Distance Learning
Resource
Handbook

Air Force Distance Learning Office

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Purpose

When we first did a search of the Internet on "distance learning," our search engine displayed more than 400,000 hits. A year later, using the same search engine, we had over 800,000 hits. Today, it is over a 1,000,000. Clearly there was and remains a need for some type of compass to help navigate the Net when trying to find "distance learning" sites. This handbook is such a compass.

We've compiled Web sites related to distance learning. They include definitions, history, conferences, certification programs, listservs, newsgroups, on-line resources, organizations, periodicals, books and bookstores. We've also added a section on search engines, so if there is something we've missed, you can find it on your own. You can add your favorite sites and other comments at the end of this document in the "Notes" section.

We welcome your feedback as we constantly update this handbook. Direct any comments to:

Lt Col Fred Vornbrock
Air Force Distance Learning Office
55 LeMay Plaza South
Maxwell Air Force Base, Alabama 36112-6335
(334) 953-5728
DSN: 493-5728
Fax: 493-4148

E-mail:
fvornbrock@hq.au.af.mil

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Definitions of Distance Learning

"Structured learning that takes place without the physical presence of an instructor." United States Air Force. Adopted from October 1989 distance learning conference sponsored by Los Alamos National Laboratory; definition was written by Andy Andrews.

Key attributes are:
- Physical distance between learner and instructor
- Sponsored by an academic institution or functional organization
- Part of a structured curriculum with stated objectives
- Provides for two-way communication and feedback between institution and learner
- Deployed outside the confines of the resident schoolhouse
- Includes process to evaluate learning outcomes

"Distance Learning is the delivery of standardized individual, collective, and self- development training to soldiers and units at the right place and time through the application of multiple means and technology." United States Army

"Distance learning is formal, institutionally based educational activities where the instructor and student are separated from each other in location. The primary objective of distance learning is to extend the learning environment to students at remote locations. A variety of media are combined in an effective distance learning system, including video, audio, computer, audiographics, and print media." United States Navy

"The term distance learning describes the process of connecting learner with remote resources." Franklin, Nancy, Yoakam, Michael, and Warren, Ron, (1995). *Distance Learning: A Guide to System Planning and Implementation*. Indiana University School of Continuing Studies.

"The communication between the trainer and participants is separated by a geographical distance. The communication is two-way and interactive. The technology is used to facilitate learning." Garrison, D.R. (1989) *Understanding Distance Education: A Framework for the Future*.

"A learning experience where the student is in a location away from the teacher." Lochte, R. H. (1993). *Interactive Television and Instruction*.

"Distance learning is defined in this study as the linking of a teacher and students in several geographic locations via technology that allows for interaction." Roberts, Linda G. and Office of Technology Assessment (OTA) Project Staff. (1989). *Linking for Learning: A New course for Education*. US Government Printing Office.

"Delivery of education or training through electronically mediated instruction including satellite, video, audiographics, computer, multimedia technology and other forms of learning at a distance." United States Distance Learning Association.

"A short definition of distance education might be 'any formal approach to learning in which a majority of the instruction occurs while educator and learner are at a distance from one another.'" Verduin, J. R. and Clark, T. A. (1991) *Distance Education: The Foundations of Effective Practice.*

"At its most basic level, distance education takes place when a teacher and student(s) are separated by physical distance, and technology (i.e., voice, video, data, and print) is used to bridge the instructional gap." Willis, B. (1993). *Distance Education: A Practical Guide.*

"Distance learning is the acquisition of knowledge and skills through extended information and instruction, encompassing all technologies and other forms of learning, wherein a time and/or physical distance between student and instructor exists." Rose Kimberly

"Distance learning is the acquisition of knowledge and skills through extended information and instruction, encompassing all technologies and other forms of learning, wherein a time and physical distance between student <u>and instructional resources and services</u> exist." Dr. Steve Eskow, President, The Electronic University Network

"*Open Learning* is a PHILOSOPHY--one of giving learners more access to learning and more choice and control over what and how they learn. Sometimes this means merely that learners are able to choose the time, place and pace of their learning. But it can extend to opening the learning to new kinds of learners (e.g. less qualified or wealthy ones) and/or giving them choice about what and how and with whom they learn. It may or may not involve distance learning. *Distance Learning/Education* is a TECHNOLOGY--one that enables learners to learn without being in the same place as their teacher, e.g. with the aid of self-teaching materials (like specially prepared workbooks, textbooks, multimedia packages), WWW materials, resources available in community or workplace, conferencing and, correspondence with a supportive distant tutor. It may be no more open than conventional courses." Dr. Derek Rowntree, Professor of Educational Development, The Open University.

"Distance learning is a system and a process that connects learners with distributed learning resources." From the *Guiding Principles for Distance Learning in a Learning Society* by the American Council on Education's Adult Learning and Educational Credentials.

Conclusion: Clearly, basing a definition of distance learning on one or another medium is too limiting and does not reflect the purpose and nature of distance learning. It would be similar to defining training as classroom instruction.

For a compilation of distance learning definitions, see a summary on Penn State's listserv at: ftp://ftp.cac.psu.edu/pub/people/cxl18/summary/distance.txt or the University of Wisconsin's site at: http://www.uwex.edu/disted/definition.html.

Distance Learning Glossary

Below are commonly used distance learning terms with their definitions.

Air Command and Staff College (ACSC) is the second level of professional military education an officer receives usually at the 11-13 year point. The college uses computer-based education and world-class hyper-information systems to annually educate almost 600 resident and more than 7,000 nonresident mid-career officers and Department of Defense civilians. ACSC is located at Maxwell Air Force Base.

Air Force Catalog of Formal Schools (AFCAT). The AFCAT is a listing of nearly all formal courses offered within the AF. The AFCAT is a formal publication that is updated semiannually. Its publication number is AFCAT 36-2223.

Air Force Distance Learning Office (AFDLO) is the focal point for implementation of distance learning policy and emerging distance learning technologies within the Air Force. It is located at Maxwell Air Force Base.

Air Force Institute of Technology (AFIT) grants masters and doctoral degrees at its two resident graduate schools and supervises students enrolled in its civilian institutions program. AFIT's Graduate School of Engineering is among the nation's top engineering schools and provides advanced education and research focused on aerospace technology. AFIT's Graduate School of Logistics and Acquisition Management provides officers the advanced expertise they need to manage the life cycles of complex weapons systems. AFIT is located at Wright-Patterson Air Force Base.

