

Audio and Video Resources for Teaching & Learning of Mathematics

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NEP 2020 and NCF(SE) emphasize the importance of incorporating technology in mathematics education to enhance learning outcomes.

They advocate for utilizing digital tools, interactive platforms, and simulations to improve the engagement, accessibility, and practicality of mathematical concepts.

Technology makes it easier for students to learn in their own way, receive immediate feedback, and collaborate to solve mathematical problems.









Audio

An audio recording involves capturing sound, like speech, music, or sound effects, and converting it into a file for later use.

Audio is captured by devices like microphones, and the recorded sound can be stored in digital or analog form. File Formats:

> MP3 (MPEG-1 Audio Layer 3) WAV (Waveform Audio File Format)

A video recording is a digital or analog recording of moving visual media, typically with audio, designed for playback on various devices or platforms.

A sequence of images (frames) displayed rapidly in succession to create the illusion of motion is captured.

Video

MP4 (MPEG-4 Part 14)

AVI (Audio Video Interleave)





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Learning resources are texts, audio & video materials and digital aids that assist you in effective transaction of curricular content.

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By integrating these tools, educators can create an engaging environment that promotes deeper comprehension and retention of mathematical concepts.



Audio resources, such as podcasts and audiobooks, provide an alternative way for students to engage with mathematical content. They can enhance listening skills and allow for learning during commutes or other activities, making education more accessible.



Video resources, such as tutorials and lectures, provide visual explanations for intricate mathematical concepts. They are able to accommodate various learning preferences and offer detailed instructions, helping students better understand of challenging topics.

Advantages of Audio & Video

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Resources Incorporating audio and video resources can greatly enhance student participation. These tools have the ability to attract attention and spark curiosity, resulting in a learning environment that is more engaging and lively.



Utilizing audio and video can enhance the ability remember understand to and mathematical ideas. By providing information in different formats, students are more inclined to retain their learning and improve their academic performance.

Audio video and resources can accommodate diverse learning needs. They offer alternative methods for students who might have difficulty with conventional teaching approaches, ensuring that every learner can reach the concepts.



Integrating audio and video can enhance interactive learning. By participating in discussions, quizzes, and collaborative projects, students can interact with content to enhance their grasp of mathematical concepts.



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Tools for Recording

Audio Tools

Audacity: Multi-track audio recording and editing, supports various file formats, and has a wide range of audio effects. <u>Audacity</u>



Ardour: High-quality audio recording, multi-track editing, support for MIDI, and extensive plugin support. <u>Ardour</u>

Ocenaudio: Simple and fast audio editing, real-time preview of effects, and cross-platform compatibility. Ocenaudio OpenShot: Easy-to-use video editor with features like drag-and-drop editing, clip resizing, and support for multiple layers. <u>Opensho</u>t

Kdenlive: Multi-track video editing, customizable interface, support for wide variety of formats, and numerous effects and transitions. Kdenlive

OBS Studio: High-performance real-time video and audio capturing, live streaming support, multiple scene creation, and transition effects.

Video Tools

Open Brodcaster Software









Thank you...

