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SCHOOL OF COMPUTING & IT

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BUSINESS INFORMATION TECHNOLOGY

MODULE:
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CHAP II: ADVANTAGES AND DISADVANTAGES OF MULTIMEDIA

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2.0 Components of Multimedia

Multimedia can be an exciting addition to business communication. Its glitziness and fun hold great temptation for the business. Moreover, organizations, institutes, and business houses can earn real and potential benefits. Even then, the adoption of multimedia by businesses has been very low. There are many reasons for the unwillingness. Multimedia is everything that we hear or see.

Example:

o   Text in books

o   Sounds in music

o   Graphics in pictures

o   Animations in videos, etc.

2.0 Components of Multimedia cont.

There are many components of multimedia which are depicted in the following figure:

- **Digital Texts:** The most common and flexible form of presenting information on the screen and conveying ideas in multimedia application in text.

- **Digital Graphics:** Digital graphics include still pictures, images, and photographs without dynamic movements like animations.

- **Digital Audio:** Digital Audio files and streams play a major role in some multimedia systems. These files play an important role in making the applications interactive.

- **Digital Video:** Digital Video is the technology of capturing, recording, processing, and transmitting moving pictures.

- **Digital Animation:** Combining moving images, graphics and text are one of computer technology's most powerful aspects. Animated components are common within both web and desktop multimedia applications.

2.1 Features of Multimedia

Multimedia has many features that make it an effective and engaging medium for communication and entertainment.

❑ Here are some 7common features of multimedia:

Text, Audio, Video, Images, Interactivity, Adaptability, Accessibility

1. **Text:** Multimedia can include text in the form of written words, captions, or subtitles.

2. **Audio:** Multimedia can include audio in the form of music, sound effects, or spoken words.

3. **Video:** Multimedia can include video in the form of full-motion footage or animated sequences.

4. **Images:** Multimedia can include static or animated images, such as photographs, drawings, or graphics.

5. Interactivity: Multimedia can be interactive, allowing users to interact more actively and engagingly with the content.

6. Adaptability: Multimedia can be adapted to different devices and platforms, such as computers, smartphones, and tablets.

7. Accessibility: Multimedia can be designed to be accessible to users with disabilities, such as by providing closed captions or audio descriptions for users who are deaf or hard of hearing.

Overall, multimedia features make it a powerful and effective tool for communication and entertainment. It allows for the creation of engaging and immersive experiences that can be tailored to a wide range of audiences and platforms

2.2 Uses of Multimedia in Society

Multimedia has had a significant impact on society and has transformed the way we communicate and access information. From education and entertainment to advertising and news, multimedia has become integral to modern life.

One of multimedia's main impacts on society is how it has improved learning and retention. Multimedia presentations, which combine text, audio, video, and other elements, are more effective at engaging students and helping them to retain information than traditional methods such as lectures or textbooks. These features had a significant impact on education and have changed the way that information is delivered and consumed.

2.2 Uses of Multimedia in Society cont.

Multimedia has also greatly impacted how we communicate and access information. With the rise of the internet and social media, multimedia has become essential for sharing ideas and connecting with others. It has also made it easier for people to access a wide range of information and resources, changing how we learn and access knowledge.

In addition to its impact on education and communication, multimedia has significantly influenced the entertainment industry. The rise of streaming platforms and online video has transformed how we consume entertainment and has made it easier for people to access a wide range of content. These advancements also impacted the advertising industry, as companies have been able to reach larger audiences through multimedia platforms.

2.2 Uses of Multimedia in Society cont.

Multimedia is an important part of modern society and is used in various applications to communicate, entertain, educate, and advertise. It has revolutionized how we consume and share information and has become an integral part of our daily lives.

Overall, the impact of multimedia on society has been significant, and it has transformed how we communicate, learn, and access information. While there are some disadvantages to consider, such as the complexity of creating and using multimedia and the potential for distraction, the overall impact has been largely positive. As technology continues to evolve, multimedia will likely continue to play a central role in society.