Air National Guard (ANG) is a wartime mobilization force providing personnel and aircraft to augment the active duty forces.

Air Technology Network (ATN) is the Air Force education and training interactive video teletraining network. Created in 1992 to broadcast the newly-required acquisition courses, ATN has expanded to four uplink sites at Wright-Patterson, Maxwell, Sheppard and Keesler Air Force bases with more than 70 downlink receive sites typically located at the base education offices. The system uses 1-way video, 2-way audio over a compressed digital video signal. Combined with ANG's Warrior Network, the Air Force can reach almost 300 sites within the US.

Air War College (AWC) is the senior school in the Air Force professional military education system. The college prepares selected senior officers for key staff and command assignments, where they will manage and employ aerospace power as a component of national security. AWC is located at Maxwell Air Force Base.

Asynchronous. Transmission which does not occur simultaneously with the audio and video associated with the broadcast. Fax and computer responses systems would be considered to operate in the asynchronous mode.

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Audio Bridge. Specialized equipment that permits several telephone lines to be joined together in a conference call.

Bandwidth. The frequency width needed to transmit a communications signal without excessive distortion. The more information contained in a signal, the more bandwidth it requires for distortion-free transmission.

C-Band. A type of satellite transmission with less path loss than other satellite standards such as Ku-Band. C-Band, however, requires a relatively large antenna. C-Band frequencies are shared with terrestrial microwave transmissions, which cause interference with weaker satellite signals.

CODEC. Coding-decoding equipment used to convert and compress analog video signals into a digital format for transmission, then convert them back to analog signal upon reaching their destination.

Compressed Digital Video (CDV) is a type of transmission of audio, data and video by satellite that uses 3.3 or 6.6 mbps compression algorithm.

Computer Assisted Instruction (CAI) is a term referring to courses delivered using a personal computer and includes floppy disks, CD-ROMs, and Internet-delivered courseware.

Computer Based Instruction (CBI) is the same as computer assisted instruction.

Computer Based Training (CBT) is the same as computer assisted instruction.

Compact Disk-Read Only Memory (CD-ROM) is a disc designed to hold up to 600 megs of data in a digitized format. Because it is "read only," users cannot alter or write over the data on the CD making it very popular with courseware developers.

Compressed Digital Video (CDV) is a digital transmission process used by commercial vendors and others to deliver TV-quality video in a way that reduces the amount of data required to be transmitted. While compressed video requires less bandwidth, signal quality is reduced. As a result, picture quality is not generally as good as full-motion, with quick motions often appearing somewhat blurred.

College for Enlisted Professional Military Education (CEPME) is responsible for designing the curriculum taught at Airman Leadership Schools, Noncommissioned Officer Academies, and the Air Force Senior Noncommissioned Officer Academy. The college directly operates the two advanced phases of enlisted PME, the stateside NCO Academies and the Senior NCO Academy. Major commands operate their own Airman Leadership Schools using curriculum designed by CEPME.

Computer Mediated Conferencing (CMC) is another way of conferencing using the personal computer and telephone lines as the communication vehicles. It provides instructor-student and student-student interaction in an asynchronous mode.

Course Director/Manager. The person responsible for the development of an instructional sequence. This person often serves as the primary presenter.

Distance Learning (DL). The Air Forces uses Andy Andrew's definition of distance learning first introduced at a conference at Las Alamos in 1990: "Structured learning that takes place without the physical presence of the instructor." With this definition, the Air Force includes correspondence courses, satellite broadcasts, videotape and computer-based instruction or any combination thereof.

Downlink. A location where equipment receives a satellite or ground based signal(s) for display on video, audio, or data receiving equipment. Normally, a downlink includes a room equipped for display of satellite signal(s) through a TV monitor and permits occupancy by 15 to 50 people.

Exportable Training is training that is sent out or 'exported' from a resident course to a field location; also referred to as Type 6 training. See DL.

Extension Course Institute (ECI) is the Air Force's correspondence school for military subjects ranging from general courses to specific career areas.

Facilitator. See instructional facilitator.

Government Education & Television Network (GETN) is a network of uplink broadcast facilities and more than 900 downlink receive sites used by Department of Defense, Department of Energy, the Federal Aviation Agency, the Social Security Administration, and the Environmental Protection Agency. GETN incorporates the Air Force Air Technology Network, the Air National Guard Warrior Network and the Army Satellite Education Network.

Hyper Text Mark-up Language (HTML) is the language of the Internet allowing authors to link to other items.

Instructional Facilitator. A content-knowledgeable person, not an instructor, at a downlink site who assists the content provider (normally at the remote uplink site) to conduct instruction using the satellite system.

Internet Based Training (IBT) is a term referring to courses delivered via the Internet.

Interactive Courseware (ICW) is any type of computer-controlled education or training that relies on student inputs to determine pace, sequence and content of training delivery using more than one type of medium to convey the cost of instruction.

Integrated Receiver Decoder (IRD). The hardware at each ATN downlink that receives and decodes the digital transmission from the broadcast site; also functions as an electrical key for authorization or non-authorization receipt of the digital transmission.

Interactive Video Teletraining (IVT) describes all satellite-based instruction. Also called video teletraining, interactive video training and business TV.

Job Site Training (JST) is training delivered to students at their base of assignment without an Air Education and Training Command instructor physically present. The training media can take the form of interactive courseware, interactive video teletraining, videotape, paper or some combination of these. Does not include mobile training teams or CDCs.

Job Site Training POC. Organization or person at base level responsible for all aspects of training administration.

Ku-Band. A type of satellite transmission of a higher frequency that C-Band transmission, requiring smaller antennas.

Local Area Network (LAN) is a system that connects computers, printers and other office equipment together within a defined area (like your office building).

Multimedia in its strictest definition is anything that includes or involves the use of several media. Within communications, the term has evolved to refer to any system or strategy that uses a combination of data, graphics, video and sound. Common storage systems include CD-ROM devices. Combined with hypertext or computer-based instruction, it becomes *interactive multimedia*.

