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Effectiveness of Multimedia in Education

Abstract

This paper present how we can use multimedia elements in a way which it can be used for educational activity. In general multimedia is the blend of visual and audio representations. These representations could include features of texts, graphic arts, sound, animation, and video. The conventional approach of learning system that had been used for the previous generation had proved to be helpful. However, with the help of combination of visual and audio representations, it can facilitate enhancing our educational system and make learning to be more interesting and enjoyable. The difficulty with the conventional approach of learning is that it is lack in creativity and often hard to understand. This tend to make learning tricky and boring. This will make learning difficult as students tend to be confuse and fail to understand the subject that they learn. With the help of multimedia which provide variety of options, learning could be more interesting and exciting experience. It will give an aid students to fully capture an understanding of the subject that they learn.

I. Introduction

Multimedia is content that uses a combination of different content forms such as text, audio, images, animations, video and interactive content. Multimedia means an electronically delivered blend of media comprising of video, still images, audio, and text in such a way that can be accessed interactively. Much of the information on the web today falls within this definition as understood by number of people. Multimedia presentations may be seen by presentor on dias, projected, transmitted, or played locally with a media player. A broadcast may be a live or recorded multimedia presentation. Broadcasts and recordings can be either analog or digital electronic media technology. Digital online multimedia may be downloaded or streamed. Streaming multimedia may be live or on-demand.

With the development of technology in this world, we can see that the world that we live in is changing speedily and the field of education are one of the field that are rising to be much better. The conventional education where the learning environments are passive is long gone. We can say that the application of multimedia in education has increased a lot in this recent times and is looking to evolve ever further in the future. Educator primarily required resources in order to help students to understand better about the topic that they are learning. By enabling educator to have access in multimedia learning resource, which help to support constructive concept development, allowing the educator to be more focus to teaching the subject while working to help the students to be aware of the subject individually.

From multimedia learning (MML) theory, David Roberts has created a large group lecture practice applying PowerPoint and based on the use of full-slide images in combination with a reducing of visible text (all text can be put in the notes view' segment of PowerPoint). The method has been used and tested in 9 disciplines. In every experiment, students' envolement and active learning has been approximately 66% more, than with the same matter being delivered using bullet points, text and speech, corroborating a range of theories presented by multimedia learning scholars like Sweller and Mayer. The concept of media convergence is also becoming important element in education, specially higher education.

II. The Traditional Approach in Learning

The conventional education is long-established habits found in school that people has traditionally deemed appropriate. This type of education is more to educator - centred and emphasis on verbal answers, reliance on memorization with no effort at understanding the meaning. Traditional approach also insisted that all students be taught the same materials at the same point; students that did not learn quickly enough failed, rather than being allowed to succeed at their natural speeds. Furthermore, the conventional ways of learning are much more related with factual collections and skill mastery while the modern approach with the help of multimedia are non-linear, with one idea linked to another, enabling the learner to select the path that they want to learn.

The conventional approach of learning is less creative. The students are more passive as they lack in material resource needed in order to express their creativity. Such loop hole can make learner to be less fervent and lazy to learn. This is why multimedia use in education is vital in education.

III. The Multimedia Approach in Learning

Multimedia Approach

Multimedia is the digital combination of text (written), Graphics (the interface of the program), Animation, Audio (dialogues, Stories, Sound effects), Still images (Pictures and Visual Stimuli), Motion video etc. Through the mixture of all these media, the learning experiences become an interactive one mirroring each day experiences. Multimedia materials, however, combine all of these media providing educator with a package offering flexibility and ease of use as well as more "realistic" contexts for language practice. These material can help the educator to provide the learner with cooperative learning, critical thinking, discussion, and problem solving. When we integrate more than one medium in teaching it is known as media mix multimedia approach and integrated media approach. So, multimedia approach in learning provides a great edge over the conventional method.

As per Szuprowicz – Human acquire their knowledge

<80% through sight
11% through hearing
3.5% by smell
1-1.5% by touch & taste
Humans retain –
20% of that they hear
20-30% of what they see
40-50% of what they see & hear
80% of what they see, hear & do
So, multimedia certainly improves the teaching and learning process.