2.2 Uses of Multimedia in Society cont.

Here are some common ways that multimedia is used in society:

Communication: Multimedia is widely used in communication, including social media, messaging apps, and websites. It allows users to share information, photos, and videos more engaging and immersively.


Entertainment: Multimedia is used extensively in the entertainment industry, including movies, television shows, and video games. It allows for the creation of more engaging and immersive experiences for audiences.

Education: Multimedia creates interactive learning experiences like online courses and educational videos. It can make learning more engaging and interactive for students.
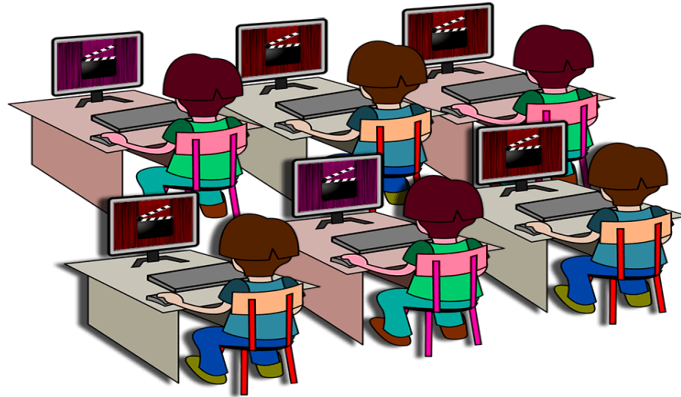
Advertising: Multimedia is often used to create more engaging and effective advertisements, such as TV commercials, online ads, and billboards.

Persuasion: Multimedia can persuade an audience to take a certain action, such as purchasing a product or supporting a cause.

News: Multimedia is used in the news industry to present information in a more engaging and immersive way, such as through news websites, TV news programs, and online video news reports.

 Uses of Multimedia in Different Places

Nowadays, multimedia has become a very important part of every company carrying out their work. The following are the important other applications of multimedia:

Creative Industries , Commerce, Social Work Purposes, Journalism , Engineering, Medicine, Research, Interior Designing,…….

2.3 Multimedia Gadgets

Many multimedia gadgets are designed to create, consume, or interact with multimedia content. These devices have become an important part of modern life and have revolutionized how we access and share information and entertainment.

Here are some common gadgets of multimedia:

- **Smartphones:** Smartphones are multifunctional devices that allow users to access the internet, make phone calls, send texts and emails, and consume and create multimedia content such as photos, videos, and music.

- **Tablets:** Tablets are portable devices that have a touch screen and are designed for consuming multimedia content, such as movies, TV shows, and books. They can also be used for creating multimedia content, such as drawing and writing.

2.3 Multimedia Gadgets cont.

- **Laptops:** Laptops are portable computers that allow users to access the internet, create and consume multimedia content, and perform various other tasks.

- **Smart TVs:** Smart TVs are television sets connected to the internet and allow users to access streaming services, such as Netflix and Hulu, and consume other multimedia content.

- **Game consoles:** Game consoles are devices designed specifically for playing video games. They often have powerful processors and graphics capabilities and the ability to connect to the internet and access multimedia content such as movies and TV shows.

2.4 Problems with Multimedia

Following are the problems that are associated with multimedia:

o **Cost**

o **Equipment Failure**

o **Technical Barriers**

o **Social and Psychological Barriers**

o **Legal Problems**

Problem 1 - Cost:

Although the cost of technology is falling, the cost of development is increasing daily. The cost reflects the technology's complexity and the need to acquire the rights to use a large volume of material, followed by others. Production of multimedia is more expensive than others because it is made up of more than one medium. It requires an electronic device, which may be relatively expensive. It also requires electricity to run, which adds to the cost of its use.

Solution - Cost estimation

Whenever we make a multimedia project, we have to make a proper cost estimation so that the final cost may not exceed.

Problem 2 - Equipment Failure:

Multimedia often requires more equipment to deliver a message than more traditional mediums. Whenever equipment is invoked, there is always the chance of equipment failure.

Solution - Continuous updates and expert maintenance

To tackle equipment failure, there is a need for continuous updates and expert maintenance of multimedia technology.

