

THE BENEFITS AND APPLICATION OF MULTIMEDIA ELEMENTS IN INFORMATION

¹K. Saraswathi, ²V. Lakshmi, ³S. Geetharani, ⁴S. Selvakumari

Department of computer Science, Dhanalakshmi Srinivasan College of Arts and Science for Women,,Perambalur , 621 212, Tamilnadu, , India.

Email: saraswathik5511@yahoo.com (K.Saraswathi) Corresponding author: K.Saraswathi

ABSTRACT

Uses a variety of media (text, audio, graphics, animation, and video) to convey information or entertain the user in a variety of ways. Storage and consumption of multimedia content through electronic media are also included in the definition of multimedia. Mixed media in fine art is similar to multimedia, but with more impact. The term "rich media" refers to any kind of multimedia that may be interacted with. By comparing the effectiveness of multimedia components in computer-aided learning with their production costs, this study examines how effective multimedia education may be at the college level. Teachers and students alike regard interactive multimedia components to be among the most powerful tools for enhancing teaching and learning.

There are several factors that influence how well multimedia is utilised in teaching and learning. These factors include how content is delivered, how it is presented, and how it is tailored to students' individual needs. Every presentation now includes some kind of multimedia. Uses range from entertainment to education have been discovered for it. Multimedia content is becoming more important as internet use increases.

Keywords: multimedia, graphics, animation, video, educational technologies.

INTRODUCTION OF MULTIMEDIA

When compared to more conventional forms of media, such as written matter or audio recordings, which included little to no user engagement, multimedia is a method of communication that incorporates a variety of information types into a single interactive presentation. Animated videos, audio slideshows, and video podcasts are all forms of multimedia.

Multimedia may be saved on computers, laptops and other electronic devices for playing either on demand or in real time, making it possible to watch it later (streaming). Multimedia's word "rich media" was formerly used interchangeably with "interactive

multimedia." Multimedia was added to the World Wide Web via hypermedia extensions throughout time.

It is possible to include multimedia components into a computer-supported teaching and learning environment in order to accommodate a range of student learning styles. It may be costly and time-consuming to provide training that incorporates aspects of on-line text, hypertext, graphics, sound, and video.

HISTORY OF MULTIMEDIA

[1]Intermedia," a new technique to artmaking coined by American artist Dick Higgins two years before, may have occurred to Goldstein. [2] Even if the phrase "multimedia" didn't exist at the time, the notion of a "whole artwork" can be traced back to Richard Wagner, who composed in the late 1800s and early 1900s. Wagner aimed to achieve a perfect synthesis on stage by fusing opera, theatre, and music. He despised the Grand Opera at the time because it placed more emphasis on individual skill than on the total piece. Wagner firmly thought that the most profound works of art might be created by fusing these disparate mediums. [3]

In 1966, Variety's Richard Albarino used the phrase "multi-media music-cum-visuals" to describe the "Lightworks," a song written and performed by "Washington Square" comedian Bob Goldstein..

The following are some of the most significant events in the field of multimedia in computing: During World War II, Bush authored an article about Memex. It was at MIT in 1967 when Negroponte established his Architecture Machine Group. Nelson & Van Dam's hypertext editor at Brown University in 1969 1971 - Email 1976 - Architecture Machine Group proposal to DARPA: Multiple Media. Aspen Movie Map by Lippman & Mohl The Electronic Book was a backer in 1983. The MIT Media Lab was founded in 1985 by Negroponte and Wiesner. In 1989, Tim Berners-Lee presented the CERN with a proposal for the World Wide Web (European Council for Nuclear Research) Apple Multimedia Lab, 100 personnel, educ. in 1990 - K. Hooper Woolsey in 1991, the Apple Multimedia Lab released Visual Almanac and the Classroom MM Kiosk The year was 1992, and it was the year of the first Internet multicast of M-bone audio. In 1993, the National Center for Supercomputing Applications (NCSA) at the University of Illinois developed the NCSA Mosaic web browser. It was 1994, and Jim Clark and Marc Andreessen were working on Netscape at this time: In 1995, JAVA was introduced as a platform-independent programming language. This is the first applet, and it's named after Duke. Microsoft released Internet Explorer in 1996.

CATEGORIES OF MULTIMEDIA

1. Linear and non-linear multimedia may be categorised as such. Linear active content is similar to a cinema presentation in that the spectator has no control over the material. Non-linear content allows the user to manage their own progress, such as in a computer game or self-paced computer-based instruction, by allowing them to engage with the material. Hypermedia is another term for non-linear material. Live or pre-recorded multimedia presentations are available. Using a navigation system, a

recorded presentation may be interactive. In a live multimedia presentation, the presenter or performer may be able to engage with the audience.

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3. Live or pre-recorded multimedia presentations may be used.
4. There are two ways in which a multimedia show may be interactive: through the presenter or performer or by using a navigation system.

