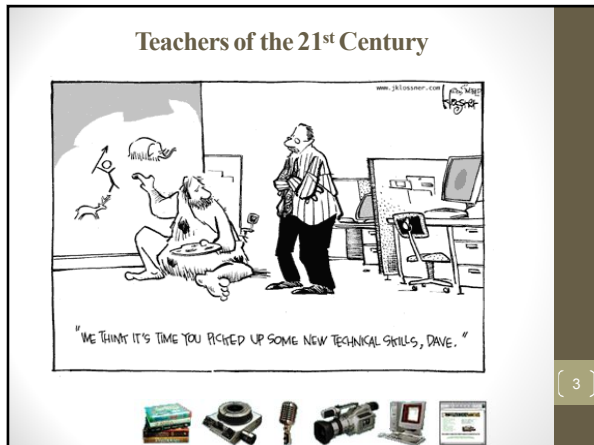


# LECTURE 4: Computer Studies Instructional Media

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- ## Objectives
- By the end of this lesson, the learner should be able to;
    - i. Identify types of instruction media
    - ii. Discuss the strengths and weaknesses of selected media
    - iii. Identify factors affecting media selection
    - iv. Select appropriate media for delivery of instruction

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### Students of the 21<sup>st</sup> Century

*Today's digital kids think of information and communications technology (ICT) as something akin to oxygen. They expect it. It's what they breathe, and it's how they live. They use ICT to meet, play, date, and learn. It's an integral part of their social life. It's how they acknowledge each other and form their personal identities.* (Seely-Brown, 2004)

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Traditional Learning	21 <sup>st</sup> Century Learning
Schooling	Lifelong Learning
Knowing (factual knowledge based learning)	Understanding
Broadcast/Teacher centred/ Transmission model/passive learning	Constructivist / student centred/ information exchange/ active learning
Single sense stimulation / single media	Multi-sensory stimulation / multimedia
Traditional Content / isolated, artificial context	Contemporary Content/ real world, authentic context
Learning Tech Skills / individual work/	Developing 21 <sup>st</sup> Century Skills / collaborative work / critical thinking

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- ### Instructional Media
- Instructional media carry messages with an instructional purpose.
  - The design of the message and the quality of teacher-learner interactions, not the medium, are what influences learning effectiveness
  - No one medium is capable of presenting all the required learning stimuli, so use a multimedia approach.

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## Instructional Media

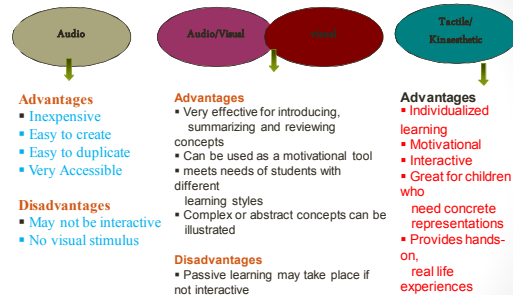
➤ Instruction Media can fall into the following categories;

- Audio
- Visual
- Audio – visual
- Tactile/Kinaesthetic



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## Advantages and Disadvantages of the Media



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## Factors Affecting Media Selection

- The basis of media selection are the factors affecting media choice.
- These factors include...



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## Factors Affecting Media Selection

- a) Instructional method
- b) Type of learning task (objectives)
- c) Subject matter and required student performance
- d) Learner characteristics (learning style, skills)
- e) Target population – location, size
- f) Teachers' attitudes/preferences, skills etc.
- g) Physical attributes of the media (sensory channels)
- h) Teaching space, lighting, facilities (physical environment)
- i) Practical constraints – economic (money) and administrative issues, time, what's available



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## When Should I Select Audio Media ?

- Examples: Teacher's voice; Audio cassettes; Audio CDs; Radio; etc
- Use when:
- Improve on learner listening skills
  - You want to stimulate learner imagination
  - Re-telling or reviewing a lesson
- **Caution**
- Risk of misinterpretation
  - Difficult for young children



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## When Should I Select Visual/ Audio-visual?

- Examples of visual media include;
- chalkboards
  - white boards
  - flannel boards
  - magnetic boards e.g. Smart Boards
  - objects / models
  - pictures
  - charts / diagrams
  - photographs
  - text
  - Over head (OH) transparencies
  - slides / silent films
- Examples of audio-visual media include;
- video
  - television
  - multimedia CDs
  - DVDs
  - PowerPoint
  - Internet



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### When Should I Select Visual/ Audio-visual?

- Use for:
  - Demonstration
  - Problem solving
  - Contrived experiences (realism/practicality and immediacy)
  - To present information

#### Caution

- Excess stimuli can hinder
- Audio and visual channels should be mutually supportive. They should not compete

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### When Should I Select Tactile/Kinaesthetic Media?

- Such media include:
  - Working models
  - Equipment
  - Simulators
  - Interactive software
  - Social media platforms
- Used to/when;
  - To introduce a lesson or topic
  - When it is convenient to use the real thing
  - Future review of principles taught

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### Convergence of technologies

- Driving this convergence is the powerful discovery that all information – sound, pictures, data – can be converted into digital format (ones and zeroes) and reincarnated intact somewhere else
- Computer technologies facilitate the combination of different media

**NB:** Media can become effective learning resources if what is selected is **relevant to the task**, and **provides experiences which are different** from other available materials - (Adapted from Bates, 1984).

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### Group Discussion and Presentation

- Group 1 (30 minutes)
- Discuss the use of the following resources in a computer lesson;
- a) Computers & PDAs,
  - b) printers/scanners
  - c) digital camera
  - d) Templates

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### Group Discussion and Presentation

- Group 2 (30 minutes)
- Discuss the use of the following resources in a computer lesson;
- a) Books
  - b) Magazines
  - c) Journals
  - d) Newspapers

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### Group Discussion and Presentation

- Group 3 (30 minutes)
- Discuss the use of the following resources in a computer lesson;
- a) Digital content
  - b) Simulation software & Videos
  - c) Educational portal
  - d) Social media platforms e.g. blogs, Skype, Twitter, Facebook

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Questions:

- Discuss Seven (7) instructional media appropriate for Computer Studies instruction
- Discuss the criteria for selection of a computer Studies instructional media

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