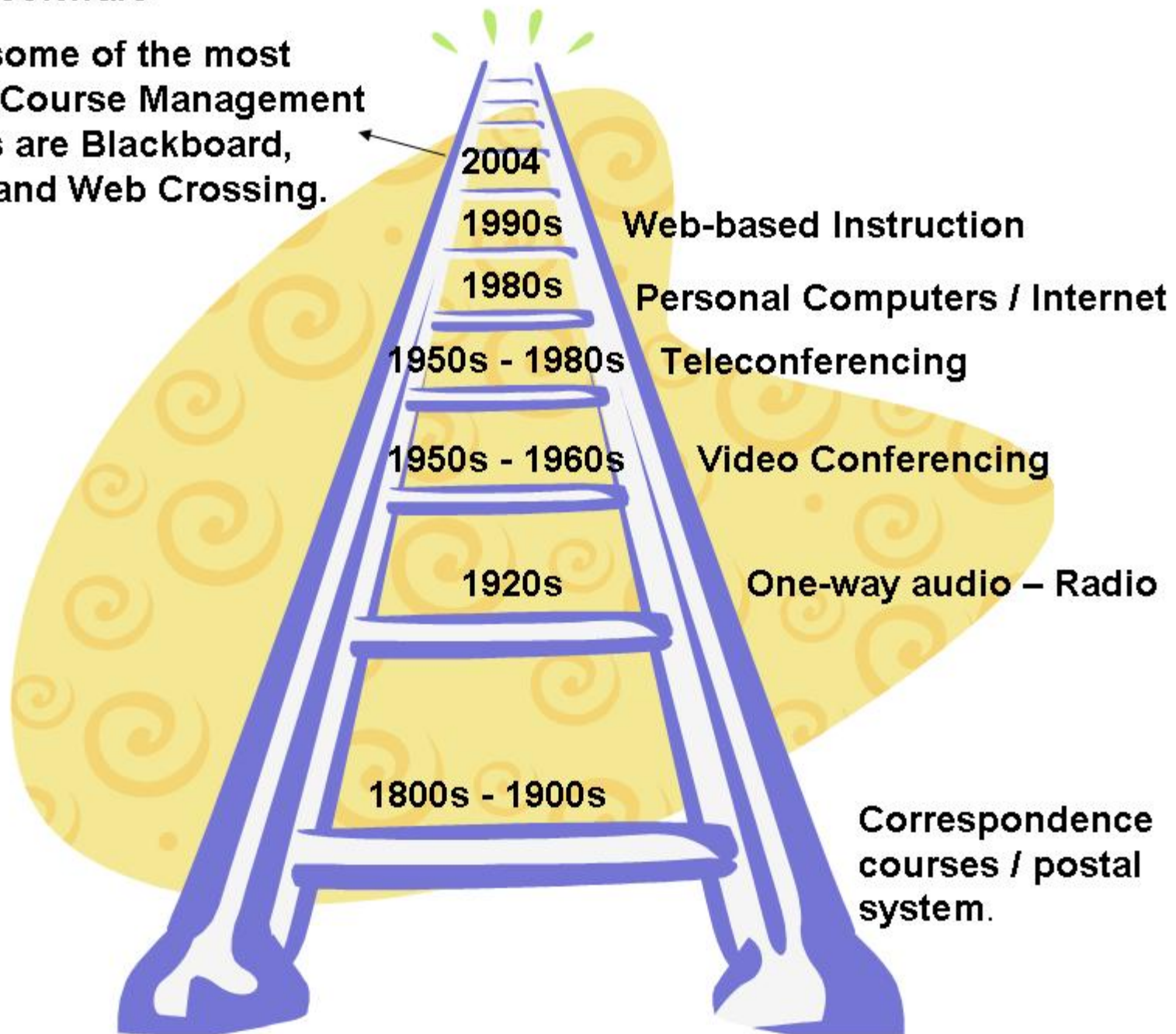


PSA#5, LSTE 7330, Sandy Cobb, 10/20/04

**Timeline for Distance Education Technology**

## Modern software

Today, some of the most popular Course Management Systems are Blackboard, WebCT and Web Crossing.