2.4 Problems with Multimedia cont.

Problem 3 - Technical Barriers:

Organizations using multimedia applications must be aware of the up-gradation of the hardware and software tools. This up-gradation is required to provide the latest multimedia features like:

Personal computers or workstations that can support multimedia data.

Latest file servers that can handle the volumes of data.

Upgraded software tools that can control the quality of different forms of information.

Local and wide area networks for the transmission of multimedia information.

In business houses, sometimes it is required to transmit the voluminous amount of multimedia data in the form of continuous streams over the local and wide area networks. Sometimes the lack of standards becomes the reason for the incompatibility between the user's equipment and that of the information sender.

Solution - The solution to this problem is to use captioning, alternate text, and transcription for audio content.

Problem 4 - Social and Psychological Barriers:

Due to the invention of multimedia technologies, teleworking has been increasing daily. As a result, loneliness, isolation, lack of emotions, and lack of contact with clients and other professionals arise.

The typical environment of the office does not support multimedia interaction due to the background noise. Sometimes during videoconferencing, the participants get distracted by the movements in the background, which is responsible for the low quality of the picture.

Solution –

These types of barriers can be tackled by interactions between the clients and professionals once every month, thus improving their social and psychological barriers.

Problem 5 - Legal Problems:

One of the biggest problems regarding the growth of multimedia applications is "ownership of content". It will be legal if someone reproduces some copyright work without the copyright owner's permission. In such a case, the copyright owner can sue for damages.

Copyright is the exclusive and assignable legal right given to the originator for a fixed number of years to print, publish, perform, film, or record literary, artistic, or musical material. There may be problems related to intellectual property rights in applications where networks are used to support joint work. Security and control of access to information are required to ensure data integrity.

Solution - In this case, educators will play a major role by thinking about an issue from an ethical point of view by informing and discussing it.

2.5 Advantages and Disadvantages of Multimedia

Multimedia uses various forms of media, such as text, audio, video, and graphics, to create a single, integrated presentation. It has become an integral part of our daily lives and is used in various contexts, including education, entertainment, and business. In this article, we will explore the advantages and disadvantages of multimedia and its impact on society.

Multimedia uses multiple forms of media, such as text, audio, video, and images, to communicate information or tell a story. Multimedia has become an important part of modern communication and entertainment, and it is used in a wide range of applications, including the internet, television, film, and video games.

2.5.1 Advantages of Multimedia

1. Improved Learning and Retention

One of the main advantages of multimedia is its ability to improve learning and retention. Research has shown that multimedia presentations are more effective at engaging students and helping them to retain information than traditional methods such as lectures or textbooks. Multimedia helps in learning because multimedia presentations use a combination of different media, which can appeal to different learning styles and make the material more interesting and engaging.

2. Enhanced Communication

Multimedia can also be used to enhance communication and make it more effective. It allows people to convey complex ideas and concepts through various media, such as text, audio, and video. Multimedia can also make it easier for people to understand the message and can help to engage the audience more effectively. Multimedia can be an effective tool for communication, as it allows for the integration of various forms of media, such as text, audio, and video. Multimedia can help make complex concepts easier to understand and add a visual element to a presentation, which can be more engaging for the audience.

3. Increased Accessibility

Multimedia can also increase accessibility, particularly for people with disabilities. For example, multimedia presentations can be made more accessible for people with hearing or vision impairments through closed captions, audio descriptions, and other features.

4. Increased Interactivity

Multimedia can also increase interactivity and engage the audience more effectively. For example, multimedia presentations can include interactive elements such as polls, quizzes, and games, making the material more engaging and encouraging people to participate.

5. Improved learning outcomes

Multimedia has improved learning outcomes, especially compared to traditional instruction methods. It allows learners to engage with content more interactively and engagingly. Multimedia also allows learners to learn at their own pace, which can be especially beneficial for visual or auditory learners.

