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INTERACTIVE MEDIA PATH IN EDUCATIONAL TECHNOLOGY

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Abstract:-The age of information technology has presented to education a wide range of instructional media and materials. These media and materials are, in fact, tools of educational technology, which aims at solving problems of teaching and learning Hardware and software are two structural components of this technology and INTERACTIVE MEDIA is an important aspect related to them. Education as a system has some objective planned for the process and for the realization of which a variety of strategies, techniques and aids have been designed and devised b y educational technologists. INTERACTIVE MEDIA approach is one such innovation that is aimed at improving teaching-learning process.

Keywords: Interactive Media , Educational Technology , Personal Computer

INTRODUCTION

Weidong Xhang (2003) says that INTERACTIVE MEDIA is a hot topic in education because it represents the latest technology and introduces into the classroom whole new ways of thinking about curriculum, interaction with students and even the nature of learning itself. According to him, INTERACTIVE MEDIA means "any kind of file or document, either a text or spread sheet, that have audio or video effects or an interactive information cafe."

According to F. T heodore Struck (1999), INTERACTIVE MEDIA provides sensory functions with the aid of which instruction can be made more effective than without such assistance and they are not vital only to a few areas of learning but also to every subject or unit of learning.

Dipika B. Shah (1981) defines INTERACTIVE MEDIA as 'more than one media' used in a single communication either sequentially or simultaneously.

Encyclopedia Britannica defines INTERACTIVE MEDIA as a "Computer-delivered electronic system that allows the user to control, combine, and manipulate different types of media, such as text, sound, video, computer graphics and animation. T he most common INTERACTIVE MEDIA machine consists of a PERSONAL COMPUTER with a sound card, MODEM, digital speaker unit, and CD-ROM."

The word 'INTERACTIVE MEDIA' is coined from two separate terms like 'Multi' (means 'many') and 'Media' (means 'a channel through which something is conveyed').

INTERACTIVE MEDIA is a powerful tool, which can provide individual and interactive instructions as well as motivation for practice in an entertainment environment. INTERACTIVE MEDIA also provides students with different learning style, the opportunity to learn, share, communicate and grow using all their faculties.

OBJECTIVES OF THE STUDY

1.To discuss different concept of INTERACTIVE MEDIA.
2.To discuss the nature of INTERACTIVE MEDIA approach.
3.To classify different media as per criteria.
4.To explain what is INTERACTIVE MEDIA.
5.To describe steps in adopting INTERACTIVE MEDIA approach.
6.To identify the effect of INTERACTIVE MEDIA in Teacher's role.

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7.To enunciate the advantages of INTERACTIVE MEDIA.

NATURE OF INTERACTIVE MEDIA APPROACH

• INTERACTIVE MEDIA approach uses a number of media, devices, and techniques in the teaching learning process.
• INTERACTIVE MEDIA approach has come out o f researches and experiments in educational technology that have been undertaken in order to improve the process of teaching learning.
• INTERACTIVE MEDIA approach aims at providing meaningful learning experiences via a mix of media in order to achieve predetermined objectives.
• In INTERACTIVE MEDIA approach, several media in combination is used as a powerful means of communications.

CLASSIFICATION OF MEDIA USED IN INTERACTIVE MEDIA APPROACH

The INTERACTIVE MEDIA approach is based on the methods, strategies, and mode of instruction in relation to instructional objectives classified in the following tables:

Table 1. Classification of Media in terms of Type of Instruction

Media
↓
Mode of Instruction

CAI	PSI	UTM	LPI
Computer Assisted Instruction	Personalized System of Instruction	Using Teaching Machines	Learning Programmed Instruction

Table 2. Classification of Media on the basis of means of mass Communication

Media
↓
Means of Mass Communication

Radio	Television	Distance	Open School & University	Internet

Table 3. Classification of Media on the basis of Teaching Aids

Media

Teaching Aids

Graphic	3D Aids	Projective Devices	Mass Communication
i) Charts	i) Models	i) Projectors OHP, LCD, Slides	i) Ratio
ii) F lash cards	ii) Puppets	ii) Filmstrips	ii) TV
iii) Posters	iii) Living and	iii) Motion Pictures	iii) Satellite Communication
iv) Graphs	iv) Non-living Objects	iv) Slides	
v) Diagrams			
vi) Maps			
vii) Pictures			

Table 4. Classification of Media based on reading or Teaching Material

Reading or Teaching Material
↓

↓	↓	↓	↓	↓	↓	↓
Teachers guide	Laboratory manuals	Activity books	Work books	Text Books	journals & Magazines	News Paper

Table 5. Classification of Media based on Means of Gaining Experience

- Means of Gaining Experience
- Field Trips
- Excursions
- Demonstration
- Role
- Experimentation
- Exhibition
- Library
- Social service camps / classes
- Hobby
- Subject clubs

MEDIA FOR COMMUNICATION (ONE / TWO WAY)

The instructional designs distinguish between media that can be used one-way communication and those that can b ring about two-way interaction process. The following figure represents the media and the type of communication process.

