

# APPLICATIONS OF MULTIMEDIA AND ITS EFFECTS ON THE TEACHING AND LEARNING PROCESS-A PERSPECTIVE STUDY

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## ABSTRACT

It is important for teachers to provide their students with most effective ways of learning and teaching experiences. The pedagogy at both tertiary level as well as higher education level has undergone a complete overhaul in the recent times. The purpose of this research work is how to use the media for effective teaching learning every method in the life is learning method and after that teaching learning through the use of multimedia is more surfaced than any other and it became attractive for the whole process of teaching. It is the responsibility of the teacher to diffuse the education in multimedia way that it gives strength for teaching learning and improves the skills among the students and develops the quality and observer knowledge and they remain alert for any challenging face of the environment educational problems.

It is suggested that use of multimedia in entire teaching and learning process and knowledge making and knowledge creation has revolutionized the whole process of knowledge making and knowledge creation.

**KEYWORDS:** Multimedia, Teaching, Learning, Effects, Education, Knowledge, Role Of Internet, Practical And Educational Advantage.

## INTRODUCTION

Multimedia is an extremely powerful tool and how it is used in education today is of great importance in understanding its role in whole knowledge creation both at tertiary level as well as higher education level. Multimedia can be defined as combination of audio as well as video resources for the purpose of presenting information. It is also referred as where computers are used in imparting knowledge or in other words computer mediated technology that integrates audio and video mediums. Use of computers, e-books, slide projectors, sound

and video systems, are all examples of multimedia in educating, teaching and learning.

Uses of multimedia is duty bound no one can deny this right it works same as we talk of the digital India not much required to make the banking system to online or the business transaction. it is one of the fundamental aspect of the corruption but before that it is necessary in every field of education same as the case when all the rights are suspended but one right never suspended (that is right to education up to the age of 14) same as the here multimedia

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as much as required if we want to teaching learning effective and it develops the scientific temper among the students , otherwise the digital India not work but we are showing for the outsider to look towards the 4G and digital revolution and internet and other sites are work a lot for the student but unfortunately , in some areas lot of carrier was lost for the students through the digital India when it was shut down or the internet curfew that means we are getting back more towards the traditional technologies.

The present study seeks to identify the use and impact of multimedia in whole learning and teaching process. It is suggested that using multimedia in teaching has great benefits and advantages over traditional ways of teaching. This hypothesis is proved by the review of relevant empirical and also theoretical literature in this area.

The study aims to find the use of multimedia in entire learning and teaching process and what impact it has on the entire process of knowledge making and knowledge creation. It has tried to find out if the how using the multimedia in imparting education has increased the efficiency of teaching.

## **LITERATURE SURVEY**

A medium is “an intervening agency, means instrument by which something is conveyed or accomplished “(Webster’s college dictionary, 1991)

Media is the plural form of medium, and it includes the means to create, store and present instructional content. These include tools such as chalk and talk, books, and computers, slide projectors, video projection, overhead projectors, document cameras, audio system (a CD player) radio, combined sound and video system (television) digital video cameras.

According to Bartlett and strough (2003) state that multimedia formats may offer benefits to instructors teaching multi-section courses because this type of format ensures uniformity in the lecture content across the sections.

Use of graphics, images, video lectures, animation and use of special effects all of this has enhanced the entire learning and teaching process. (Sousa, Richter, & Nel, 2017) suggest use of multimedia in teaching provides benefits like ‘interactivity, sound cues, use of animated text or animation and graphics helps in better demonstrating the concepts’ which the traditional way of teaching often lacks. Use of multimedia technologies has made use of computers technologies and internet especially has proved very useful tool in imparting quality education. Use of multimedia in teaching has also increased the productivity of teachers. Many researchers suggest that multimedia is one of the best educational techniques available in imparting education as it involves use of both sight and hearing that is both audio and video which has more impact than any traditional methods of teaching. The increasing use of multimedia in teaching has made teaching a more dynamic process, it helps clarification of ideas and thoughts, it helps in increasing the attention span of the learners which no other mediums of teaching and learning provide. Globally there has been an increase in use of technology in education programmes. Traditional educational approaches were not as effective as the modern ways of teaching are as the new medium is more flexible and more interactive which is the key to education.