6. Increased efficiency

Multimedia can save time and improve efficiency in a variety of contexts. For example, in business, multimedia presentations can be used to communicate complex ideas or products to clients more efficiently. In education, multimedia can be used to deliver course materials, allowing students to access information at their own pace and on their

7. Greater Flexibility

Multimedia offers greater flexibility than traditional media, as it can be accessed on various devices and platforms. The flexibility means that people can access multimedia content at a convenient time and place for them, which can be particularly useful for those who are busy or have limited time.

8. Greater impact

Multimedia can impact the audience more, as it can appeal to multiple senses and engage the viewer in a more immersive way. Multimedia can be especially useful in marketing and advertising, as it can help to create a more memorable and effective message.

2.5.2 Disadvantages of Multimedia

Multimedia uses multiple forms of media, such as text, audio, video, and images, to communicate information or tell a story. While multimedia has many advantages and is widely used in various applications, there are also some potential negatives.

1. Cost

The production of multimedia materials can be expensive, as it requires specialized equipment and skills. Multimedia gadgets and their sources can be a barrier for those who do not have the resources to produce high-quality multimedia content.

2. Quality

The quality of multimedia content can vary, and low-quality content can be unengaging or misleading.

3. Technical issues

One disadvantage of multimedia is that it can be complex to create and use. It requires various skills and technologies and can be time-consuming and costly to produce. Multimedia can be a barrier for those who do not have the necessary skills or resources and may limit the accessibility of multimedia content. There is a risk of technical issues occurring when using multimedia, such as problems with audio or video quality or compatibility issues with different devices. These issues can be frustrating for users and can interfere with the effectiveness of the content.

4. Limited accessibility

Multimedia can also be limited by the quality of the audio and video, which can affect the overall experience for the user. For example, poor-quality audio or video can make it difficult for people to understand the content, reducing its effectiveness. While multimedia can be more accessible for some individuals with disabilities, it can also present barriers for others. For example, poorly designed or labeled multimedia content may be difficult for individuals with cognitive disabilities to access.

5. Dependence on technology

The use of multimedia relies on technology, which can be a disadvantage in situations where technology is not available or not functioning properly. Dependence on technology can be frustrating for users and may limit the accessibility of multimedia content. Dependence on technology can limit the use of multimedia in certain contexts, such as in remote or rural areas where access to technology may be limited. Another disadvantage of multimedia is that it relies on technology and can be affected by issues such as internet connectivity and device compatibility.

6. Increased demand for skilled professionals

The production of multimedia content requires specialized skills and expertise, which can be in high demand. Increased demand for skilled professionals can create competition and lead to a shortage of qualified individuals in certain areas.

7. Distraction

Multimedia can be distracting, and overuse can lead to problems such as addiction and lack of face-to-face communication skills. Multimedia can also be distracting and make it more difficult for people to focus on the content. Distraction can be particularly problematic in educational settings, where students must concentrate and retain information.

8. Security concerns

Finally, there are also security and privacy concerns to consider when using multimedia, particularly when it is shared online. Multimedia content can be vulnerable to security breaches and piracy, which can concern creators and users. It is important to ensure that personal information is not shared and that appropriate security measures are in place to protect against cyber attacks and other threats.

2.5.3 Ways to limit the disadvantages of multimedia

Here are some ways to limit the disadvantages of multimedia:

1. **Careful Planning:** Planning carefully before creating or distributing multimedia content can help to minimize potential problems. Careful Planning can include considering compatibility issues, budgeting for necessary equipment and software, and identifying potential security concerns.

2. **Quality control:** Ensuring that multimedia content is of high quality can help to minimize problems such as low engagement or misleading information. Quality Control can include using high-quality equipment, following best practices for media production, and fact-checking information.

2.5.3 Ways to limit the disadvantages of multimedia cont.

3. Responsible use: Using multimedia responsibly can help to minimize negative effects such as addiction or lack of face-to-face communication skills. Responsible use can include setting limits on media consumption and prioritizing face-to-face interactions.

4. Security measures: Implementing security measures can help to protect multimedia content from breaches and piracy. Security measures can include encryption, password protection, and other measures to secure content.