<b>1800s - 1900s</b>	Correspondence courses and the postal system.	<p>The first known correspondence course was initiated in England by Isaac Pitman, the English inventor of shorthand. In 1840, he began teaching shorthand by correspondence in Bath, England.</p> <p>In the United States Anna Eliot Ticknot and William Rainey Harper began teaching courses in History, Science, Art, Literature, French, and German via correspondence in 1873.</p> <p>Assignments were exchanged between student and teacher via the postal system.</p> <p>The International Correspondence Schools (ICS) evolved from the Colliery Engineer School of Mines based in Wilkes-Barre, PA. It was also a member of the first generation of distance education. Their home study course on mine safety quickly became very popular after their formation in 1890. With the growing importance of railroads, ICS became a very large institution. At one point, they offered courses to employees from as many as 150 railroad companies. Today, ICS is the largest commercial provider of home study programs in the US. It also has a very large international presence. (Moore and Kearsley, 1996)</p> <p>Today – ICS is part of Thomson Learning, and is known as Education Direct. Student can now access course materials via the Internet, rather than waiting on the US mail!</p>
<b>1920s</b>	One-way audio – Radio	The first educational radio license was issued in 1921
<b>1950s - 1960s</b>	Video Conferencing	In July 1962, the first American communications satellite (Telstar 1) was launched into space. Shortly thereafter, educators recognized this method of communication as a viable means of distance education. One-way video/two-way audio was and still is the most common format.
<b>1950s - 1980s</b>	Teleconferencing	<p>The first educational television license was issued in 1945.</p> <p>In 1952, the Joint Council on Educational Television, a group of professional educators and interested parties, pressured the U. S. Federal Communications Commission to reserve a segment of the open TV channel spectrum for educational purposes. "Educational" stations began to spring up. Thus ITV was born.</p> <p>During the 60's and 70's, classrooms were privy to instruction via</p>

		<p>television. Still a relatively young medium at the time, television gave classrooms an avenue to receive instructional programming.</p> <p>During the 70's and 80's, broadcast video and home video playback equipment provided another means of constructing a distance learning course and allowed the learning the learning goals that could be addressed through independent learning to be expanded. At the college level, telecourses became a common distance-learning format. Several major telecourse development projects were funded by the Annenberg Foundation, the Corporation for Public Broadcasting, and some community colleges and universities.</p> <p>During the last decade, cable television and satellite transmission has offered an alternative method for delivering instructional television. Many cable companies will pick up satellite transmissions of educational programs and broadcast them on public access channels.</p>
<b>1980s</b>	Personal Computers	<p>Personal computers became common by the late 1980s. At first, they were used mostly by distance learners as tools to type up papers to be submitted to correspondence teachers via the postal system, but very soon the Internet become popular and online Internet classes began to replace the postal system method of exchanging assignments.</p>
<b>1990s - present</b>	Web-based Instruction	<p>Virtual learning environments are popular today. via the Internet.. Basically, the students in the class, along with the instructor, use a local computer (usually at home) to access the course. Students then are able to do a myriad of things – register online, download course materials, gain access to video and audio materials, and communicate with instructors and fellow students.</p>
Source of above information: <a href="http://www.people.memphis.edu/~ffowler/overview.html">http://www.people.memphis.edu/~ffowler/overview.html</a>		
<b>1990s - present</b>	Modern software and technology	<p>CMS / LMS and applications that can be used to encapsulate learning materials for Internet delivery have been steadily expanding since the 1990s.</p>
<b>Today - 2004</b>		<p>Today, some of the most popular Course Management Systems are Blackboard, WebCT and Web Crossing.</p> <p>Some popular software applications for creating learning objects include Macromedia Flash, PowerPoint, Impatica, Hot Potatoes, SoftChalk LessonBuilder, Camtasia, Robo Demo, Macromedia Director, QuickTime and many more.</p> <p>Java Applets are commonly used today to stream, play and simulate</p>

		<p>learning activities. Audio and video are common components within Web courses, as well as interactive quizzes, discussion boards and live chat applications.</p> <p>More homes in America have personal computers than homes that don't. Many have high speed Internet access via cable or DSL, and email is fast becoming the premier method of communication. Online learners will typically either email assignments to instructors or upload them into some type of online digital drop box.</p>
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### Significant Educational Timeline (Source: <http://www.degreeinfo.com/timeline.html>)

#### 1728

The March 20, 1728, Boston Gazette contains an advertisement from: Caleb Phillipps, "Teacher of the New Method of Short Hand," advising that any "Persons in the Country desirous to Learn this Art, may by having the several Lessons sent weekly to them, be as perfectly instructed as those that live in Boston."