Research on teaching learning worldwide suggests that use of Information and Communication Technology (ICT) can enhance learning process (Mayer & Moreno, 2002). Using multimedia in teaching which largely

computer based technology in learning is consists of text and images, sounds and video offers an extremely powerful tool for improving learners comprehension levels and understanding. What media and how it should be used can be sometimes tricky for the educators or teachers as every medium comes with its unique challenges and advantages. Mayer & Moreno also suggest although use of multimedia in learning and teaching can enhance learning process but not all the multimedia messages or tools are equally effective. They provide five aids to computer mediated multimedia learning which is multimedia aids; teachers can use narration and animation while teaching instead of narration alone as it is easier for the learners to comprehend when he or she sees it visually. Contiguity aids; it is suggested that both narration and animation should be used, coherence aids; do not make use of unwanted words and sounds, modality aids; present words as narration rather than as on screen-text, everything on the screen should be explained and redundancy aids; present narration and animation rather than narration, animation and on screen-text because access of resources can also confuse the learners.

The multimedia is essential in the process of teaching and learning in the classroom and it is improving the technical skills easily among the students in An interactive manner and multimedia provides a greater opportunity for interacting with diverse text that gives students a solid background in the challenging tasks And courses and is characterized by the presence of text, pictures, sound, animation and video, some or all of which are organized into some weren't program "(Phillips 1997)".

## **SIGNIFICANCE OF MULTIMEDIA IN CLASSROOMS**

This research work helps both the teachers and students to develop their skills through multi-

media, print text, film, video, radio, computer, newspaper, and internet. But all such kinds of facilities are related to the nation as the student pertaining to what the institution will provide them during the compulsory education. All the circles both the inner as well as outer are rationally interrelated to both the influential teaching and if multimedia uses in a pure way. Otherwise, they will develop the education but without the skilled and no scientific temper develop among the students. when pragmatism is came same as the teacher can do for the inner checking to manifest the hidden qualities as the same role is played multimedia because they dealt with the subject found in resource material.

Multi-media classroom helps a lot for all the age categories without the discrimination and some media helps some disabled students more as they equally compete with the other through the audio-visual or in sometime through the audio only or video sense and playing a great dynamic role for progressing of individual mind into a concrete reality where the society is set up and sometimes, all the dependent students who are not able to afford the learning in regular mode and it remaining best for that category and the multimedia teaching learning is just beginning to think of shifting the basis of certification from time served to skills and knowledge oriented. If teacher want to teaching effective then it required both for the teacher and the govt. to apply the multi-media in schools, colleges, and universities even hospitals also to spread the awareness among the general masses to how we neglect the diseases and how we become healthy .( means health oriented program) as the article 21A works . Free education up to the age of 14 same as have required if we really like the education system in a developed way then no one can deny the multi-media in a classroom anymore. It makes possibility for the teachers to give opportunity to students being happier

and more enjoy during the course instead of the boring system and teacher usually stands in front of the students, giving explaining, informing and use chalk to write.

In multi-media classroom students can be modified according to the situation needed. They sit at wide tables in comfortable chairs and have plenty of room to spread work and they corrupt the every movement as they see through audio-visual media and teaching learning are becoming scientific and it is the basic mechanism in the school system act and in the social education process more generally and it develops them the perception involving incoming stimuli , as well as mental images they create and students when they see do not simply respond immediately to external stimuli but rather think about, and access, them through mental imagery and the program is presented as a simulation gave to interest and motivation. Students using the program found themselves in the virtual world of education.

An important precursor to the modern multimedia or mass media was the invention of the Gutenberg movable type which enabled texts to be reproduced. Gutenberg made use of existing technologies-paper and wood. Block printing that originated in Asia much easier and the multimedia influencing not only the teaching learning but also the influences of social cultural and economic factors must also be taken into account.

First we have required to make the system of society favorable for school institutions make smooth at this level then we have need to bring the digital revolution in all foundation corners of institutions ( specially education) we then examine the ways in which educational globalization impacts on other learning .