2.6 Future of Multimedia

Multimedia has become an important part of modern communication and entertainment, constantly evolving and adapting to new technologies.

The future of multimedia is likely to be shaped by advances in technology, such as virtual and augmented reality, artificial intelligence, high-speed networking, and streaming services. These developments could lead to even more immersive and interactive multimedia experiences. Here are some possible developments in the future of multimedia:

Virtual and augmented reality: Virtual and augmented reality technologies are already being used in multimedia applications, and these technologies will likely become more widespread. Virtual and augmented reality technologies could allow even more immersive and interactive multimedia experiences.

2.6 Future of Multimedia cont.

Artificial intelligence: Artificial intelligence is used in various multimedia applications and will likely become even more prevalent. For example, AI could create personalized multimedia content or automatically transcribe and translate audio and video content.

5G and other high-speed networking technologies: The widespread adoption of 5G and other high-speed networking technologies will likely lead to faster and more reliable multimedia content delivery. Such high-speed networking technologies could allow seamless video and other high-bandwidth content streaming.

Increased use of streaming services: The popularity of streaming services, such as Netflix and Hulu, is already increasing, and more people will likely choose to access multimedia content through streaming services. The increased use of streaming services could lead to change in how multimedia content is produced and distributed.

2.7 How to preserve multimedia ?

Preserving multimedia content is important for various reasons, including cultural, historical, and artistic value. Here are some ways that multimedia can be preserved:

Digital preservation: One of the most effective ways to preserve multimedia content is through digital preservation, which involves storing the content in a digital format and ensuring that it is properly managed and maintained over time. The concept of digital preservation can include using specialized software to preserve the content and regularly backing up the content to prevent data loss.

Archiving: Archiving involves collecting and preserving multimedia content for future use or reference. Archiving can include creating physical copies of the content or storing it in digital form.

Migration: Migrating multimedia content to new formats or technologies can help to preserve it over time. For example, if a particular format becomes obsolete, migrating the content to a new format can ensure that it is still accessible in the future.

Collaboration: Collaborating with other organizations or individuals can help to preserve multimedia content by sharing resources and expertise. Collaboration can include partnering with institutions that have expertise in preservation or working with experts in specific media formats.

Overall, preserving multimedia content requires a combination of digital preservation, archiving, migration, and collaboration. Taking these steps makes it possible to ensure that multimedia content is preserved for future generations to enjoy and learn from.

2.8 Conclusion

Multimedia is a powerful tool that has transformed how we communicate and access information. It has several advantages, such as enhanced communication, greater accessibility, increased retention, improved creativity, and improved collaboration. However, it also has its disadvantages, such as high cost, time-consuming, dependence on technology, limited control, and distractions.

Multimedia has many advantages and has become an integral part of modern society. However, there are also some disadvantages to consider when using multimedia, and it is important to be aware of these to make informed decisions about how to use it.
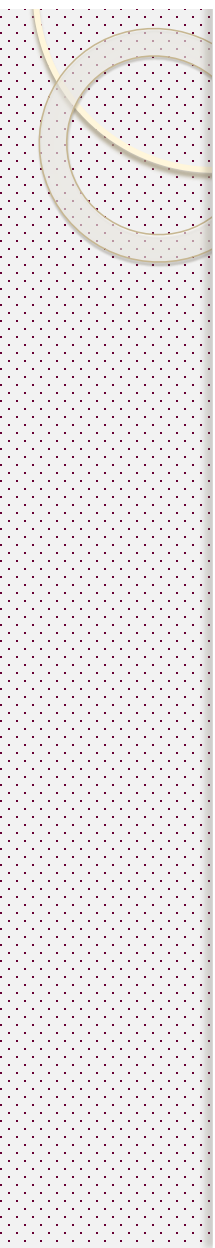
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THANK'S FOR
YOUR ATTENTION

Assignment#2 [Group Assignment]

As an IT, with the features of Multimedia, Describe the use of Multimedia in society and their advantages with disadvantages, how to limit these disadvantages and how we can preserve the multimedia to be used in future of Africa.

Prepare the Power point presentation for at least 10slides for each group.