

TCT 201: INSTRUCTIONAL TECHNOLOGY

Topic: Instructional Media

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Objectives

At the end of this lecture the learner should be able to:

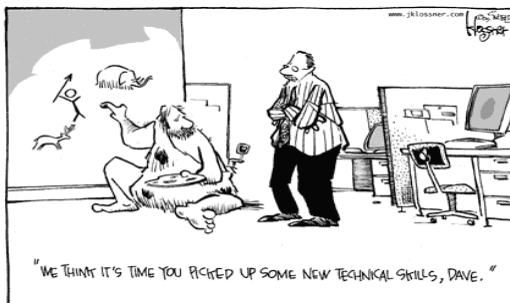
- a) Explain classification of instructional media
- b) Highlight the strengths and weaknesses of selected media
- c) Describe the selection/evaluation criteria of instructional media

01-Nov-18

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Teachers of the 21st Century



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Learners of the 21st 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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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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Classification of Instructional Media

- There are many types of instructional media
- They can be classified in many ways, however, two common criterion are used:
 - 1) Nature of media
 - 2) Sense of stimulation

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Classification of Instructional Media

1) Classification According Nature of Media

When classified according to nature of the media, there are several sub-categories of the instructional media:

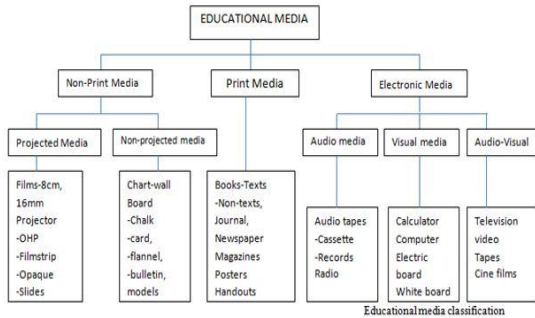
- a) Print media
- b) Non – print media
- c) Electronic media

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Classification According to Nature of Media



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Classification of Instructional Media

2) Classification according to sense stimulated

When classified according to sense of stimulation, there are several sub-categories of the instructional media which include:

- a) Visual media – involves sense of seeing
- b) Audio media – focuses on sense of hearing
- c) Audio – Visual – focuses on hearing and seeing
- d) Multimedia – stimulates multiple sense (multisensory) which include hearing, seeing, touch, smell and taste

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Properties of Instructional Media

- a) **Fixative property** – Enable one to acquire, store and retrieve information anytime you want to use it
- b) **Manipulative property** – Media can manipulate information in a way such that it is presented in a way that one wants
- c) **Distributive property** – media is used to share information

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General Principles of Effectiveness

- **Instructional media should:**
 - Change behavior by influencing a gain in cognitive, affective, and/or psychomotor skills
 - Enhance learning, however, no one tool is better than another
 - Complement the instructional methods
 - Match available financial resources
 - Be appropriate for physical environment
 - Complement learners’ sensory abilities, developmental stage and educational level
 - Impart accurate, current, valid and appropriate messages
 - Add diversity and information to learning

Components of Instructional Media

1. Delivery System

- Definition : both the software (physical form) and the hardware used to present materials
- Examples
 - Software (physical form) : Power Point slides , DVDs
 - Hardware : computer, DVD players

Components of Instructional Media

2. Content/Message

- Actual information imparted to the learner
- Selection criteria for content
 - Accuracy
 - Appropriateness for skill determination
 - Readability

Three Major Components of Instructional Media

3. Presentation

- Weston and Canston (1986) states that the form of the message/content; in other words how information is presented is the form most important for selecting/developing instructional materials
- They describe the form of the message as occurring along a continuum from Concrete to Abstract including ;

Components of Instructional Media

- **Realia:** Most Concrete and accurate form of stimuli used to deliver information e.g. A computer teacher demonstrating to learners how to format text in a Word processor
- **Illusionary representations:** Less concrete e.g. real life visual and auditory media such as audiotapes on how to discriminate between normal and abnormal lung sound
- **Symbolic representations:** Most abstract types of message/stimuli used for instruction e.g. Audiotapes, oral; presentation, graphs, written text, handout....

