

# Computer-Assisted Instruction (CAI)



Presented by  
Anuradha Maurya

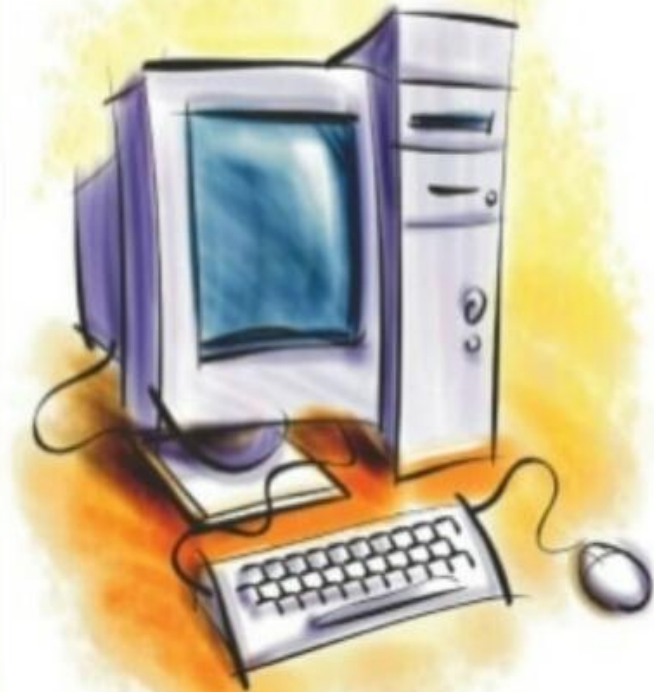
Class - B.E.d Ist Semester

Instructor - Azra Mam

College - Charak Institute of  
Education

## **INTRODUCTION**

- ❑ Computers have become omnipresent and ubiquitous today and found in every walk of life.
- ❑ Computer influence every sphere of human activity and bring many changes in education, health care, scientific research, social sciences, law, music and painting.



## DEFINITIONS:


- ❑ Computer-assisted instruction (CAI) is an interactive instructional technique whereby a computer is used to present the instructional material and monitor the learning that takes place.

OR


- ❑ A self-learning technique, usually offline/online, involving the interaction of students with programmed instructional materials.

## TERMINOLOGY


| Terminology | Meaning                             |
|-------------|-------------------------------------|
| <b>CBT</b>  | Computer Based Training/Test        |
| <b>CAI</b>  | Computer Assisted Instruction       |
| <b>CAL</b>  | Computer Assisted Learning          |
| <b>WBT</b>  | Web Based Training/Tutorial         |
| <b>CALL</b> | Computer Assisted Language Learning |
| <b>WBI</b>  | Web Based Instruction               |




## TYPES OF CAI




Drill and Practice




Tutorial



Simulation



Instructional Game



Problem Solving



## DRILL AND PRACTICE METHOD

- ▶ SIMPLEST LEVEL OF CAI.
- ▶ DRILL AND PRACTICE PROVIDE OPPORTUNITIES FOR STUDENTS TO REPEATEDLY PRACTICE THE SKILLS THAT THEY HAVE PREVIOUSLY LEARNED AND FURTHER PRACTICE NECESSARY FOR MASTERY .



## CRITERIA OF DRILL AND PRACTICE METHOD

- ▶ Format is interactive
- ▶ User can establish the pace
- ▶ Provision made the progression in levels of difficulty
- ▶ Items of same level came selected at random
- ▶ Employs motivational technique
- ▶ Rewards presented for correct responses
- ▶ Incorrect responses handled appropriately
- ▶ Teacher can modify content



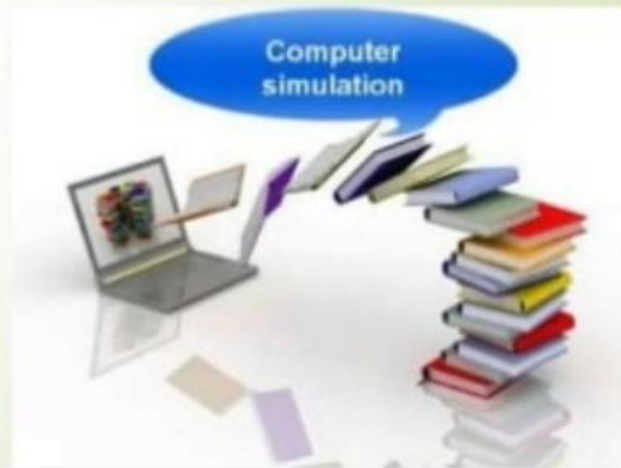
## TUTORIAL MODE



- The program tutors or teaches the student a body of knowledge by presenting information and asking questions ,giving hints if students.
- Tutorials can free the faculty members from teaching some of the routine basic material.
- At the same time the students may find the tutorials more interesting and fun than the instructor's lecture.

## **SIMULATION**

- ▶ Clear direction
- ▶ Simple keyboard paddle use
- ▶ Realistic situation for role playing
- ▶ High level of interest is maintained throughout
- ▶ Results predicted in user impulse
- ▶ Varying levels of difficulty

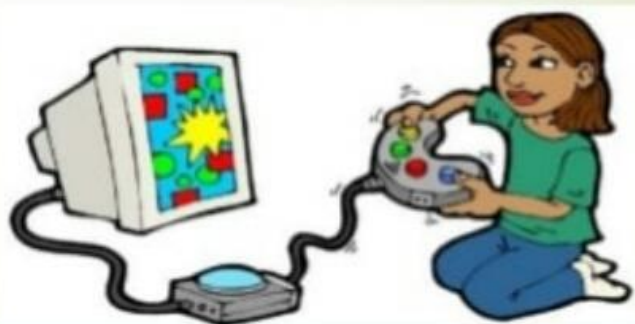


## GAME MODE



- Game software often creates a contest to achieve the highest score and either beat others or beat the computer. The extend of learning depends on the type of game.

E.g. Games on spelling's, name of places and general knowledge





## ADVANTAGES OF CAI

- ▶ One-to-one interaction
- ▶ Great motivator
- ▶ Freedom to experiment with different options
- ▶ Instantaneous response/immediate feedback to the answers elicited
- ▶ Self pacing - allow students to proceed at their own pace
- ▶ Helps teacher can devote more time to individual students



## Cont.

- ▶ Privacy helps the shy and slow learner to learn
- ▶ Individual attention
- ▶ learn more and more rapidly
- ▶ Multimedia helps to understand difficult concepts through multi-sensory approach
- ▶ Self-directed learning – students can decide when, where, and what to learn

## LIMITATIONS OF CAI

- ▶ May feel overwhelmed by the information and resources available
- ▶ Over use of multimedia may divert the attention from the content
- ▶ Learning becomes too mechanical
- ▶ Non availability of good CAI packages
- ▶ Lack of infrastructure



*Thank You*