The fundamental aspect of the multimedia in teaching learning concerns the very infrastructure through which information is

communicated and exchanged and during the second half of the 20<sup>th</sup> century have completely transformed the face of telecommunication, the communication of information , sounds or images at a distance through a technological medium.

## **ROLE OF INTERNET AND THE WORLD WIDE WEB**

The internet has played a wonderful role for eliminating the students into ruthless problems to light. Internet has shrinking the all communication into a pocket and bonded all people together. Internet brings people come close to each other and more. Knowledge hub and teaching effective is for the students and all the topics and books are in front of those who are belonging and longing to the topics of any subject. The internet provides online services, electronic bulletin boards, chat rooms and software libraries were put onto the net by a bewildering variety of people. In 1994 companies overtook universities as the dominant users of the network.

## **APPLICATIONS OF MULTIMEDIA IN TEACHING AND LEARNING PROCESS**

Research suggests that (Joshi, 2012) usage of multimedia in education is increasing at all levels. It is important for teachers to provide best education to its learners so that they can compete at all levels. Multimedia allows teachers to be innovative and creative and hence allows them to provide the most effective forms of teaching. Multimedia technology in educational programs helps teachers to provide them a problem based learning environment. Multimedia is the most interactive medium available for both the learners and teachers. Multimedia is a media that uses combination of different content forms presented using computer or computerized technology. In knowledge making it is widely used and effective tool as one can

make use of varied forms of illustrations to explain a concept or ideas.

Additionally, in modern education system, the use of computer and internet enabled multimedia is gaining momentum. Teaching processes are making use of graphics, animations, web bulletin boards, video and audio to present material to the students. Self-teaching programs have increasingly become popular. Multimedia platform have made the entire teaching process more interesting and enjoyable. The advantages of multimedia based in teaching includes interactive learning, individualized learning and provides range of experiences to both teachers as well as learners which older methods of teaching often lack (Naidu & Biswal). Using multimedia has positive effect on the learners in terms of better understanding and greater retention and comprehension. A study by (Shah & Khan, 2015) investigated the impact of using multimedia aided teaching on students' academic achievement and attitude at elementary level. The study found that multimedia aided teaching is more effective than the traditional class room mode of teaching.

(Andresen & Brink, 2013) educational processes have seen a varied kind of innovation and development especially where computer based technologies are used. It is impossible to think about effective teaching without making using multimedia or computer based technology in education or any other teaching process. The present modern education systems are highly technological driven in which multimedia is considered to be one of the most powerful tools that helps teachers to enhance their productivity in terms of their professional capacity and also helps students and learners in better understanding and achieve their educational goals. Multimedia in education is also solving the larger social problems of 21<sup>st</sup> century which is providing the access of

education to all and it has also changed the whole process of teaching. Multimedia in education also means use of more 'reflexive, pragmatic and experiential approaches' in learning. Use of multimedia based teaching in education has brought teachers and students or learners closer. The use of multimedia based teaching has also led to the more student centered approach in teaching. It also leads to more flexible schedules which has advantages for both the students as well as the teachers. The traditional role of teachers as someone who is in authority has changed to more democratic and friendly relationship with the students. The learners have more accessibility to reach the teachers which the traditional hierarchy based education system often lacked.

## **EFFECTS OF MULTIMEDIA ON TEACHING AND LEARNING PROCESS**

The benefits of multimedia in education include deeper understanding, better problem solving methods and greater interactivity between the teachers and the learners. A study by (Aloraini, 2012) found the positive impact of use of multimedia on the academic achievement of female students. The study employed experimental method and selected 20 female students each for experimental and control group from the College of Education at King Saud University. One group was given lectures using computers and other multimedia tools and the other group was given lectures using traditional methods of lectures. A study by (Čubrilo, Crvenković, Obadović, & Segedinac, 2014) on the effects of use of multimedia and its effects on teaching physics in schools suggests that application of multimedia in teaching physics in school had a significant impact on the quantum and quality of students knowledge. It also found that students had longer retention where multimedia was used in teaching as compared to the traditional method of teaching. The study used experimental

method and 140 students were selected from the first year of the engineering course from the Technical School in Kikinda, Republic of Serbia.