1. Print Media

- This includes printed media like books, handouts, pamphlets, magazines, study guides, instructional manuals, newspapers, journals, dictionaries, encyclopedia, posters, charts, etc

Advantages of Print Media

- a) It contains the core information a learner is supposed to learn e.g. in books
- b) It is readily available
- c) Are easy to carry and can be used anywhere and anytime
- d) They provide a variety of information from different sources
- e) They can give update information i.e. newspapers
- f) Use of handouts become easy to communicate to the learner
- g) Promote individualized learning

Disadvantages of Print Media

- a) In some instances may have outdated information
- b) Could be written in inappropriate maturity level of learners' reading ability
- c) Handouts may easily be misplaced by students in class
- d) Most abstract form of reality
- e) Immediate feedback limited
- f) Less useful with low literate learners or visually or cognitively impaired learners

How Print Media are used

- a) Selection - select reading material (print) appropriately
- b) Reference list - prepare a reference list to share with learners
- c) Curriculum - consider ideas presented on the books and the demands of the curriculum
- d) Use language understood by the learners
- e) Do find useful examples to the learners
- f) Use the most current books
- g) Avoid reading books in class

Evaluating Print Media

- Educator must consider:
 - Nature of the audience
 - Literacy level required
 - Linguistic variety available
 - Brevity (briefness) and clarity
 - Layout and appearance
 - Opportunity for repetition/duplication
 - Concreteness and familiarity

2. Non - Print Media

- This is made up of projected media and non-projected media

a) Projected media

- **Projected media** refers to **media** formats in which text and still images are enlarged and displayed on an illuminated screen.
- The text and images are usually printed on a transparent film such as an overhead transparency or a slide.
- Examples of projected media include: slides, filmstrips, opaque and overhead projections, motion pictures, videos, etc

Image of an Over-head Projector (OHP)



Image of Opaque Projector/ Epidiascope



Image of Film Strip Projector

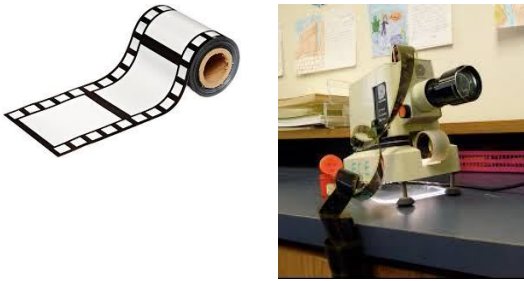


Image of Slide Projector



Image of LCD Projector



Image of Smart Board with fixed LCD Projector



Image of Motion Picture Camera



Value of Projected media

1. Provides greater enjoyment in learning
2. Stimulates more rapid learning
3. Makes teaching situation adaptable to wider range
4. Enlarges or reduces actual size of objects
5. Influences and changes attitudes
Utilization to Education
6. To attract and focus the attention of a large group of audience
7. Entertain an audience

Advantages of Projected Media

1. Easy to operate
2. Can be shared by a large group of people
3. Make teaching more effective and efficient
4. Relatively cheap to make visual aids
5. Can be VERY large (my screen is 8 feet and can be 20 in a dark room)
6. Are portable

Disadvantages of Projected Media

1. Mostly require use of dark room for high resolution of the display
2. Require clear line of sight – there should be no obstacles
3. Digital projectors don't last forever - mostly 2000 – 4000 lamp hours
4. Require qualified technical support to install and maintain
5. May make using laser pointers difficult since so much light is already bouncing off the surface
6. Most projectors don't have good sound quality or need an external sound unit

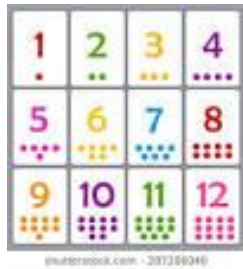
b) Non-Projected Media

- **Non projected media** are those media which are used without any projection
- They translate abstract ideas into a more realistic format
- They allow instruction to move from verbal representation to a more concrete level.
- Examples of non-projected media include: Still picture, drawings, charts, graphs, cartoons, puppets, realia (real objects), models, dioramas, fieldtrip, display surfaces, boards (chalk board, magnetic boards, white boards), flip charts, flannel charts, specimens, bulletins, etc