Multimedia Personal Computer (MPC) is a personal computer equipped to play back images, sounds, objects and text into a single file. Most computers must have a sound card, speakers and CD-ROM drive in order to play multimedia.

Nineteenth Air Force (19 AF) is a numbered air force within Air Education and Training Command whose primary mission is flying training.

Originating Facility is the site location form which transmissions originate.

Professional Continuing Education (PCE) provides short course instruction in a broad range of essential educational programs to meet specific skills and functional competencies required in designated career fields. PCE courses provide students with the opportunity to think critically, plan strategically, and give them the ability to apply those skills and knowledge to undefined future programs and challenges.

Professional Military Education (PME) is education in the profession of arms and the employment of forces. It provides and develops the skills, knowledge, understanding and appreciation of leaders in the nation's armed forces.

Satellite Education Network (SEN). The transmission system operated by the Army from Ft Lee, VA. This network serves more than 60 downlinks located at Army posts throughout the US. The SEN is compatible with ATN.

Second Air Force (2 AF) is the numbered air force within Air Education and Training Command whose primary mission is operations (formerly called technical) training. 2 AF is located at Keesler Air Force Base.

Senior Non Commissioned Officer Academy (SNCOA) was formed to help the Air Force improve leadership and management within senior noncommissioned (NCO) officer grades. Designed for professional managers, the curriculum focuses on leadership and management, communication skills and military studies. The academy uses case studies and group problem solving as well as lectures and small-group activities to promote the exchange of ideas.

Site Coordinator/Monitor. An individual at a downlink site who is responsible for having the site ready for use, who assists students and instructional facilitators or Job Site Training POCs in using the equipment in the classroom, and who often has other minor administrative support responsibilities. Often referred to as site monitor.

Squadron Officer School (SOS). Professional military education for Air Force officers begins with Squadron Officer School. Captains build the foundations for their careers in four curriculum areas: officership, air and space power, leadership tools and applications. They develop skills, techniques and attitudes to better serve as leaders and mid-level supervisors in the Air Force. The academic curriculum is presented through readings, lectures and seminars. SOS is located at Maxwell Air Force Base.

Subject Matter Expert (SME). (a) An individual who has thorough knowledge of a job, duties/tasks, or a particular topic, which qualifies him/her to assist in the training development process (for example, to consult, review, analyze, advise, or critique). (b) A person who has high-level knowledge and skill in the performance of a job.

T-Net. A two-way video, two-way audio, slow-bit rate video system currently used by the Air Force Reserve Command. ATN can connect to and transmit over T-Net using special arrangements through the Army's Satellite Education Network at Ft Lee. Due to the difference in system configuration and transmission rates, receive locations may experience some difficulties in receiving clear video and audio signals.

Teleconferencing Technologies, Inc. (TTI). The manufacturer of the ATN audio hardware at each downlink. The TTI at each program active downlink is connected in a conference bridge (a telephone loop) to the broadcast site, thereby enabling audio traffic among network nodes.

Teleseminar is an interactive means of instructing learners at a distance through the use of one-way video and two-way audio over a satellite communication link.

Test Administrator. Person at a downlink who has responsibility for the acceptance, secure storage, distribution, control and return of assessment items.

Uniform Resource Locator (URL) is an engineer's way of saying "Homepage address." It tells your browser where the file is located on the Internet and the type of file it is.

Uplink. The location where equipment permits the transmission of video, audio, and data signal to a satellite. Uplinks can have multiple channels for transmission purposes. An uplink normally has the capability to function as a downlink.

Video Teletraining (VTT). Job site training delivered to students at their base of assignment via satellite over the Air Technology Network.

Warrior Network is the name of the Air National Guard satellite delivery system. All components within the network are compatible with the Air Technology Network. The Warrior network has more than 200 downlinks across the US.

Web Based Training (WBT) is a term referring to courses delivered via the World Wide Web (Internet).

World Wide Web (WWW) is a system for sharing many different kinds of information over the Internet. Designed in 1989 by researchers at CERN in Switzerland, the Web is accessed by browsers like Netscape or Microsoft Internet Explorer.

For more definitions, visit the following sites:

- http://www.uwex.edu/disted/glossary.html

- http://www.uidaho.edu/evo/dist14.html

- http://www.kn.pacbell.com/wired/vidconf/glossary.html

- http://web.ce.utk.edu/DistanceLearningResources/glossary.htm

- http://www.cayboces.org/dln/glossary/glindex.html

- http://www.salt.org

Growth of Distance Learning

Some believe distance learning is a fad; the numbers suggest otherwise. Read on!

US Department of Education Study on Distance Education in Higher Education

- A few of the study's findings:
  - 58 percent of all higher education institutions offered or planned to offer distance education courses
  - An estimated 25,730 DE courses with 753,640 students enrolled were offered in the academic year 1994-95
  - An estimated 690 degree programs and 170 certificates were offered exclusively at a distance.
  - Three-fourths of the institutions developed their own course curricula; one-third purchased courses from vendors
  - Types of technologies used include:
    - two-way interactive video (57%)
    - two-way audio with one-way video (24%)
    - one-way pre-recorded video (57%)
    - Internet and other computer-based technology (36%)

- The most common technologies to be pursued during the next three years were two-way interactive video and online/computer-based, as identified by three-quarters of the institutions.

- The four most important reasons for offering distance education courses:
  1. Increase student access by making courses available at convenient locations (82 percent)
  2. Increase institution's access to new audiences (64 percent)
  3. Increase student access by reducing time constraints for course taking (63 percent)
  4. Increase institution enrollments (54 percent)

For more information on this study, see http://nces.ed.gov/pubs98/distance/index.html.

A Third of College Courses Use E-Mail

- The annual Campus Computing Project survey shows that nearly 33 percent of courses offered at the 605 institutions polled use e-mail, up from 25 percent last year and 8 percent in 1994. At private universities, the percentage of courses using e-mail is 60 percent and nearly half of public university courses use it. More than 14 percent of all institutions put class materials, such as syllabi, on the Web and more than 24 percent use other Web resources, such as online encyclopedias other Web sites. (Chronicle of Higher Education 17 Oct 97)

From ASTD's Benchmarking Forum

Percent of companies using selected delivery systems 1994-1996

Televised distance learning
47% in 1994
64% in 1995
69% in 1996

Internet/network-based distance learning
12% in 1994
33% in 1995
53% in 1996

*See ASTD's web site (*www.astd.org*) for statistics on other technologies, such as CBT and EPSS.*

Other Sources

- In 1995, more students enrolled in distance education courses than entered all the US colleges and universities as freshmen (*ED, Education at a Distance*, March 1997)

- More of the $50 billion spent annually on employee education is going into distance education (Home Education Network)

- Demand for technology-based training will rise 10% a year to $12 billion by 1998 (Gartner Group).