Table 6. Media and Type of Communication Process

Discussing Exercises	Testing Two-way communication Interaction / Instruction	Audio + Workbook CAI - CAL
Workbooks		Video + Support
Text book	One-way Communication Information Transfer	Television
Lecturing		Audio recording
	Projected visuals	

INTERACTIVE MEDIA COMPONENTS:

INTERACTIVE MEDIA is a tool, which has had a great impact in the field of education. T his tool uses five elements arid combines them into single powerful tools. The five media are: i) Text, ii) Animation, iii) Video, iv) Graphics and v) Sound.

Texts: Text has a great   impact on the quality of the INTERACTIVE MEDIA title. Texts provide the important information, but too much text on a page can be a detrimental. Texts act a keystone in development of learning process

Animations: Animations are primarily used to demonstrate on idea or illustrate a concept. Animations are based on drawings. There are two types of animation. They are:

a.Cell based: It consists of multiple drawings, each one a little different from others.
b.Object based: It moves an object across a screen. The object itself does not change. It is also called slide or path animation.

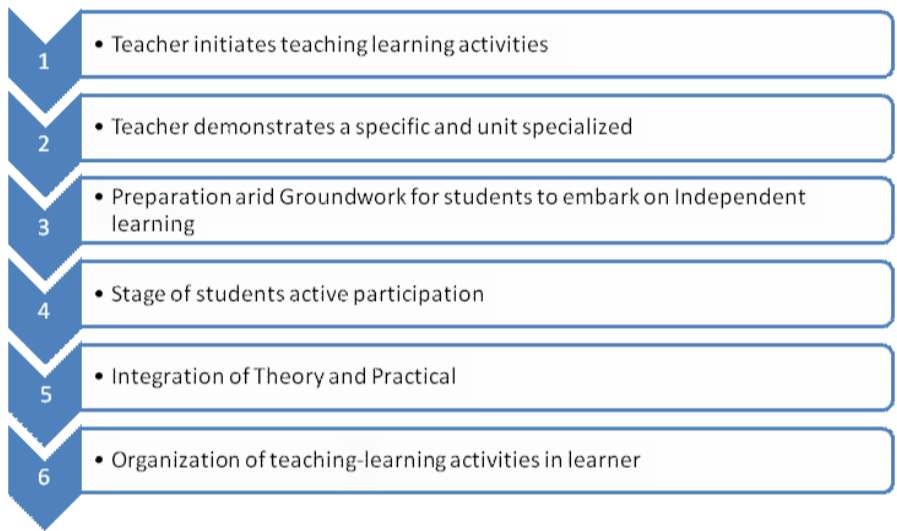**Video:** It develops learner's visual skill.

Graphics: It provides the most creative possibilities for a title. They can be photographs, drawings, graphs from a spreadsheet, pictures, from CD-ROM, or something pulled from Internet. Graphics develop learner's new sense of visual

literacy.

Sound: It develops learner's audio skill.

PROCEDURE FOR ADOPTING INTERACTIVE MEDIA APPROACH

INTERACTIVE MEDIA approach calls for the use of more than one media in the teaching-learning process. The following are the six steps to be followed while adopting the INTERACTIVE MEDIA approach.

1 • Teacher initiates teaching learning activities

2 • Teacher demonstrates a specific and unit specialized

3 • Preparation arid Groundwork for students to embark on Independent learning

4 • Stage of students active participation

5 • Integration of Theory and Practical

6 • Organization of teaching-learning activities in learner

Stage 1: In this stage, the teacher initiates the teaching-learning activities. He delivering a well-prepared lesson based on the formulated objectives. He could use a variety of media for his presentation.

Stage 2: In this stage, the teacher demonstrates a specific and specialized unit using a mix of media. The teacher may provide learner with programmed learning materials, cassettes, CD's etc.

Stage 3: This is a predatory stage for the learner before he starts independent learning. The student discusses with per students and teachers about his plans of action.

Stage 4: In this stage the learner actively participates. He uses a variety of media and materials in his self-study.

Stage 5: In this stage the learner integrates theory with practice.

Stage 6: In this stage learner finds that teaching-learning activities have to be organized on a higher level. He is involved in critical analysis, critical evaluation and exchange o f ideas.

LEARNING 'FROM' MEDIA AND TECHNOLOGY:

Media and Technology are used as 'tutors' in schools in the process of educational communication i.e. the deliberate and intentional act of communicating content to students with the assumption that they will learn something 'from' these communications. The instructional process inherent in the 'from' approach to using media and technology in schools can be reduced to a series of simple steps :

• Exposing students to messages encoded in media and delivered by technology.
• Assuming those students perceives and encodes their messages.
• Requiring a response to indicate that messages have been received.
• Providing feedback as to the adequacy of the response. Television and the Computer are the two primary technologies used in the 'from' approach.