Flannel board/Flannelgraph



Flash Cards



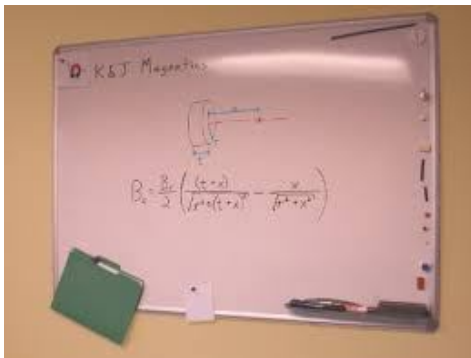
Dioramas



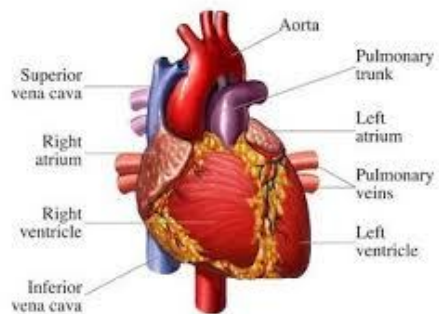
Flip charts

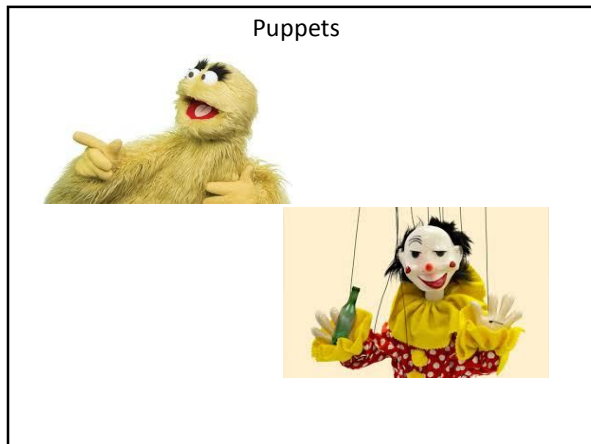


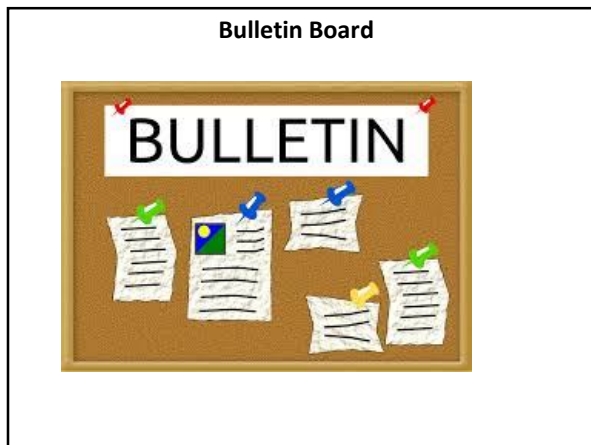
Magnetic Boards



Models e.g A Heart Model







- Advantages of Non Projected Media**
1. Abundant and are easily obtainable.
 2. Requires no electricity
 3. Appropriate for low budget
 4. Not much artistic ability is required in the use of these visual aids.
 5. Can be used in many ways at all levels of instruction and discipline
 6. Used to stimulate creative expression such as tell stories or writing stores
 7. Many of them can be converted into projected aids.
 8. Some of them can be projected through an opaque projector.

Disadvantages of Non Projected Media

1. These could present problems in transportation and storages, depending on the number and bulk
2. These have limited dramatic effect of the presentation
3. These should be big enough to be useful effectively.

Electronic Media

A good aid is like a window, it should not call attention to itself, it should just let in the light.