- By the year 2000 half of all corporate training will be delivered via technology (Quality Dynamics Inc.)

- Web based IT training will grow from $92 million in 1996 to $1.7 billion in 2000, with an emphasis on Intranet-based, asynchronous, self paced instruction (9/8/97 *Web Week*)

- John Bear says that his *Guide to Earning College Degrees Nontraditionally* now lists 87 properly accredited American colleges and universities with degrees 100 percent by distance learning, and 117 with very short residency requirements (4 weeks or less). And, his update site on the web lists 20 more new degree programs. See http://www.degree.net

- About 48 percent of companies involved with more than 100 employees are involved with computer-based training. (*Training Magazine 1995 Industry Report*)

- The bibliography "Library Services for Off-Campus and Distance Education: The Second Annotated Bibliography" by A.L. Slade and M.A. Kascus, 1996, suggests interest in the field of library support for distance education is growing geometrically: a rough average of nine entries per year for the 60-year period preceding 1990 jumped to more than 68 entries per year since 1990 (from a review by Carol Goodson, State University of West Georgia).

- Approximately 50 percent of all higher education institutions currently engage in distance learning and expect to spend over $1.5 billion during this academic year, according to syndicated research by CAA Consulting Inc.

  - "Be it for distance learning or on-site courses, the entire arena of technology-mediated learning is burgeoning, and it is important to understand that it is not seen or used simply as a slick add-on, like an electronic field trip to the Louvre. Instead, it is used in the real business of higher ed, that is, in the awarding of undergraduate and graduate credits toward degree credentials," said Carole Cotton, president of CAA Consulting. "Further, over 50 percent of higher education institutions rated technology's effectiveness 'high' or 'very high' on four key dimensions: 'Student Attitude Toward Learning,' 'Student Achievement,' 'Student-Faculty Interaction,' and 'Student Self-Esteem'" (from Distance Education Report, November 1997, Farhad Saba, editor).

History of Distance Learning

Distance learning is more than 200 years old. In fact, the Boston Gazette ran ads for shorthand lessons by mail in 1728. Australia's University of Queensland offered an external degree program in the 1890s. Columbia University offered extension programs in the 1920s while other schools began using radio in the 1930s.

Distance Learning has been a normal part of Air Force education and training programs for many years. Using paper-based media, a variety of programs from career development courses to Professional Military Education correspondence courses have met varied education and training needs. Founded in 1950 as the Air Force's only correspondence school, the Extension Course Institute supports formal training and educational programs of the Air Force, Air National Guard and Air Force Reserves. Since then, operations training, professional military education and continuing education courses are using floppy diskettes, videos, CD-ROMs, interactive satellite broadcasts, video teletraining seminars, the Web and other media to deliver education and training courses worldwide.

For a short, on-line history of correspondence courses, see the Distance Education and Training Council at. www.detc.org.

For more information on the last century of collegiate correspondence study, see Watkins, B.L. and Wright, S.J., *The Foundations of American Distance Education*, Kendall/Hunt Publishing Co., 1991. ISBN 0-8403-7101-2.

Quality of Distance Learning

There are more than 200 studies proving that courses offered at a distance are just as good, *or even better*, than resident courses, when they are properly designed.

For the most comprehensive listings of these studies, see Thomas L. Russell's masterful compilation titled, "The No Significant Difference Phenomenon" that is on-line. The site address is http://teleeducation.nb.ca/phenom/phenom3.html.

The most recent literature review is Hank Payne's *Interactive Video Teletraining In Distance Learning* courses which may soon be posted to the Web.

Distance Learning Conference Calendar

1998

April 19-21, 1998	1998 DETC Annual Conference Del Mar, California www.detc.org
May 11-13, 1998	The Education and Training Technology Conference Dallas, Texas http://www.abctelecon.com/1ettcon/ettcon.htm
May 28-30, 1998	NAU/Web 98 Flagstaff, Arizona http://star.ucc.nau.edu/~nauweb98/announce.html
May 29-30, 1998	Creative Teaching at Distance with Merging Technologies Albuquerque, New Mexico http://www.nmsu.edu/~ced/wkshp.htm
May 31 - June 4, 1998	ASTD International Conference and Exposition San Francisco, CA www.astd.org
June 21-24, 1998	1998 World Congress on Information Technology Fairfax County, Virginia http://www.worldcongress1998.org/
June 28 - July 2, 1998	Institute for Leadership in Distance Education Penn State Conference Center Hotel State College, Pennsylvania http://www.cde.psu.edu/ACSDE/Symp.html
July 28-30, 1998	7th Annual Conference on Multimedia in Education & Industry Myrtle Beach, South Carolina http://www.aaim.org/98conference.html
August 5-7, 1998	14th Annual Conference on Distance Teaching and Learning Madison, Wisconsin http://www.uwex.edu/disted/distanceconf/deconf.html

August 26-28, 1998   Interactive Multimedia '98
Crystal Gateway Marriott Hotel, Arlington, Virginia
http://www.salt.org

September 8-11, 1998   Armed Forces Distance Learning Conference (ICE '98)
Sheraton Washington
CANCELLED

October 6-8, 1998   DETC Distance Education Workshop
Notre Dame, Indiana
www.detc.org

October 10-11, 1998   Global Learn Day II; a FREE on-line Worldwide Distance
Learning Conference
On-line
http://www.bfranklin.edu/learnd.html

October 13-16, 1998   EDUCOM '98
Orlando, Florida
www.educom.edu

October 14-16, 1998   ASTD's Technical Training Conference & Exposition
Dallas, Texas
http://www.astd.org/who/products/symposiu/conf.htm#techskills

October 26-28, 1997   Telecon XVIII
Anaheim Convention Center
www.abctelecon.com

November 15-18, 1998   Tech Learn '98
Orlando, Florida
http://www.techlearn.com/tl98/tl98.htm

For the latest information on distance learning conferences, refer to
The University Of Wisconsin's site:

http://www.uwex.edu/disted/conf/index.html

For international conferences, refer to Open University's site at:

http://www-icdl.open.ac.uk/info/conferences.html#2

Distance Learning Certification Programs

There are several certification programs in the area of distance education; here are some of the US-based ones.

