

Software Categories

Educational software can be categorized according to its purpose of use or characteristics. Categories 1 - 6 are considered computer-assisted instruction, that which actively engages students and requires a minimal amount of teacher interaction. Categories 7 - 13 are considered computer assisted performance, that which encourages creativity and requires a greater amount of teacher preparation.

1. Tutorial

- A. New information is presented.
- B. Student works at own pace.
- C. Most tutorials allow user to select topic from a menu, so user does not have to start from beginning each time the tutorial is used.
- D. Examples: How to word process, how to use an Apple computer, a home study course in using a data base, etc.

2. Drill and Practice

- A. Material has already been taught.
- B. Numerous repetitions - many problems to do.
- C. Students improve in accuracy, speed and retention.
- D. Examples: 50 addition problems, 15 identify the noun problems, etc.

3. Interactive Storybook

- A. Usually based on familiar children's' books.
- B. In simplest form, they are fairly linear, progressing from one page to the next with clickable objects that enhance the story line through word definitions, animation and sound.
- C. In more complex form, there are hyperlinks to activities that reinforce concepts and skills.
- D. Examples: Broderbund's Living Books

4. Instructional Game

- A. Involves the chance to win/lose.
- B. Usually random events are provided by computer.
- C. Student sometimes tries to find winning strategy.
- D. Motivating - students often play several times.
- E. Examples: Computer games that resemble tic-tac-toe, concentration, guess the number, guess the word.

5. Simulation

- A. Models life-like situations
- B. Students make decisions, then see consequences, then try different choices.
- C. Examples: Flight simulator, rule a country, run a business.

6. Problem Solving / Discovery / Inquiry

- A. Student uses general problem-solving techniques (rather than already memorized facts) in a format more complex than a game.
- B. Students can explore a concept.
- C. Often open-ended.
- D. Often labeled as "Logic" software.
- E. Examples: Adventure games, put together machines to build a product, keep track of clues to solve a detective story, etc.

7. Electronic Reference Works

- A. Often an electronic version of a popular reference works with large amounts of information including text, pictures, video clips and sound.
- B. Sometimes provides in-depth information for research on a particular topic.
- C. Student utilizes simple search techniques to find information.
- D. Examples: An electronic encyclopedia, the works of Steinbeck.

8. Utility Software

I. TEACHER UTILITY

- A. Computer is a tool used by teacher, not students.
- B. Often saves teacher's time.
- C. Examples: Programs to keep attendance, grades and other student information; to create textbook readability studies; to generate paper materials.

II. MATERIALS GENERATION

- A. Computer is a tool to produce paper materials.
- B. Usually done only by teacher, students then work on paper materials generated by the computer.
- C. Examples: Software to arrange word search and crossword puzzles, draw questions from a previously established data bank to construct multiple versions of a test, produce cloze tests from textbook chapters.

III. GENERAL UTILITY

- A. Programs that are of use to both teacher and students.
- B. Examples: Browsers, e-mail, telnet, data recovery, virus checks.

9. Application Software (Computer as a Tool)

- A. Students use the computer as a partner in the educational process.
- B. Emphasis is usually on the making of a product.
- C. Examples: Word processing, databases, spread sheets, computer graphics

10. Authoring Systems

- A. User creates a product.
- B. Product is usually in multimedia form (i.e. text, graphics, sound, video)
- C. Examples: Kid Pix Studio, HyperStudio, PowerPoint, Director, Web-authoring

11. Programming

- A. Student uses the specific codes of a computer language.
- B. Students work on their understanding of what it means to 'control' a computer.
- C. Usually utilize a problem solving method.
- D. Examples: Logo, BASIC, Pascal, FORTRAN, C++, Java

12. Complex Utility

- A. Software that aids the user with complex tasks.
- B. Examples: Computer assisted design (CAD) and musical instrument digital interface (MIDI)

13. Computer System

I. OPERATING SYSTEM

- A. Communication between the hardware and the software.
- B. Examples: UNIX, DOS, MAC OS, Windows

II. NETWORKING

- A. Examples: Windows NT, AppleShare, Novell