#### 1840

Isaac Pitman begins teaching shorthand, using Great Britain's Penny Post.

#### 1852

Pitman's brother Benn Pitman founds the Phonographic Institute in Cincinnati, Ohio, and teaches shorthand through correspondence courses in the U.S.

#### 1856

Charles Toussaint and Gustav Langenscheidt teach language courses by correspondence in Europe.

#### 1858

The University of London begins its External Program.

#### 1873

Anna Ticknor Fields founds the Society to Encourage Study at Home.

South Africa's first university, the University of the Cape of Good Hope (later to become the University of South Africa) is established.

#### 1883

New York authorizes the Chautauqua Institute to award degrees by correspondence.

#### 1890

The Colliery Engineer School of Mines in Wilkes-Barre, Pennsylvania, offers a home study course in mining.

#### 1890

The Colliery Engineer School of Mines changes its name (and broadens its mission), becoming the International Correspondence Schools (ICS).

#### 1892

Pennsylvania State College offers correspondence courses in agricultural studies.  
The University of Chicago offers courses by mail, led by university president William Rainey Harper.

**1900**  
Martha Van Rensselaer organizes Cornell University's extension program in home economics for New York State's rural women.

**1901**  
Moody Bible Institute begins offering courses through the Moody Correspondence School project.

**1905**  
Calvert Day School offers its kindergarten curriculum by correspondence.

**1906**  
The University of Wisconsin offers extension courses in engineering.

**1914**  
The Federal Schools (which later changes its name to Art Instruction Schools) begins offering art courses by correspondence.

**1915**  
The National University Continuing Education Association is formed.

**1916**  
University of the Cape of Good Hope changes its name to the University of South Africa.

**1922**  
Pennsylvania State College airs courses on radio.

**1925**  
The State University of Iowa offers courses for credit through radio and correspondence.

**1926**  
National Home Study Council (later Distance Education and Training Council) is formed.

**1933**  
Televised courses from the State University of Iowa

**1946**  
University of South Africa opens its Division of External Studies

**1967**  
British Open University established

**1974**  
Dr. John Bear publishes his first guide

**1985**

National Technological University established

**1993**

The Graduate School of America (now Capella University) is founded

**1997**

The Graduate School of America (now Capella University) is accredited by the North Central Association.

**1999**

Jones International University is accredited by the North Central Association.

## **Information Technology Timeline (Source: <http://www.mantex.co.uk/ou/t171/t171-07.htm>)**

**1617**

Scottish mathematician John Napier invents logarithms and constructs set of 'rods' or 'bones' for performing mechanical calculations.

**1642**

French mathematician and philosopher Blaise Pascal constructs and demonstrates a mechanical adding machine.

**1666**

German mathematician Gottfried Leibniz writes on the value of binary numbers in *De Arte Combinatore*.

**1694**

Leibniz constructs first mechanical device to successfully perform all four arithmetic functions (addition, subtraction, multiplication, and division).

**1804**

French engineer Joseph Jacquard develops punched card system for programming looms - weaving cloth to match a set of commands. Holes in the cards correspond to binary Open/Closed. This system of in-putting data into machines persists until 1960s

**1823**

English engineer Charles Babbage invents The Difference Engine - the first mechanical computer.

**1834**

Babbage designs and starts to build 'Analytic Engine' - Augusta Lovelace [Byron's daughter] writes the first computer program.

**1847**

English mathematician George Boole publishes 'Mathematical Analysis of Logic' and uses the ideas of binary numbering to fuse logic with algebra.

**1925**

American engineer Vannevar Bush designs and builds the first multipurpose mechanical analogue computer.

**1936**

English mathematician Alan Turing puts together binary notation and Boolean logic to produce tests for mathematical probability. He proposes 'Universal Turing Machine' - a theoretical construct which contains all the logical and mathematical elements of what would be a modern analogue computer.