Texas A&M University Center for Distance Learning Research--Distance Learning Certification Program
http://www.cdlr.tamu.edu/

The key goal of the certification program is to provide training to distance education practitioners. Key proficiencies needed by distance education professionals have been identified through a combination of two national studies conducted by the American Society of Training & Development and Texas A&M University. The program provides an interactive, experience-based program leading to professional certification in distance education. A serendipitous benefit of this program is the large number of professional networking opportunities for participants. Call Dr. Marie Mouzes at (409) 862-7573.

University of Wisconsin - Certificate of Professional Development in DL
http://www.uwex.edu/disted/certificates.html

The Distance Education Professional Development (DEPD) Program is designed to build or enhance your professional knowledge, skills, and leadership in distance education and training. Through a flexible, learner-centered curriculum, we strive to facilitate professional growth in distance education while challenging your decision-making, problem-solving, and critical thinking skills. This program is actually offered via distance learning; others have site components for hands-on experience in desktop video/satellite and site technologies. Call Dr. Chris Olgren, Outreach Program Manager, (698) 262-8530.

Teletraining Institute (Oklahoma)--Certified DL Instructor Program
http://www.teletrain.com/CDLI.html

The Teletraining Institute's certification program is designed to recognize instructors who have reached a unique professional level of achievement. The designation "Certified Distance Learning Instructor" (CDLI) is recognized as a sign of achievement and competence. The Program provides more than an ordinary assurance of professional quality services. Call (800) 755-2356 for details.

DETC Evaluator Training Program
http://www.detc.org

Designed to train evaluators for DETC accreditation visits, this program, can give you a thorough understanding of the DETC accrediting program and how you can improve your institution's programs. Call Ms. Sue Reilly at (202) 234-5100 for more details.

Listservs on Distance Learning

Listservs are mailing lists on specific subjects connected via E-mail to those that subscribe to it. Subscriptions are free. A moderated listserv has a moderator to manage the listserv by reviewing and then determining which E-mails will be posted on the listserv. Listservs have their own E-mail address because the software automatically manages the mailing list, distributes messages posted to the list, adds/deletes subscribers, etc., minimizing the need for human interface.

To join a listserv, follow the subscription instructions, which generally involves sending E-mail with your name to the listserv address. Note that 'Your Name' means your real name and not your E-mail address. The E-mail address is picked up from the message header. This should be in the body of the message--not in the subject line, which is ignored (or sometimes rejected as "suspicious"). Please remove signatures, etc., from the message as they generate annoying error messages.

The following moderated listservs are related to distance learning, technology and or education.

American Association for Higher Education (AAHE). To receive this free listserv, send the following E-mail, with subject line blank, to LISTPROC@LIST.CREN.NET: SUBSCRIBE AAHESGIT yourfirstname lastname. You will receive a confirmation E-mail within minutes of submitting this message. If you have questions regarding this service, contact Mr. Steve Gilbert, Director, Technology Projects, AAHE. His phone is (202) 293-6440, ext. 54.

American Association for Collegiate Independent Study. To receive this free listserv, send the following E-mail, with subject line blank, to AACIS-L@BGU.EDU "subscribe AACIS-L your_name" to LISTSERV@BGU.EDU.

Computer Training Listserv. Moderated by Elliott Masie, this Internet mailing list focuses on issues related to computer training, including needs analysis, course design, delivery, evaluation, etc., to subscribe, send this message, *Subscribe Computer Training firstname lastname* to listserv@bilbo.isu.edu.

Distance Educator Online Symposium (DEOS). DEOS-L, an interactive list-serve component of DEOS, was established to facilitate further discussion of the issues presented in DEOSNEWS. This international discussion forum has grown in scope and now serves over 1500 subscribers. To receive this free listserv, send the following message to listserv@psuvm.psu.edu: subscribe DEOS-L x {first letter of your first name} z {full last name}. You will receive a confirmation E-mail within minutes of submitting this message. For more details, see their homepage at http://www.cde.psu.edu/ACSDE/DEOS.html.

DEOSNEWS, an electronic journal available internationally, was created to disseminate information about the research and practice of distance education. Articles published on DEOSNEWS cover a broad range of topics, such as:

> Distance education theory
> The use of audio and video communications
> Course design and development
> Adult Education
> Book Reviews
> Abstracts from major journals

DEOSNEWS is currently accessed by more than 4000 subscribers from 68 countries. Researchers, practitioners, administrators, and students are invited to submit articles about distance education by e-mail to DEOSNEWS at ACSDE@PSUVM.PSU.EDU. If your article is published, PSU will post your E-mail address so that reader's questions and comments might be addressed directly to you. For more details, see http://www.cde.psu.edu/ACSDE/DEOS.html.

G.S.U. Faculty and Instructional Technology Listserv. To receive this free listserv, send the following E-mail to "subscribe factek-l your1stname yourlastname" to listproc@gsaix2.cc.gasou.edu. You will receive a confirmation E-mail within minutes of submitting this message.

Quality Assurance for Distance Learning Mail Distribution List. After our conference on Quality and Distance Learning, we decided to set up a listserv to discuss the issues. If you are interested in QA and DL, and wish to join in this discussion, you are welcome to join the listserv. To join the Quality Assurance for Distance Learning Mail Distribution List, send a message to listproc@sheffield.ac.uk containing the single line: [subscribe qa-conf Your Name], e.g., subscribe qa-conf John Smith.

Research It!
http://www.iTools.com/research-it/research-it.html
This is a great tool you can use to search listservs by subject.

List of listservs related to adult/distance education, compiled by J.H. Ellsworth, available via FTP at host: una.hh.lib.umich.edu, path: una.hh.lib.umich.edu/inetdirsstacks/disted:ellsworth and from ftp.std.com as /pub/je/dre-list.txt

URL for all ListServ. There are approximately 400 listservs for 'distance learning' or 'distance education.' Most are for individual courses and have fewer than 50 subscribers. To view the list, visit http://www.oak-ridge.com/ierdrep1.html.

