

1950s

(1) Advances in Computer Technology

1950

- Computer monitor
- 1st Counting Machine

1951

- 1st Calculating Device

1952

- 1st graphical PC game - Tic-Tac-Toe
- 1st Calculating Machine

1953

- MIT mag. memory - Faster than vacuum tube
- 1st Electronic Calculator

1954

- Fortran
- 1st Electronic Analog Computer

1955

- AI phrase coined
- 1st Transistor computer
- 1st Electronic Digital Computer

1956

- 1st PC w/ HD shipped
- Silicon Valley HD weights 1ton
- 1st General Purpose Computer

1957

- IBM no longer makes PCs with vacuum tubes
- IBM creates first computer with disk storage
- Sputnik
- 1st Use of Transistors

1958

- 1st video game "Tennis for two"
- 1st IC Chip
- 1st Microprocessor

1959

- 1st Microcomputer

(2) Computer Use in Education

50's Computer Assisted Instruction (CAI) introduced

Overview

The Cold War and the military race with the Soviet Union paved the way for more emphasis on math, science, and foreign language in order to compete. This decade also saw an influence of [Cognitive Theory](#) and [Programmed Instruction](#)

- (1950) Alan Turing publishes *Computing Machinery and Intelligence*
- (1952) San Diego public schools are using closed circuit television for classroom instruction. (McKune, 1966)
- (1952) Alabama develops the first statewide educational television network, broadcasting instructional programs to over 600 primary and secondary schools. (Saettler, 1990)
- 1953 - The FCC allocates 242 television channels for educational programming. (Cuban, 1966)
- (1954) [B. F. Skinner](#) publishes *The Science of Learning and the Art of Teaching*
- (1954) [B. F. Skinner](#) demonstrates at the University of Pittsburgh a machine designed to teach arithmetic, using an instructional program
- (1954) [John Flanagan](#) - critical incident technique
- (1954) Maslow introduces Hierarchy of Needs
- [Task Analysis](#)
- 1956- Seventy-one schools nationally are televising courses. (McKune, 1966)
- (1957) The Soviet launch of [Sputnik](#) initiated federal funds to education in math and science
- (1959) Roby Kidd publishes *How Adults Learn*
- (1959) Wolfgang Kohler publishes *Gestalt Psychology Today*
- Visual literacy gains attention of educators when TV seems to influence behavior
- (1954) John Flanagan critical incident technique
- (1958) National Defense Act was passed. Afterwards, the government funded media research and curriculum development (especially in mathematics and science), as well as University-based research and development (Reiser, 1987).

Task Analysis

- term first used by military to refer to procedures for anticipating the job requirements of new equipment under development

Programmed Instruction

- Through [B. F. Skinner](#) work on his theory of reinforcement, the Programmed Instruction Movement was born. Programmed Instruction was characterized by:
 - clearly stated objectives
 - small frames of instruction
 - self-pacing
 - active learner response to inserted questions
 - immediate feedback

(3) Instructional Design and Relevant Learning Theories

1950 - CAI based on drill-and-practice

1956 - Bloom begins working on his taxonomy of learning

1956 [Benjamin Bloom - Taxonomy of Educational Objectives](#)

1950s - Instructional television usage grew and computers began to be used in education and training, though instructional television use faded by the mid-1960's (Reiser, 1987).

1950s - The audiovisual instruction movement shifted focus from devices to the entire process (sender, receiver and medium) (Reiser, 1987).

Mid 1950's: Programmed instruction movement began.

1959- NBC begins broadcast of Continental Classroom; these televised courses are offered for credit by various institutions of higher learning across the country. (Saettler, 1990)

(4) Research, Foci, Methods, or Findings

1957- The National Program in the Use of Television in the Public Schools, a nation-wide experiment in ITV begins.

Teaching Machines and Programmed Instruction Movement:

- W.W.II - devices called "phase checks", constructed in the 1940s and 1950s, taught and tested such skills and disassembly-assembly of equipment.
- Crowder - designed a branched style of programming for the US Air force in the 1950s to train troubleshooters to find malfunctions in electronic equipment.
- Skinner - based on operant conditioning Skinner's teaching machine required the learner to complete or answer a question and then receive feedback on the correctness of the response. Skinner demonstrated his machine in 1954.

Resources:

Saettler, P. (1990). *The evolution of american educational technology*. Englewood, CO: Libraries Unlimited, Inc.

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Reiser, R. A. (1987). *Instructional technology: A history*. In R.M. Gagne (Ed.) *Instructional technology: Foundations* (pp. 11-48). Hillsdale, NJ: Lawrence Erlbaum Associates.

<http://www.indiana.edu/~idt/shortpapers/documents/ITduring20.html>

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