Feature of Multimedia:-

1. It creates a rich learning environment by increasing students exposure to the target language and making use of authentic contexts.
2. The emphasis on experimental, Individual learning makes the learning process more natural.
3. It provides contexts and allows for the integration of such skills; learners can listen to texts as they read and exercises are often multi-skilled incorporating listening, reading and speaking tasks.
4. It can make the whole process of language learning involving and motivating by providing an exciting, dynamic and autonomous learning environment.

The Educational Values Of The Multimedia Approach

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1. Multimedia approach can convey vast information and can provide many sources from which students can get access to the information.
2. Through multimedia approach a large number of models of learning can be practiced over a great range of content.
3. Multimedia approach provides the opportunity to gain mastery of competencies and skills which are based on theoretical knowledge.
4. Multimedia approach is not restricted to a single type of learning style or instructional mode.

Role Of Educator In Multimedia Approach :-

1. The educator has to adopt a number of methods, medias and techniques.
2. The educator has to be aware of the different available media and their sources.
3. The educator should be physically competent to use and demonstrate the use of different medias.
4. The educator role in the multimedia approach is of a facilitator or manager, etc
5. The educator should provide experiences that helps the students to link practice and theory and to integrate them.

IV. **Multimedia Elements in Education**

Multimedia elements can be use in different ways. With the help of computer software such as Adobe Photoshop, Desktop Publishing, Graphic Software, Reference Software, Drill & Practice Software, Tutorial Software, Educational Games & Simulations. We can generate and join different multimedia elements to create a great project. But, we must know all function of those multimedia elements so that we can use it in your learning.

❖ Text :-
Text are the most basic part in multimedia and it is very simple to apply. But, you must not take too lightly it because text can give the most impact on the class of the multimedia communication compared to the other elements.

❖ Graphic:-
Graphic are two-dimensional figure or illustration. It is the most innovative technique of learning approach. There are many kinds of image format such as GIF, JPEG and PNG. Using graphic in teaching will enhance the students understanding. This is because image use a enormous degree of cortical skills such as colour, form, line, dimension and imagination. This will assist the students to obtain a clear photo of what they are information.

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❖ Audio:-

Audio has been use in education from several years. Because whatever that we learn can be recorded, it is an helpful instrument for the students because they use it to communicate with the path content provided by their teachers at any times and any place that they need. Audio also ease the students by conducting live digital discussion via audio tools and platform

❖ Video:-

Video is widely used multimedia element. It also has the maximum performance on your computer or device among the five factors. There are a few standard video format for learning purpose such as MPEG2 that is used for Digital Versatile Disc (DVD) playback or MPEG4 for domestic video. Sometimes, using text or other multimedia elements to communicate information are difficult and complex. This kind of multimedia element is used because it can provide visual stimulation for students so that they can have a better understanding in learning.

❖ Animation:-

Animation are formed applying continuous motion and shape change blend together to create an animation. This happened because of a biological fact called persistent of vision and psychological mental phenomenon called phi. This helps us to see animation the way it is. Animation are unlike than video. This is because video is taken from real life event while animation are typically taken from drawing. There are a few animation software that are used in learning sector like Adobe Flash . By using this software, students can use their own imagination and thought to present a project that they prefer. This facilitate to develop their creativity while bringing joy in learning.

Advantages Of The Multimedia Approach

a) This approach can arouse curiosity among the learners and provide them vivid impressions.
b) Multimedia approach can develop a positive attitude among the learners towards the teaching- learning process.
c) Techniques of simulation can be effectively applied through the multimedia approach.
d) Educator can supplement regular teaching with the multimedia approach, which will help the educator in reinforcing the learning process.
e) Effective remediation programmers can be implemented through the multimedia approach.

Disadvantages of The Multimedia Approach

a) Multimedia approach requires highly sophisticated infrastructure facilities, which may lead to heavy financial burden.
b) Expertise and skills are required to operate the multimedia devices, which will lead to the problem of non-availability of human resources.
c) Multimedia approach is not feasible in the case of all topics of study.

V. <u>Conclusion</u>

In conclusion, multimedia infatuated a lot of advantages to make learning interesting. This will eventually assist students to increase their learning technique. With the help of multimedia elements, which is text, graphic, video, sound and animation, it can create an interactive learning environment that can help educator and students teaching and learning.

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