**1940**

American electrical engineer Claude Shannon uses Boolean logic to optimise relay-switching circuits in his MA thesis at MIT.

**1945**

Vannevar Bush publishes 'As We May Think' in *Atlantic Monthly*, outlining what we now call 'hypertext'. Hungarian mathematician John van Neumann conceives the first stored computer program.

**1948**

First computer using stored program built at Manchester University. Turing's proposal for a 'Turing Computing Engine'.

**1962**

'Spacewar' - first graphical computer game.

**1968**

Douglas Englebart demonstrates 'windows' and mouse in San Francisco.

**1969**

Myron Krueger develops first prototypes of virtual reality.

**1974**

Ted Nelson self-publishes *Computer Lib* and *Dream Machines* outlining his ideas on hypertext in paper form. Standard General Markup Language (SGML) first invented as a universal publishing language.

**1975**

Bill Gates and Paul Allen found Microsoft

**1978**

Philips and Sony introduce the laserdisk (analogue video)

**1981**

IBM introduces the first PC

**1983**

Microsoft launches its first version of Windows. Myron Krueger *Artificial Reality*

**1984**

Apple-Mac launched - DNS (Domain Naming System) introduced - Number of Internet hosts reaches 1,000

**1985**

Commodore Amiga launched (powerful graphics facility) - First Amstrad released in UK.



**1987**

Ted Nelson's *Literary Machines* describes Project Xanadu - his scheme for electronic commerce and micro-payments. Hypercard (hypertext program) added to the Apple-Mac. Number of Internet hosts reaches 10,000

**1989**

Tim Berners-Lee develops Hypertext Markup Language (HTML) and the World Wide Web at CERN in Geneva. Howard Rheingold's *Tools for Thought*. Number of Internet hosts reaches 100,000

**1990**

Archie (search tool) released by McGill University. Microsoft launches Windows 3.0

**1991**

CERN launches the World Wide Web. Howard Rheingold's *Virtual Reality* - an early work on the sociology of computer users. Gopher (search tool) released by University of Minnesota.

**1992**

Veronica (search tool) released by University of Nevada. Number of Internet hosts reaches 1,000,000

**1993**

Marc Andreessen, NCSA, and University of Illinois develop Mosaic - the first graphical interface to the WWW. A recorded 341,634 per cent growth rate in Web traffic.

**1994**

First eCommerce (shopping malls and banks) arrive on the Web, and Web traffic second only to FTP-data transfers. Linux 1.0 open source operating system released.

**1995**

First search engines developed. Sun launches JAVA programming.

**1996**

Browser wars begin between Netscape and Microsoft. Web censorship in China, Saudi Arabia, Singapore, Germany, and New Zealand.

**1998**

Extensible Markup Language (XML) introduced. Dotcom boom takes off. Estimated size of Web - 320 million pages.

**2000**

Dotcom crash begins (April). Size of Web estimated at one billion pages.

**2003**

Google claims a searchable database of 3.6 billion web pages.

## **Educational Technology Events Timeline (Source: <http://www.lis.uiuc.edu/~chip/projects/timeline/335tl.shtml>)**

40,000 BC

Paintings and drawings are a new means of communication.

1400 BC

First writing in China, on bones.

389 BC

The founding of the Academy by Plato begins a new movement in education.

1453

The printing of the Bible with moveable type by Gutenberg transforms society.

1564

Graphite is discovered.

1635

Founding of the first public school in the US.

1651

John Dury invents the modern library.

1654

The first slide rule in which the slide works between parts of a fixed stock is made by Robert Bissaker.

1795

Nicholas-Jacques Conte of France discovers the process of mixing graphite with clay.

1872

QWERTY: Christopher Sholes develops a machine to print the alphabet.

1878

Sales take off after the Remington No. 2 hits the shelf.

1901

Marconi sends a radio signal across the Atlantic.

1932

August Dvorak creates a keyboard that is easier to learn.

1944

Grace Hopper is responsible for the term 'bug' for a computer fault.

1960

An early CAI system, PLATO, was initiated at the University of Illinois at Urbana-Champaign and later developed by Control Data Corporation.

1961

The emergence of an on-line community around PLATO.