Usenet NewsGroups on Distance Learning

   Usenet NewsGroups are another way to share ideas on a given topic using E-mail. They are very similar to listservs.

   The following usenet NewsGroups are related to distance learning, technology and or education.

American Association for Collegiate Independent Study
listservmailto:LISTSERV@BGU.EDU
To subscribe, print "subscribe AACIS-L your_name" in the body of an email message addressed
to LISTSERV@BGU.EDU

Usenet News Distance Education Discussion Group. alt.education.distance
(You must have your browser set up to access USENET News)

Usenet NewsGroups:
alt.education.distance seems best
misc.education occasionally has relevant postings
Also check alt.education.disabled

   For a more comprehensive listing, check out: http://www.oak-ridge.com/ierdrep1.html

On-Line Distance Learning Primers

Distance Education Primer by Teletraining Institute Training Center
http://www.teletrain.com/Primer.html

This primer should help those new to distance education understand its basic components, who's using it, and how they are using it.

Overview of Distance Education by the Univ of Wisconsin
http://www.uwex.edu/disted/overview.html

Part of their Distance Education Clearinghouse, topics include *Some Definitions of Distance Education; Glossaries; Distance Education at a Glance from the University of Idaho; Models of Distance Education by the University of Maryland System Institute for Distance Education; History of Distance Education at University of Wisconsin-Extension;* and *Success Stories*

US Navy's Office of Training Technology
www.ott.navy.mil

The OTT SPIDER is designed to provide the widest possible range of information resources to assist in the analysis, development, procurement, and implementation of training technologies. Information about current training technologies and training research & development initiatives may be found.

Helpful DL Articles

For those who still have not received the paper "Infrastructure Getting Started" it is now available under "articles" at www.rjcdesigns.com.

For more articles, check out WestEd and Far West Laboratory for Educational Research's Distance Education Subject Research at http://www.fwl.org/edtech/subjectresearch.html. It has one of the best bibliographies around and has direct links to many on-line articles.

On-Line Distance Learning Resources

Center for Distance Learning Research at Texas A&M University
http://www.cdlr.tamu.edu/
      The mission of the Center for Distance Learning Research at Texas A&M University is to provide timely and appropriate information on the development, application and maintenance of information technology systems. This information is provided through demonstration, training, publications and technical assistance. The Center's services are available to all public agencies and private businesses who are interested in the welfare and education of people through the use of appropriate information technology and distance education.

The Comprehensive Distance Education List of Resources
http://www.online.uillinois.edu/ramage/disted.html
      This is a great on-line resource maintained by Illinois On-Line Network.

Distance Education Clearinghouse (Univ of Wis)
http://www.uwex.edu/disted/welcome.html
      The Distance Education Clearinghouse allows users easy access to a wide range of information about distance education. This web site brings together distance education information and resources from Wisconsin, national and international sources. New information and resources are being added to the Distance Education Clearinghouse on a continuing basis.

Distance Education Resource Sites (Miami Univ of Ohio)
http://miavx1.muohio.edu/~cedcwis/distance_ed_Index.html
      This page provides a listing of sites related to distance education and educational telecommunications topic areas or providers. Annotation is kept to a minimum--browsing will provide a general overview, and if you find a site of particular interest to you, you can save and annotate it.

Eggman's List of Distance Education and Related Links
http://www.access.digex.net/~nuance/de/index.html
      This page is really an index with hot links to a variety of topics related to distance education. Topics include *Education Related Search Tools; Magazines, Journals and Papers of Interest to the Distance Education Community; Consultants and Commercial Resources; Usenet and Mailing List;* and *Schools and Government Sites Offering Distance Education Resources to the Internet.* Steve Eggleston is the Eggman; he is an independent training consultant.

Distance Education Frequently Asked Questions
http://pages.prodigy.com/PAUM88A/
      This document offers answers to the most Frequently Asked Questions regarding distance learning, also known as distance education, or non-traditional education. Distance learning most commonly involves the earning of post-secondary credits via non-traditional means, i.e., correspondence courses, and college courses via the Internet, TV, radio, satellite, etc.

Distance Learning Center at Georgia Southern University
http://www2.gasou.edu/distance_learning/dlchome.html

The Georgia Southern University distance learning program revolves at present around the GSAMS interactive television network. At GSU over ninety percent of the distance learning that occurs off site is accomplished via the GSAMS system. However, many GSU faculty are combining other technologies with GSAMS to enhance communication among students, instructor(s), and other knowledge resources around the world. These technologies include: electronic mail; satellite teleconferencing; listserv discussion groups; computer based multimedia; instructional courseware; web pages/sites and desktop videoconferencing.

Indiana Partnership for Statewide Education
http://www.ind.net/IPSE/

The Indiana Partnership for Statewide Education is a voluntary association of Indiana's independent and public post-secondary institutions for collaborative development and delivery of distance education. The Partnership's focus is delivery by distance learning technology of courses and programs for the benefit of all Indiana residents; a secondary goal is to meet local or national needs by working with area institutions or consortia.

International Centre for Distance Learning (iCDL)
http://www-icdl.open.ac.uk/

The database gives information on over 31,000 distance learning courses mostly in the Commonwealth, nearly 1000 institutions teaching at a distance worldwide, and over 8,500 references to books, journals, articles, research reports, conference papers, dissertations and other types of literature relating to all aspects of distance education.

Lucent Technologies Center for Excellence in Distance Learning (CEDL)
http://www.lucent.com/cedl/

Lucent Technologies Center for Excellence in Distance Learning (CEDL) has an overall purpose to advance the state of the art in distance learning. CEDL creates information products for AT&T customers who are planning distance learning solutions. CEDL professionals will also consult with customers to increase productivity, reduce costs, and enhance the quality of the education and training customers provide.

US Navy Office of Training Technology (OTT) Seamless Product Information, Data Exchange and Repository (SPIDER)
www.ott.navy.mil

The OTT SPIDER is designed to provide the widest possible range of information resources to assist in the analysis, development, procurement, and implementation of training technologies. Information about current training technologies and training Research & Development initiatives may be found under many areas.

