphasis on, how a multimedia information technology can be integrated in teacher education programme with its full potentials.

**KEYWORDS:** Multimedia, Information Technology, Higher Education

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### Introduction

The scenario of the recent past reflects the higher education institutions endorsing the integration of multimedia based information technologies in the classroom thereby enhancing the learning environment. Kothari Commission (1964-66) and National Policy on Education too have laid emphasis on '*burden free education and joyful learning*'. It is an established fact that bombardment of information through making the curriculum content-heavy has only stressed students. Therefore, the challenges faced by the present day teacher education institutions are – making the teaching-learning a joyful learning experience and more so on making the future teacher educators and teachers to understand the worth of real integration of multimedia and technology in the teaching-learning process. This paper emphasis on, how a multimedia information technology was integrated in teacher education programme was discussed in this paper.

### Emerging of Multimedia Information Technology

The present day education continuum has changed from the gurukul times by manifolds. There has been change in all the aspects of education whether one looks at the aims of education, methods of teaching, curriculum, discipline or role of teacher, the change has been in leaps and bounds. Earlier lecture method and meagre use of teaching aids used to suffice the needs of teacher to transact the content knowledge to the students. But with

the invention of computer in the 20<sup>th</sup> century the overall scenario changed. The highest impact of this technology was found on the educational institutions. With the passage of time there was more demand for better technology. Invention of newer technologies raised the inquisitiveness in the knowledge providers to make use of these in the teaching-learning process thereby changing the picture of education as we see it today. The current millennium evinces the amalgamation of computer and information technology. The combination and integration of text, video, graphics and sound gave birth to Multimedia Information Technology. Multimedia information technology has broken the boundaries of textual mode of transmission of information. Now the information is not only available in textual form but also in audio, video or any other media form to its users. Thus, multimedia information technology now means information technology in combination with other media. This opened new avenues for providing education to millions irrespective of their age, caste, creed, race or place through – online learning, e-learning, virtual university, e-coaching, e-education, e-journal etc. It has provided the learners with the opportunity of making optimum use of all their senses to get information. The provision of multi-sensory touch multimedia information technology has influenced the quality of teaching-learning. It has broken the monotony and has provided for variety in the teaching-learning process.

### **Potentials of multimedia information technology**

It is evident today that the use of multimedia information technology has significant impacts on every aspect of our lives. In the context of education industry more and more higher education institutions have come to realize the potential impact of using the multimedia in the classroom as part of the learning environment. To implement multimedia in the classroom internet provides a large variety of freely available resources that help in the better understanding of the content and prove to be cost effective on the teacher's part. Internet has proved to be a milestone in distance learning and its vast scope is seen in all three different form of education (formal, informal and non-formal education).

Studies based on internet gave more emphasis on the e-learning. An overview of e-learning and how it is being implemented using content management systems is provided by Cohen and Nycz (2006). Despite the many challenges yet to be overcome, the advantages of Internet-based learning have been widely recognized. Some of these major advantages include flexibility and broader accessibility (Lee, Cheung, & Chen, 2005), improved students' performance (Alavi, 1994), reflective evaluation of the learning experience (Hiltz, 1995), and higher computer self-efficacy (Piccoli, Ahmad, & Ives, 2001). Academic institutions also benefit in terms of cost reductions and increasing revenues (Saadé and Bahli, 2005).

The success of multimedia information based technologies' usage for learning is primarily due to its potential to integrate various types of media (such as sound, video, graphics, text, etc.) and delivered in various forms (such as collaboration, simulation, game, interactive, program learning material etc.). Therefore the use of multimedia information technology is increasing and influencing quality of teaching-learning.

According to one of the study conducted in this area, highlighted that although there has been an increase in the percentage of faculty using technology since 1996, Kenneth Green in his report of the 1996 National Survey of Information Technology in Higher Education notes that the percentages of college courses using various kinds of information technology resources remains relatively low:

Multimedia	11%
E-mail	25%
Presentation Handouts	28%
Commercial Courseware	19%
CD-ROM Materials	9%
Computer Simulations	14%
Computer Lab/Classroom	24%
WWW-based Resources	9%

The general use multimedia technology is made to learn curriculum content, to present information to class/ audience, to share ideas/opinions through the Internet, to conduct research, to collect information, to play games, to check emails / chat / browse websites on the internet, to help peers, to learn and improve computer skills, to do project work and to get help from experts. Use of multimedia makes the content so diluted and soft that it can be easily digested and absorbed by the learner.

### **Advantages of Multimedia Information Technology**

The impact of multimedia information technology in the field of education has many benefits to provide to the students availing knowledge through it. These benefits are as follows.

1. Multimedia information technology helps students to collect and learn additional knowledge pertaining to the topics covered in class.
2. It helps students to explore their knowledge in larger perspectives in emerging fields with the help of teachers and technology.
3. It helps students to do their project work and other academic assignments.
4. Students can be encouraged to investigate issues pertaining to the real world. This can be done through assigning them projects on the same.
5. It allows the students to access up-to-date information related to role of technology in the field of education.
6. It builds a broader and deeper knowledge base- regarding the interrelation between current concerns and role of technology in education.
7. It has enabled students and teachers sitting miles away from each other to interact and share their experiences and understand the pattern of teaching-learning all over the world.