Information Revolution of the 21<sup>st</sup> century has probably affected everyone and all walks of human endeavor. The technological advancements and proliferations of multimedia technologies have also affected education and the process of knowledge making and knowledge creation. The use of technology in education is increasing day by day. A study by (Ilhan & Oruç, 2016) that use of multimedia in social studies classes have increased students success and it has a positive effects in students attitudes and it makes the learning process for students more enjoyable and understandable. The study used experimental method on 67 social studies students of 4<sup>th</sup> grade students from a school in Kayseri, Turkey. Another study by (Gebreyohannes & Hasan, 2016) multimedia based teaching and learning process increases the performance of students on the module calculus and numerical methods. They did experimental study on 50 students studying module calculus and numerical methods from Coventry University of Middle East College, Oman. 25 students were taught using multimedia and another group of 25 were taught using traditional method. It was found that those who were taught using multimedia showed better performance as compared to students who were taught using traditional methods of teaching. The use of multimedia has powerful effects on sharing knowledge which is a lifelong process.

### **ADVANTAGES OF MULTIMEDIA IN TEACHING AND LEARNING**

Multimedia which is highly being used in the modern education system is the most effective tool of learning and communication. Multimedia in education can be used creatively and reflexively additionally multimedia provides

a great degree of flexibility and interactivity. Interactivity is the biggest advantage of use of multimedia and computer based media in teaching over the traditional method of teaching. It allows learners to provide feedback which can in turn help the teachers to understand the individual problem of the students and resolve it in a much better way. Interactivity is the key in multimedia based learning and teaching process which traditional ways of teaching lacks. (Rhodes & Azbell, 1985) has identified three forms of interactivity in multimedia:

**REACTIVE INTERACTION:** In this kind of interactivity, the learners give response to a presented stimulus.

**PROACTIVE INTERACTION:** In this kind of interactivity, the learners control the program.

**MUTUAL INTERACTION:** In this kind of interactivity, the learners and the program are able to adapt to each other.

### **IDEAS AND KNOWLEDGE USING MULTIMEDIA CAN BE IMPARTED IN THESE WAYS**

- **IMAGES:** In the forms of scanned photographs, graphics, maps, designs, drawings, etc.
- **SOUNDS:** both audio as well as video, talking heads, interactive videos.
- **ANIMATION AND SIMULATIONS:** Interactive videos and graphics, special effects.
- **DISCUSSION PLATFORMS:** Blogs, social media, websites, etc.

Using multimedia in knowledge making process helps in the construction of meaningful and understandable knowledge, construction of applicable knowledge and construction of knowledge about learning. Uses of graphics and images in teaching have largely a positive

impact on the learning outcomes and attitudes of the students because it is easier for them to remember as well as comprehend the materials. The animated texts appeal more to the students as it uses more creativity than the traditional texts that largely come in the form of books. It also promotes individual and self learning which can be tailored as per the needs and requirements of individual students. Students can choose their own learning process as per their interests and preferences, Apart from interactivity and flexibility using multimedia also allows to overcome the embedded difference between learners and the teachers. The multimedia offers great advantage over traditional ways of teaching but still the role traditional teachers cannot be undermined. Success of usage of multimedia and its application is dependent on the skilled teacher who knows which media to use and how to use if for the advantage of the learners. Multimedia provides students to learn by reading, by hearing or watching which is much easier than learning just by reading.

## **CONCLUSION**

Multimedia in entire learning and teaching process has benefitted both teachers and learners. On one hand it has increased the productivity of the teachers and presented them with effective ways of teaching and also it has made the whole process of learning all the more enjoyable, interactive and understandable. Multimedia is the effective way of teaching and it is much easier for the learners to comprehend the concepts easily. When the teacher interact the students with multimedia the student become increasing familiar with all the knowledge of the subject and also the language structure developed well . connecting with the internet and new technological multi-media the student will make the benefit of increased motivation and student not dislike the class and are become

eager to arrive early at the class because to continue working on the internet and the benefit of the education on demand.

Through this research work, it can also be concluded that the multimedia based way of teaching and learning is more effective and useful than the older and traditional way of teaching. In order to provide the learners with best available knowledge teachers and educational institutions need to bring the latest technology in the entire knowledge making process.

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