Training & Development Resource Center
http://www.tcm.com/trdev/t2.html

Links to 150+ non-commercial web sites of interest to Training & Development professionals—ranging from benchmarking and performance technology to distance learning.

DoD/Services Distance Learning Sites

DoD

ADL (Advanced Distributed Learning Initiative)
www.adlnet.org

DANTES
http://voled.doded.mil/dantes/dl/dl-page2.htm

DAVIS (Defense Automated Visual Information System)
http://www.dmdc.osd.mil:8887/ditis/

DITIS (Defense Instructional Technology Informational System)
http://www.dmdc.osd.mil:8887/ditis/

DoDDS (DoD Dependents Schools)
http://www.dlc.odedodea.edu/

DoDSI (DoD Security Institute)
http://www.dtic.mil/dodsi/

DoD Voluntary Education
http://voled.doded.mil/

DVIC (Defense Visual Information Center)
http://www.dodmedia.osd.mil/dvic/intro.htm

Defense Acquisition University
http://www.acq.osd.mil/dau/

National Guard Bureau

National Guard Bureau test distance learning technologies
http://infosphere.safb.af.mil/~rmip/96feb/96feb15.htm

Army

A Guide to Learning Techniques in the XXI Century Army
http://wwwlogsa.army.mil/ommcs/distance.html

Army Distance Learning Plan
http://www-dcst.monroe.army.mil/adlp/distancelearning/index.html

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Army Distance Learning Directorate
http://atscweb.atsc-army.org/dld/dldhome.html-ssi

Army National Guard Distance Learning
http://www-dcst.monroe.army.mil/adlp/distancelearning/index.html

Army Reserve
http://www-dcst.monroe.army.mil/adlp/distancelearning/usar/usar.html

Army Doctrine and Training Digital Library
http://www.atsc-army.org/atdls.html

Navy

Office of Training Technology
http://www.ott.navy.mil/

Naval Reserve Video TeleTraining
http://www.navy.mil/navresfor/n7/vtt.htm

Naval School of Health Sciences
http://nshs.med.navy.mil/aimm/aimm.htm

Air Force

Air Force Distance Learning Office
http://www.au.af.mil/afdlo/afdlo.htm

Air Force Institute of Technology Center for Distance Education
http://www.afit.af.mil/Schools/DL/

Air Force Material Command
http://afmc.wpafb.af.mil/organizations/HQ-AFMC/DP/dpe/dpee/dislearn.htm

Air Force National Guard
http://www.ang.af.mil/hqang/mp/mpt/index.htm

Air University
http://www.au.af.mil/

Extension Course Institute
http://www.au.af.mil/au/oas/eci/eciproto.htm

Second Air Force
http://hq2af.kee.aetc.af.mil/

Professional Military Education (PME) Sites

DoD

Armed Force College
http://www.afsc.edu/

Industrial College of the Armed Forces
http://www.ndu.edu/ndu/icaf/homepage.html

National Defense University
http://www.ndu.edu/

National War College
http://www.ndu.edu/ndu/nwc/nwchp.html

Army

Army Command and Staff College
http://www-cgsc.army.mil/index2.htm

Army War College
http://carlisle-www.army.mil/

Marines

Command and Staff College
http://138.156.107.3/../quantico/school2.htm

Marine Corps War College
http://138.156.107.3/../quantico/school1.htm

Navy

College of Naval Command and Staff
http://users.ids.net/nwc/cnc&s.htm

College of Naval Warfare
http://users.ids.net/nwc/cnw.htm

The Naval Postgraduate School
http://www.nps.navy.mil/

Air Force

Air Command and Staff College
http://wwwacsc.au.af.mil/

Air War College
http://www.au.af.mil/au/awc/awchome.htm

Senior NCO Academy
http://www.au.af.mil/au/cepme/college.htm

Squadron Officer School
http://www.au.af.mil/au/sos/

Distance Learning Organizations

American Association for Higher Education is a national organization of more than 8,500 individuals dedicated to improving the quality of American higher education. AAHE's members--faculty, administrators, and students from all sectors, as well as policy makers and leaders from foundations, government, and business--believe that higher education should play a more central role in national life and that our institutions can and must become more effective. For more information, or to receive a membership application, contact Mary Joyce, marketing manager at AAHE: E-mail mjoyce@aahe.org; telephone (202) 293-6440 x27; fax (202) 293-0073 or visit their web site at: www.aahe.org.

American Center for the Study of Distance Education. The American Center for the Study of Distance Education (ACSDE), established in 1988 in the College of Education, seeks to promote distance education research, study, scholarship, and teaching and to serve as a clearinghouse for the dissemination of knowledge about distance education. Write The Pennsylvania State University, 110 Rackley Building, University Park, PA 16802-3202, or telephone (814) 863-3764, fax (814) 865-5878. Visit their web page at: www.cde.psu.edu/ACSDE/.

American Council on Education. Founded in 1918, ACE is the nation's umbrella higher education association. ACE is dedicated to the belief that equal educational opportunity and a strong higher education system are essential cornerstones of a democratic society. Write ACE, One Dupont Circle · Washington, DC 20036, or telephone (202) 939-9440, or visit their web site at www.acenet.edu/.

American Society for Training and Development (ASTD) represents more than 65,000 individuals from more than 100 countries. ASTD is the leading resource on workplace learning and performance issues, providing information, research, analysis and practical information to its members. Write ASTD, 1640 King Street, Box 1443, Alexandria, VA 22313-2043, or telephone (703) 683-8100, or visit their web site at www.astd.org.

Association for the Advancement of Computing in Education. AACE (founded in 1981) is an international, educational, and professional organization dedicated to the advancement of the knowledge, theory, and quality of learning and teaching at all levels with information technology. Write AACE, P.O. Box 2966, Charlottesville, VA 22902, or telephone (804) 973-3987, or visit their web site at http://aace.virginia.edu/aace/aboutaace.html.

Association for Educational Communications and Technology, Inc. (AECT). The mission of the Association for Educational Communications and Technology is to provide leadership in educational communications and technology by linking professionals holding a common interest in the use of educational technology and its application to the learning process. Write 1025 Vermont Avenue, NW, Suite 820, Washington DC 20005, telephone (202) 347-7834, or visit their web site at www.aect.org/.

