



# A review on applications of multimedia and e-education technology in smart education

■ Chanchal Rana and Sunita Mishra\*

Department of Human Development and Family Studies, School of Home Science, Babasaheb Bhimrao Ambedkar University, LUCKNOW (U.P.) INDIA

(Email: [chanchalrana.444@gmail.com](mailto:chanchalrana.444@gmail.com); [sunitabbau@gmail.com](mailto:sunitabbau@gmail.com))

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\*Author for correspondence

## ABSTRACT

21<sup>st</sup> century declared to be the age of information and communication technology. Today's students have been raised in a world of instant access to knowledge and information, a word of automation, remote controls, and simulation capabilities to stimulate the mind. This paper is about the much growing technology "Multimedia and e-education". The usage of smart teaching techniques is now more prevalent in school as well as other colleges and institutes. It was generated back in 1980s and is growing since then. This new technology helps the students with the benefit of learning with a different experience. The methods of e-learning make the classroom more interactive and interesting. It has also created a greater impact on our society as well as on education system. E-textbook provides electronic textbooks which are actually used at learner's real class. Digital textbook uses the latest smart device and technology.

## INTRODUCTION

The *Smart Learning* approach provides learners of all ages and walks of life with a framework and a host of Smart Thinking Tools that motivate higher levels of understanding. Through the process learners activate and build background knowledge, process information, transform their learning into a product that shows what they know, and reflect on their learning. Smart Learning realizes the goals of inclusivity and differentiation and the inevitable choice for school teaching. With the development of the internet, and quickly spread, the modern education technology is going through a network of revolution. Teaching and training of basic multimedia

information resources system, including the main function of multimedia teaching material construction and multimedia information resource management, multimedia information resources application, is the material basis of multi-media teaching in schools. Learning is not how much one can restrict. It's rather the awareness that remains after one forgets what he/she well-read in schools. Thus we highlight on learning the concepts of smart class with the help of visuals and activities. Because the multimedia is a collection of text, graphics, animation, video, sound, special effects, etc. and contains an infinite space imagination, not only change the we learn and understand the question, but also changed the way we spread information.

**Concept of multimedia and e-education :**

The new multimedia technology mainly refers to the multimedia computer technology, refers to the comprehensive management and control of multimedia information including text, graphics, animation and moving images, etc., and to establish logical link of information, and will “interaction” enter the system function. This is a completely different traditional simple combination of multimedia technology. Smart class or E-class is an innovative educational content for the students. One of the most unique and affordable platform to run e-class is a PEN DRIVE that runs on TV through a small multi-media player called e-box or directly on the laptops or computers. This contains each subject with a real teacher in a virtual classroom, teaching chapter by chapter making studies as exciting as watching movies along with unique features like question -answer and mind map for revision purpose. E-class can also be easily loaded onto PCs, Laptops, and school servers etc. History animated videos, science experiments, geography maps and figures, geometry diagrams and sums all make a wonderful learning experience. They are all given in a pen drive for the students in an audio video animation format (Fig. 1).



**Fig. 1 :** The projector used display purpose for smart class

The computer multi-media technology integrating audio-visual information system of digital signal, then can easily storage, manipulation, control, editing and transform even query and inspection? People can describe, release, and deal with various kinds of audio-visual material, using multimedia technology, representations of nature, have more participation and creativity.

**Features of the multimedia and e-education :**

The audio, moving video, animation in multimedia

information are closely linked to time, and the integrated process of their presentation and interactivity is real-time. When one of the main content is displayed, its audio-visual information is synchronous. The key technology of the multimedia is digital high-compression and decompression technology. Using e-class is as simple as operating your Television from a remote. As with e-class you get an e-box which needs to be attached with the TV and with the e-box remote you can navigate through the study material loaded on e-class. The students have access to the study material with them, so they can plan their studies at their convenience. Revision would never had been so fun earlier as all they have to do is switch on to e-class and sit back and learn using the Audio Video learning. With e-class you can study at your own pace, devote more time to your weak points. Studying and revising can be done at once own pace (Fig. 2).



**Fig. 2 :** Tablet and equipments used for e-Education purpose

**Teaching effectiveness of multimedia and e-education application :**

The use of multimedia technology e-Education can stimulate students’ interest in learning. Using the multimedia technology through innovative image, dynamic indication, rich films and wireless data change passive “listen”, “recording” active “see”, so it can trigger the learning interest of the students, and students tend to have a positive trend learning contents. Students think positively and have courage to express his views, and actively participate in class, and direct feedback timely from teaching depends on the ability of using human-machine interaction. Through computer software and powerful man-machine interactive function of multimedia network technology development, the teachers and students in teaching and learning process get teaching feedback at any time, and teachers may study effect of training. The cultivation of students’ creative thinking in the multimedia network teaching. In the e-education, teachers use creative teaching strategies, build

a new teaching model which is student-centered, student-based independent exploration activities, teaching-oriented, learning as the main body, suspicion to be spindle, exploration the main line, so that the teaching activities are established based on student self-study, self-inquiry, and thus conducive to the formation of teaching and learning environment of students' creative thinking ability. It emphasizes the active construction process of knowledge for the students, the learning autonomy and innovation of students.

#### Examples of the multimedia and e-education vendors:

In the today's scenario is loaded with thousands of IT companies that developing several technologies every day. Generally the vendors work on projects such as setting up of equipments and environment at schools, institutions etc. The aims of smart classroom is to developing the students learning ability and e-education is an innovative product in the field of learning. The smart classrooms are the new generation educational product which helps students gain more marks. Multimedia and e-education application is a gyration, product in the field of education. A smart classroom can be considered as a virtual classroom. A virtual classroom duplicates the potentiality found in a real classroom.

#### A virtual classroom provides:

- Students and teachers use their computers to go to a virtual meeting place instead of a classroom.
- A list of students is recorded.

#### Lecture:

Teachers can choose from a variety of synchronous technologies including:

- Slide presentation
- Audio and video conferencing
- Application sharing
- Shared whiteboard

Some of the renowned vendors are:

- The EduComp
- The SMART
- The RTIVC
- DIGI class

These vendors generally tie up with the organization be it private or run by governmental authorities and develop the e-education software as per the needs of the organization. If there is any institution that wants to set

up these new multimedia technologies, the company then goes through the needs of the authorities and develop the software as per needs.

#### Conclusion :

Multimedia and e-education application will definitely play a major role as smart education .The usage of this new technology must be encouraged in the current education system. The e-education and smart classroom provide the students as well as teacher to learn through new techniques and too in a different and interesting manner. The benefits of smart education paradigm are that learning services are tailored to the learners' context which helps maximize their satisfaction and learning effectiveness, and that learners develop diverse personal and social skills, besides knowledge acquisition, through these social and collaborative activities.

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