4. FEATURES OF MULTIMEDIA

On stage, projected, broadcast, or played locally on a media player—all of these options are available for viewing multimedia presentations. If a broadcast is recorded, it may either be live or pre-recorded. Analog or digital electronic media technology may be used for broadcasts and recordings. You have the option of downloading or streaming digital internet content. Live or on-demand streaming of multimedia content is possible. Online networks, offline computers, or simulators may all be utilised to play multimedia games and simulations. They can also be used in special effects-enabled physical environments [1]-[5].

By integrating several types of media information, the amount of interaction may be increased. However, the outcome may differ according on the kind of media you're using. Online multimedia is gradually becoming object-oriented and data-driven, allowing applications with collaborative end-user creation and customization of many forms of content over time.. of content.. It's possible to adjust the multimedia "experience" in a variety of ways without having to rewrite the code for things like photo galleries that enable users to edit both the images (pictures) and the titles (text) inside them.

5. APPLICATIONS

Advertising, art, education, entertainment, engineering, medical, mathematics, business, scientific research, and spatial and temporal applications are just a few of the many uses for multimedia.

The following are a few examples of multimedia applications:

It's a creative industry: Fine arts, entertainment, commercial art, journalism, and media and software services are just a few of the fields that make use of multimedia in the creative industries. During the course of their career, a multimedia designer might work in a variety of different mediums. Technical, analytical, and artistic talents are all in demand.

Much of the electronic old and new media used by commercial artists is multimodal.
5.2 Commercial: Advertising relies on captivating visuals to capture and hold viewers'

interest. Innovative multimedia presentations that go beyond standard slide displays to sell concepts or enliven training are often prepared by creative services businesses for use in industrial, business-to-business, and interoffice communications. Commercial multimedia designers may also be employed to create for government and non-profit applications.

The entertainment sector also significantly relies on multimedia, particularly for creating spectacular effects in films and cartoons. Many people like playing multimedia games, which may be downloaded or purchased as CD-ROMs. Multimedia components are also included in certain video games. The term "Interactive Multimedia" refers to software that allows users to actively engage in the presentation of information rather than just receiving it passively [6]-[10].

Educational materials, such as computer-based training courses (often referred to as CBTs) and encyclopaedias and almanacks, make extensive use of multimedia. There are many different types of CBTs, and the user may choose the one that best suits their learning style. To combine education with entertainment, particularly in the form of multimedia, is known as educainment.

Use of multimedia in computer simulations may be used for everything from entertainment purposes to educational purposes, such as military or industrial training. 5.5 Engineering It is common for designers and software developers to work together on multimedia for user interfaces.

Industry :Multimedia is utilised in the industrial sector to convey information to shareholders, managers, and other employees. The use of almost limitless web-based technology makes multimedia an excellent tool for offering staff training, promotion, and product sales all around the globe.

Modeling and simulation are the primary uses of multimedia in mathematical and scientific research. There are a number of ways a scientist may change the molecular model of a given chemical, for example. Journals like the Journal of Multimedia publish representative research [11]-[14].

A virtual surgery or a simulation of the effects on the body of viruses and bacteria transmitted

via the human body may be used to teach physicians in medicine.

5.9 Multimedia in Public Places: Stand-alone terminals or kiosks for information and assistance will be provided at hotels, train stations, shopping malls, museums, and grocery shops. In addition to saving money by eliminating the need for conventional information booths and staff, these automated systems can operate 24 hours a day, seven days a week, even when human support isn't on duty.

To increase access to data, material, expertise, and other resources, multimedia is essential. As Wang points out, by enhancing students' practical experience, multimedia may compensate for some of the shortcomings of more conventional teaching approaches. Multimedia is used to teach students how to put their newfound skills to use.

Students, particularly those with impairments, benefit more from a multi-media presentation than from a single medium. Modern multimedia material may be saved on a variety of media, including high-capacity hard drives, flash drives, and even cloud systems. This improves the contents' availability, storage capacity, and simplicity of use. Multimedia material is also good for the environment. People don't have to accumulate more paper-based information since they may choose their multimedia material depending on their current needs. **CHALLENGES OF MULTIMEDIA**

Initial challenges include finding data that can be transformed and shown in a multimedia format. The multimedia should appropriately represent the data. In addition, competent persons are required to update and manage the contents of multimedia files. In order to meet the needs of a large number of students, academic material must be updated regularly. By letting go of old ways of doing things, individuals may be more receptive to new, cutting-edge ways of doing things. The Internet is another important consideration when it comes to accessing a variety of publications. People, on the other hand, should exercise caution when deciding what they want to learn from multimedia. An expert review is required before a piece of multimedia may be posted online to determine whether or not it is of any use. Users of data may suffer damage as a result of inaccurate or manipulated information.