LEARNING 'FROM' MEDIA AND TECHNOLOGY:

Media and Technology are used as 'tutors' in B-Schools in the process of educational communication i.e. the deliberate and intentional act of communicating content to students with the assumption that they will learn something

'from' these communications. The instructional process inherent in the 'from' approach to using media and technology in schools can be reduced to a series of simple steps:

• Exposing students to messages encoded in media and delivered by technology.
• Assuming those students perceives and encodes their messages.
• Requiring a response to indicate that messages have been received.
• Providing feedback as to the adequacy of the response. Television and the Computer are the two primary technologies used in the 'from' approach.

INTERACTIVE MEDIA AND EDUCATIONAL THEORIES IMPLEMENTATION

There are three main approaches in education. These are:

a)Behaviorist Approach
b)Information Processing Approach and
c)Cognitive Approach.

INTERACTIVE MEDIA strengthens this type of Behaviorist Approach connections using audio-video effects, by rewarding correct responses with gestures, visual symbols etc. and indicating wrong answers. Thus INTERACTIVE MEDIA provides opportunities for fulfilling law of exercise (practice) and law of effect and creates situation for law of readiness to be fulfilled.
The information processing approach says that learning is a series of information processing similar to computer's processing of digits. Information received through sense organs (eyes, mouth, ears, hands, etc.) is processed through stages of perception, memory and decision make up, and then output through effectors' organs such as arms, vocal cords, hands so on. The key to information processing approach is feedback. INTERACTIVE MEDIA can be programmed to provide extrinsic feedback whenever necessary and also provides experiences and information.
INTERACTIVE MEDIA can take into account different learning styles, some students learn by interpreting text, while other requires more graphical or aural representations. INTERACTIVE MEDIA allows for self-pacing and discovery. Students can take the time they need and choose the path of learning, making learning meaningful and pleasurable.
INTERACTIVE MEDIA helps in development of higher order thinking skills. INTERACTIVE MEDIA encourages students to seek information, apply knowledge and reattempt tasks (based on feedback given), behaviors' that are associated with higher order learning.
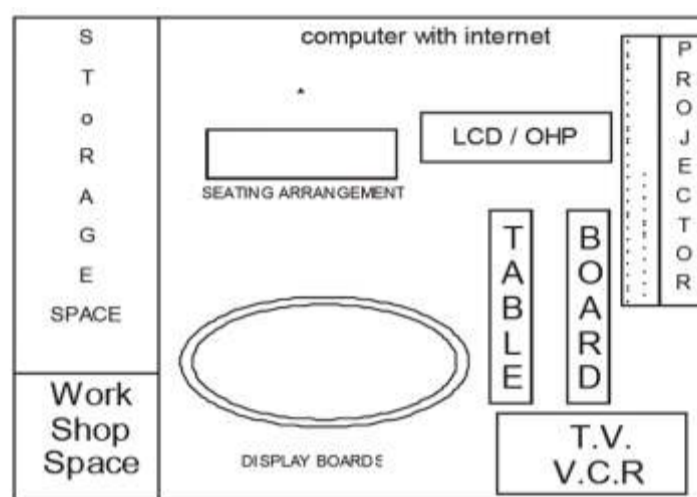
• INTERACTIVE MEDIA provides the students the flexibility or anywhere any time' learning.
• INTERACTIVE MEDIA helps in developing group and interpersonal skills. Better communication between students via e-mail, chat sessions etc., can encourage collaborative learning and enhance student- teacher interactions.
• INTERACTIVE MEDIA can bridge language barriers since audio is not the only means of communications
• INTERACTIVE MEDIA helps students to learn the content in a given discipline, it helps students to think effectively, practice problem solving and decision making.

ROLE OF TEACHER IN INTERACTIVE MEDIA APPROACH

• The teacher has to make a lot of modifications and adjustments if he has to adopt INTERACTIVE MEDIA approach. His role would have a different connotation compared to the traditional role. He would have to make these changes.
• The teacher has to adopt a number of methods and techniques; he cannot be satisfied with the lecture or the chalk-talk method.
• The teacher has to b e aware of the different available media and their availability. The teacher should be physically competent to use and demonstrate the use of different media.
• The teacher should be skillful enough to make a judicious choice of media and be competent enough to mix them sequentially and in an orderly Mainer.
• The teacher should provide experience such that the students can link practice and theory and integrate them.

AN INTERACTIVE MEDIA PRESENTATION ROOM

An ideal INTERACTIVE MEDIA presentation room should have at-least a computer with CD ROM, Internet connectivity, a VCR, a LCD, a video projection system, OHP's, Film strips projectors etc. The room should have a conference type arrangement where people can sit around the centre table.

Model of INTERACTIVE MEDIA Presentation Room

CONCLUSION

It has been proved by research that INTERACTIVE MEDIA in B-Schools are effective for students to learn both 'from' and with' it. T he focus is now on media and technology because o f their advantages in terms o f repeatability, transportability and equity of access. INTERACTIVE MEDIA helps students to construct knowledge actively. Work in-groups and use multi-senses at a time. That media is power and a well-recognized fact. However, different media have different potentials. A judicious mix of media, INTERACTIVE MEDIA helps in removing the limitation of each and cascading the advantages of all.

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