1962

The PLATO instructional computing system is widely used in college and K-12 classrooms.

1964

IBM brings out the MT/ST (Magnetic Tape/Selectric Typewriter).

1967

Logo is developed.

Texas Instruments develops the first hand-held calculator.

1966

The Educational Resources Information Center (ERIC) is established as a national information system

1968

Douglas Engelbart introduces a prototype of the computer mouse, the "x-y position indicator for a display system."

1969

The Arpanet is constructed. See also the Timetable of Internet Events.

Scholar is developed by Jaime Carbonell, as the first Intelligent Tutoring System (ITS).

1970

The Arpanet goes online.

1975

The Altair 8800 leads the way for personal computers.

Ray Kurzweil and company create the Kurzweil Reading Machine and the first omni-font OCR (Optical Character Recognition) technology.

1977

Apple introduces the Apple II.

Japan Victor Company (JVC) introduces the VHS format video cassette recorder.

Radio Shack introduces the TRS-80.

1978

HyperStudio, a multimedia authoring tool that allows people to communicate ideas on diskette, CD-ROM or Internet.

1983

Apple introduces the Apple IIe.

1984

Apple introduces the Macintosh.

Commodore introduces the Commodore 64.

CD-ROM players for computers.

1985

Aldus PageMaker is released for the Macintosh and desktop publishing is born.

1987

Apple begins shipping Hypercard, a programming system and multimedia authoring tool.

1989

The World-Wide Web begins at the Conseil European pour la Recherche Nucleaire.

1990

Texas Instruments creates the popular TI-81 graphing calculator.

1993

Mosaic Alpha 4.0 comes to Champaign Centennial High School.

1994

NJSTAR is created making it convenient to those who use Chinese, Japanese and Korean to surf the internet.

1995

Classroom Connect offers educational WebQuests for classrooms all over the world.

1999

The CI 335/CS 317 classes at the University of Illinois create the Educational Technology Timeline.  
The Advanced Cluster Computing Consortium introduces a super computer built with off the shelf parts.

2000

Netscape version 5.0 is released. Under the "decrypting wizard" button anyone can use any computer to read their native language.

2001

Nearly every museum and historical site sponsors its own online field trip.

2002

Apple releases its third generation iMac in teal with a built-in microphone. Students take it to class, and it records the lecture so that the student can organize the lecture to meet his/her learning style.

2003

PaperGraderXPress, a wand-like, wireless device, which reads and analyzes any type of student composition, typed or hand-written.  
A new PLATO satellite system, in which students have small handheld devices which they carry with them to and from school.

## **Computer History Timeline / 1936 - 1985(Source: <http://inventors.about.com/library/blcoindex.htm>)**

1936

Konrad Zuse - Z1 Computer / First freely programmable computer.

1942  
John Atanasoff & Clifford Berry  
ABC Computer

1944  
Harvard Mark I Computer

1946  
ENIAC 1 Computer / 20,000 vacuum tubes later...

1948  
Manchester Baby Computer & The Williams Tube

1947/48  
The Transistor

1951  
UNIVAC Computer

1953  
IBM 701 EDPM Computer

1954  
FORTRAN Computer Programming Language

1955  
(In Use 1959)  
ERMA and MICR

1958  
The Integrated Circuit

1962  
Spacewar Computer Game (first computer game)

1964  
Computer Mouse & Windows

1969  
ARPAnet / The original Internet.

1970  
Intel 1103 Computer Memory / The world's first available dynamic RAM chip.

1971  
Intel 4004 Computer Microprocessor / the first microprocessor.

1971  
The "Floppy" Disk

1973  
The Ethernet Computer Networking

1974/75  
Scelbi & Mark-8 Altair & IBM 5100 Computers / the first consumer computers.

1976/77  
Apple I, II & TRS-80 & Commodore Pet Computers

1978  
VisiCalc Spreadsheet Software

1979  
WordStar Software

1981  
The IBM PC - Home Computer

1981  
MS-DOS Computer Operating System

1983  
Apple Lisa Computer / the first home computer with a GUI, graphical user interface

1984  
Apple Macintosh Computer / the more affordable home computer with a GUI

1985  
Microsoft Windows / Microsoft begins the friendly war with Apple.