Student-teachers on a regular basis can use E-mail, Chat, Blogs, Discussion forums to interact and collaborate with peers, teacher educators and experts. This helps them to

keep in touch with their peers and teacher educators and getting relevant information from one place.

### **Ways and means of integration of Multimedia Information Technology**

Areas highlighting ways and means of integration of multimedia information and technology in teacher education are as follows.

#### **Multimedia Information Technology in Teaching**

Teaching at School as well as Higher Education mostly concentrates on imparting information, which is not the sole objective of Teaching. Along with making available information, other objectives of teaching are:

- developing understanding and application of the concepts
- developing expression power
- developing reasoning and thinking power
- development of judgment and decision making ability
- improving comprehension, speech and vocabulary
- developing self-concept and value clarification
- developing proper study habits
- developing tolerance, distinctness, risk taking capacity, scientific temper, etc.

These objectives can be mostly achieved by the use multimedia information technologies. Teacher and students can use power point presentation with hyper linked slides, extra material for learning and enhance it with proper use of audio and video files, to cater to different learners having different learning styles.

#### **Multimedia Information Technology in teaching-learning process**

Students and teachers can exchange their ideas and views, and get clarification on any topic from different experts, practitioners, etc. It helps learners to broaden the information base. The Multimedia Information Technology can fill this gap because it can provide access to different sources of information. It will provide correct information making it as comprehensive as possible in different formats with different examples. Pictures can be used, highlighting major points and video clipping in regular teaching learning process.

#### **Multimedia Information Technology in practice teaching**

With the present infrastructure, class size, availability of teachers, quality of teachers, training of teachers, etc., it is difficult to achieve all the objectives. Further, most of the teachers use Lecture Method which does not have potentiality of achieving majority of the above mentioned objectives. The objectives are multi-dimensional in nature, so for their achievement multiple methods should be used in an integrated fashion. Students need to inculcate the habit of higher order thinking. For achieving these objectives they use brainstorming questions by showing picture, video clipping and other medium. Integration of different methods of teaching like, lecture method, discussion method, and problem solving methods etc. are being utilized in the practice teaching phase.

### **Multimedia Information Technology in Seminars**

At higher education students are expected to be self-motivated and moreover they are appreciated to be self-learners. Curriculum gives students the opportunity to practice both these terms in its true sense by making Large group seminar (pertains to Compulsory papers) and Small group seminar (pertains to methods of teaching) presentation a compulsory component of the course. This practice allows them to try on various modes for presenting their views and opinions on the topics given to them. Along with this the students are able to imbibe the traits like concentration, critical thinking, organization of thoughts, learning various dimensions to one point of learning. This also enables life long learning which otherwise is not possible.

### **Multimedia Information Technology in assignments**

Assignments can be designed in such a way where use of multimedia information technology was compulsory. Students are asked to send their assignment through e-mails. These assignments have different requirements, like providing reference of at least *five websites* that has been used, making *program learning material* on given topics, using websites like 'youtube' ([www.youtube.com](http://www.youtube.com)) for downloading video clipping. They are also encouraged to raise any query by sending e-mail to the teachers. Teachers also favour this by sending their suggestions for assignment through the internet. The learners thus get opportunity to work on any live project with learners and experts from other countries. Multimedia Information Technology provides flexibility to learners which are denied by the traditional process and methods of teaching. Its flexibility enhances mastery over learning and that too enhance quality learning.

### **Multimedia Information Technology in assembly**

In most of the education institution assembly was a regular activity. This can be used as a medium to endow them with a large variety of enhancements. The assembly comprises of fifteen minutes which are power packed with the usage of technology and take the responsibility of shaping and grooming the student teachers to be the smart teachers of tomorrow. The components of assembly may be comprised of meditation, conducting role play, radio plays, video presentations focusing on team building, positive thinking and broadening their ideas. This practice would works as a motivator for each one of them to be at their best and do their best and become responsible members of the community at large. Presentations on national festivals, religious festivals and special days of the year too can be made with the help of multimedia usage.

### **Multimedia Information Technology for community.**

Alumni, teachers and present learners can become a part of *community* (in *orkut/ or related apps freely available on search engines like google*) where all the members of have common sharing of information. On regular basis they send formal and informal messages and invitations to the members of the community. Often they too share their views with their friends and teachers, all of which is only possible with the integration of multimedia information technology.

## Conclusion

All above mentioned efforts lead to improvement in the quality of teaching to the level of satisfaction of teachers, students, parents and all its stakeholders. From the above discussion it is also clear that use of multimedia information technology has a positive role in influencing quality of teaching-learning.

Multimedia Information Technology is such a weapon in the hands of one and all which if used in the right stride can change the whole picture of the society. Teacher Educators and Teachers can use this weapon for sharpening the skills of their students to make them wholistic individuals enabling them to face the challenges of the global world. At the same time, they themselves can make use of it to their own benefit by upgrading their knowledge in their respective fields by sharing their views and opinions with the other practitioners sitting on the other side of the world.

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