I st year

CMI (computer managed instruction)

① The term computer managed instruction (CMI) simply stands for the instruction managed with the help of computer technology.

② In CMI the computer gathers, stores, and manages information to guide students through individualized learning experience.

③ performance on every test item, keeping track of his mistakes and strengths and providing valuable feedback to the teacher etc.

④ Such a system which maintains this kind of book keeping along with the instructional programme is called as CMI.

⑤ CAI is more effective only when it is linked to CMI.

It helps to assess the learners present level of knowledge, weakness or gaps in his learning and remedial action possible.

Definition

BURKE (1982) " CMI is the systematic control of instruction by computer. It is characterised by testing, diagnostic learning prescription and through record keeping."

However in the language of computer tech. CMI may be defined as a category of computer programme that may be used by educators and instructors to organize and manage data related to instruction for attaining the stipulated instructional objectives in a most effective way. Four areas of computer management support to teachers are,

a. constructing, scoring and analysing tests.
b. Keeping records of student performance and progress through courses.
c. Providing guidance to students and advising them on the choice of next course module.
d. Reporting on the performance and progress of students to individual students, tutors and educational administrators of the institutions.

Some of the functions performed with the help of such developed softwares related to the organization and management of instructions are described below.

1. Diagnosis of entry behaviour of learners.

computer programmes help in the early diagnosis of the strengths and weakness of the learners in terms of their previous knowledge and experiences related to a particular knowledge and skill area, their interests, attitudes and aptitudes, needs, motives, personality traits - determining their potentiality.

2. Setting of instructional objectives -

helps in analysing test data and other data base information about the characteristics of the learners in relation to the needs and purpose served by a particular type of instruction at one or the other stage of school, college. helps in formulating goals and objectives for a particular course of or piece of instruction.

3. Generating individualized instructional plans.

Depending upon the need, nature, characteristics and individuality of the learners, computer software are able to generate and organize individualized for average, gifted, slow, disabled.

4° Generating instructional materials and learning experiences.

generate instructional material and opportunities of interactive learning experiences to the learners of varying need, intents, and abilities. A huge data bank of all types of information and instructional material is easily available through well prepared software packages, websites, online conferencing networking etc. The material generated and developed for instructional purposes may be used on a computer based system eg: programmed instruction.

5. Availability of instructional material into curricular unit.

For the proper organization & management of the instructions, an inventory of the instructional resources available to the learners may be stored in the computer's data bank. There shall be clear directions available for telling the learner what to do for achieving stipulated objectives, it may asks them to read a book, work-off self-administered paper, pencil exercises, conduct experiment with a SC kit, see film,

6. Monitoring of progress -
They are able to register the low achievement of learners detect the deficiencies in learning along with the possible causes and provide suggestions for overcoming the learning difficulties.

7. Providing remedial instructions:
Computer software can very well manage any progress related to remedial instructions to the needy learners. Software can suggest all the possible remedies in the planning and organization of instructions.

8. Management of information and record keeping.
collection, storage, classification and dissemination of information through a well organised system of record keeping and maintainance.
interests, abilities, educational and environmental backgrounds of the learners belonging to their past and present can be very well available

9. Organisation of testing and evaluation programmers.
They are helpful in assessing the study behaviour of the students. later on, day to day, periodic or end evaluation are all possible through the well framed unit or course tests and other evalution tech

10. Generating all types of reports :-

Computer Software helps the processes and outputs of the instructional programmes by generating all progress and information related to the tasks of instruction.

If you need the report related to the entry behaviour of pupils, it is available on the computer's hard disc or files maintained for the purpose.

The progress reports can send to parents and also it can be used for removal of their learning difficulties.

Computer Managed instruction

(1) The computer managed instruction is the
- assist teachers or school administration
- gather data, store, update, retrieve, analyse, and report such information.
- from simple student grade to sophisticated diagnostic and prescriptive systems.

(2) students computer grade book -
store, record - scores or grades on assignments or test

Foxpro, Dbase, MS Access, MS Excel, these spread sheets are used to record the data of students scores or grades of student's assignments and tests

* • Begin a new class file
• Open an existing file
• Add student name to file
• Add assignment and test scores to file
• Retrieve and modify student records.
• delete if required some information
• print report • exit.

• helps to generate reports
• shows actual final grade.
• summary information and students records are arranged in descending order

③ Test scoring.

national standardized tests. In such sys the student mark their answers on special answer sheets which can be read by a mark sensing device or optical scanning device which are connected to computer and the responses are stored on computer for futher analysis

After the analysis the computer is used to print reports with following information.

1. Test scores in descending order and alphabetically arranged.
2. Analysis of test items for diagnostic purpose
3. The mean scores of the class, the skewedness of the test and reliability of the test.
4. Sophisticated computer managed instruction pakages automatically stores the scores of each student in appropriate student record book.

④ Test Generation

Another to generate test.

• It randomly selecting item from a file of test items stored on a floppy diskette or hard disk

items of the test are organised into categories according to
- difficulty
- topics
- objectives so on.

according to blue-print of the test.

Specific information

1. Name of test item file.
2. No of parallel test forms that can be generated.
3. No. of items that should be chosen to fit the blue print of the test.
4. No. of copies the printed.
5. test items should be grouped or randomly distributed.
6. Directions to be printed at the beginning of the test.
7. print answer key.

In individualized instruction the teacher finds difficult to cater to each student seperately, hence the computer managed instruction provides a solution by providing a variety of generated tests.

Thus combining computer test generation, computer scoring and computer grade book applications into one integrated system, the testing, tracking, and reporting of student progress can all be automated.

(5) Terminal-Based Computer Managed instruction:

— CMI allows Students to respond to test items on a computer or terminal connected to mini computer.

The students responds to the items by typing the answers on the keyboard or using some other input device. computer then provides total scores.

- Scores are stored in computer.
- feedback.
- after completion < missed items / correct answers.
- essay type are not handled. — manual / tabulated.
- fill in the blanks and short ques.

(6) Sophisticated computer Managed instru Sys

- provide diagnostic prescriptions.
- The computer can analyse the student's pattern of responses and determine areas of strength and weakness.
- The evaluation can improve the quality of instruction and test items.

A drill-and-practice programe designed to help student to learn math facts keep record of student's performance and produce reports

A tutorial programe may include a test at the end of each unit that is presented and scored by the computer.

- drill-and practice
- tutorial
- simulation
- game.
- problem solving programes

These systems not only provide instruction but also diagnosis prescription, record, keeping and other management functions.

* Sophisticated computer managed instruction requires considerable planning, creative problem solving and resources. It is very effective for individualised mastery learning but on the other hand it requires the teacher to be competent with the utilization of the computer.