As a result, it is critical that data and information be accurate. Authenticated persons should verify it before posting it online. Data analysis should also be carried out by persons who have undergone training. If the educational data mining approach, medical data analysis, or corporate information analysis is used incorrectly, it will provide inaccurate findings. As a

result, data must be thoroughly evaluated in order to provide the best possible predictions about the future. Another important issue is maintaining constant access to the network. There is a significant influence on the availability of multimedia-based material dependent on the quality of the connection.

Groves argues that the goal of a study is to provide recommendations and reflect advancements in theory and practise. Testing, surveying, content analysis, phenomenological approaches and focus groups are some examples of research procedures. Other forms include exploratory and qualitative research as well as assessment studies. To uncover patterns in data, the method of knowledge detection is used in databases. Personalized academic materials are available via a web-based learning system that was built just for you.

This paper's theoretical framework was laid out throughout the research phase. Models cannot be explained without a theoretical framework. Structured data is essential, as this theoretical understanding shows. Using a variety of approaches, this study employs a hybrid approach. The Grounded theory is based on examining past behaviour to generate new ideas.

CONCLUSION

Even if it is true that one of the ultimate aims of multimedia language teaching is to stimulate students' interest in and enthusiasm for learning the language, the establishment of an ELT context should be built on transparency and openness in the teaching materials. We anticipate that the usage of multimedia English instruction will continue to grow in the future as technology advances.

The ability to reach a wider audience has been greatly aided by the integration of many forms of media. Humans must use caution and education in order to weigh the benefits of various options against the drawbacks. Thus, this research is critical to the overall success of multimedia in people's lives across the world. Students will have more control over the learning process, but it will take less time. Consequently, the quality of instruction will be enhanced, and students' applied English communication will be successfully nurtured, which means that students' communicative ability will be honed. As a consequence, we feel that this procedure may assist students develop their ability to think creatively and effectively, which is essential to achieving and achieving an effective educational outcome.

REFERENCES

1. Badii, Atta; Fuschi, David; Khan, Ali; Adetoye, Adedayo (2009). "Accessibility-by-Design: A Framework for Delivery-Context-Aware Personalised Media Content Re-purposing". *HCI and Usability for e-Inclusion. Lecture Notes in Computer Science*. 5889. pp. 209–226. doi:10.1007/978-3-642-10308-7_14. ISBN 978-3-642-10307-0.
2. Bramble, W.J., Panda, S. (2008). *Economics of Distance and On-line Learning: Theory, Practice and Research*. New York, NY: Routledge, Taylor & Francis Group.
3. Brown, D.C. (2000). *Interactive learning*. Bolton, MA: Anker Publishing Company, INC.
4. Cohen, M.S., Ellis, T.J. (2002). Developing a criteria set for an online learning environment. *Proceedings: Frontiers in Education Conference*, November 6-9, Boston, MA, pp.T3E-8-T3E-13
5. Ellis, T., Cohen, M. (2001). Integrating multimedia into a distance learning environment: is the game worth the candle? *British Journal of Education Technology*, 32, 495-498. Retrieved February 14, 2008, from Academic Search Complete.
6. Evans, C., Gibbons, N.J. (December, 2007). The inveracity effect in multimedia learning. *Centre for Education Multimedia*, 49(4), 1147-1160. Retrieved February 20, 2008, from Academic Search Complete.
7. Fourth Dimension (software system). (2007). [http://en.wikipedia.org/wiki/4th_Dimension_\(software\)](http://en.wikipedia.org/wiki/4th_Dimension_(software))
8. Hassan, B. N., Sushil, C., Osman, A., Worth, P. J. (November, 2007). Engineering education: web-based interactive learning resources. *Technology Teacher*, 67(3), 9-14. Retrieved February 4, 2008, from Academic Search Complete.
9. Jereb, E., Smitek, B. (2006). Applying multimedia instruction in e-learning. *Innovation in Educational and Teaching International*, 43, 15-28. Retrieved February 1, 2008, from ProQuest Smart Search.
10. Koroghlanian, C., Klein, J. P. (2004). The effect of audio and animation in multimedia instruction. *Journal of Educational Multimedia and Hypermedia*, 13(1), 24-47. Retrieved on February 15, from ProQuest Smart Search.
11. Lam, P., McNaught, C. (September, 2006). Design and evaluation of online courses containing media- enhancing learning materials. *Educational Media*

International, 43(3), 199-218. Retrieved February 20, 2008, from Academic Search Complete.

12. S.Kannadhasan and R.Nagarajan, Development of an H-Shaped Antenna with FR4 for 1-10GHz Wireless Communications, Textile Research Journal, DOI: 10.1177/00405175211003167 journals.sagepub.com/home/trj, March 21, 2021, Volume 91, Issue 15-16, August 2021, Sage Publishing
13. S.Kannadhasan and R,Nagarajan, Performance Improvement of H-Shaped Antenna With Zener Diode for Textile Applications, The Journal of the Textile Institute, Taylor & Francis Group, DOI: 10.1080/00405000.2021.1944523
14. Rumble, G. (1997). The cost and economics of open and distance learning. London: Routledge-Falmer.