Association for the Advancement of Computing in Education (AACE). Founded in 1981, AACE is an international, educational, and professional organization dedicated to the advancement of the knowledge, theory, and quality of learning and teaching at all levels with information technology. This purpose is accomplished through the encouragement of scholarly inquiry related to information technology in education and the dissemination of research results and their applications through publications, conferences, divisions, societies, chapters and inter-organizational projects. Write: AACE P.O. Box 2966 Charlottesville, VA 22902, telephone (804) 973-3987, fax (804) 978-7449, or visit their web site at http://aace.virginia.edu/aace/.

Center for Distance Education Research. The mission of the Center for Distance Learning Research at Texas A&M University is to provide timely and appropriate information on the development, application and maintenance of information technology systems. This information is provided through demonstration, training, publications and technical assistance. The Center's services are available to all public agencies and private businesses that are interested in the welfare and education of people through the use of appropriate information technology and distance education. For more information, write Texas A&M University Center for Distance Learning Research, Texas A&M University, College Station, TX 77843-1588, telephone (409) 845-3016, or visit their homepage at www.cdlr.tamu.edu/.

Distance Education and Training Council. The Distance Education and Training Council (formerly the National Home Study Council) is a non-profit educational association located in Washington, DC. DETC serves as a clearinghouse of information about the distance study/correspondence field and sponsors a nationally recognized accrediting agency called the Accrediting Commission of the Distance Education and Training Council. DETC was founded in 1926 under the cooperative leadership of the Carnegie Corporation of New York and the National Better Business Bureau. The Council's goal is to promote sound educational standards and ethical business practices within the distance study field. DETC's address is 1601 18th Street, NW, Washington, DC, 20009-2529, or telephone (202) 234-5100, fax: (202) 332-1386, or E-mail detc@detc.org, or visit their homepage at www.detc.org.

The Distance Learning Resource Network (DLRN) is a WestEd project, established through the Star Schools Dissemination Project Funding. DLRN disseminates information from and for educators, administrators, policymakers and parents interested in the effective implementation of distance education. Call (800) 662-4160 or visit their web site at http://www.fwl.org/edtech/dlrn.html.

Federal Government Distance Learning Association (FGDLA). The Federal Government Distance Learning Association is a chapter of the US Distance Learning Association (USDLA). The goal of the Federal Government Distance Learning Association is to promote distance learning to established groups or organizations in Education and Training within the Federal Government. For more information, visit their Web site at http://www.fgdla.org.

International Teleconferencing Association (ITCA) is a professional association linking users, providers, strategists, educators, learners, managers and employees that use teleconferencing, telecollaborative and distance education technologies. Write ITCA, 100 Four Falls Corporate Center, Suite 105, Route 23 and Woodmount Road, West Conshohocken, PA 19428, telephone (610) 941-2020, fax (610) 941-2015, or E-mail staff@itca.org or visit their web site at www.itca.org.

Society for Applied Learning Technology (SALT) is oriented to professionals whose work requires knowledge and communication in the field of instructional technology. It is a professional society, designed for individual membership participation with classes of membership keyed to the interest and experience of the individual. The Society provides a means to enhance the knowledge and job performance of an individual by participating in Society sponsored meetings, and through receiving Society sponsored publications. Membership is $45 a year. Write SALT, 50 Culpepper Street, Warrenton, VA 20186, or telephone (540) 347-0055, fax 540-349-3169, or E-mail program@salt.org, or visit their web page at www.salt.org.

Society for Information Technology and Teacher Education (SITE), an international association of individual teacher educators and affiliated organizations of teacher educators in all disciplines, who are interested in the creation and dissemination of knowledge about the use of information technology in teacher education. The Society seeks to promote research, scholarship, collaboration, exchange and support among its membership and to actively foster the development of new regional and national organizations. SITE is a society of the Association for the Advancement of Computing in Education (AACE). Write SITE 97/AACE, P.O. Box 2966, Charlottesville, VA 22902, telephone (804) 973-3987, fax (804) 978-7449 or visit their homepage at http://aace.virginia.edu/aace/site/home.html.

United States Distance Learning Association (USDLA) is a non-profit association of more than 2500 members whose purpose it to promote the development and application of distance learning for education and training. Membership is $100 a year. Write Applied Business TeleCommunications, P. O. Box 5106, San Ramon, CA 94583, telephone (800) 275-5162 or visit their web site at www.usdla.org.

Distance Learning Periodicals

American Journal of Distance Education. The American Journal of Distance Education is designed for professional trainers; teachers in schools, colleges, and universities; researchers; adult educators; and other specialists in education and communications. Created in 1987, *The Journal* disseminates information and acts as a forum for criticism and debate about research in and the practice of distance education in the Americas. Distance education describes teaching-learning relationships where the actors are geographically separated and communication between them is through such technologies as audio and video teleconference, audio and video recordings, personal computer, correspondence texts, and multimedia systems. For subscription information, contact *The American Journal of Distance Education*, College of Education, The Pennsylvania State University, 110 Rackley Building, University Park PA 16802-3202, telephone (814) 863-3764, fax (814) 865-5878, or visit their Homepage at www.cde.psu.edu/ACSDE/Jour.html.

DETC News. Published twice a year, this 30+-page journal contains articles on distance education, as well as the latest information on accreditation issues. Free. Call DETC at (202) 234-5100 to be added to their mailing list.

Distance Education Report is a monthly periodical dedicated to providing you with practical, timely, and reliable information, news, and feature stories for keeping you a more effective educator and trainer. Subscription rate is $199 a year. Call Customer Service (800) 433-0499, or visit their homepage at www.distance-educator.com/. To contribute to the *Distance Education Report*, contact Dr. Farhad Saba, Saba & Associates, 8680 Navajo Road, San Diego, CA 92119, telephone/fax (619) 461-0625, or Email saba@cts.com.

Distance Education and Technology Newsletter is a monthly report covering issues and events in distance education and educational technology from the US and around the world. Cost is $40 a year. To subscribe, contact Joan Connick, Distance Education Publications, 38 Florida Ave, Portland, ME, 04103, telephone (207) 797-7686.

Ed, Education at a Distance, is the official publication of the US Distance Learning Association (USDLA) and is published six times a year by Applied Business Telecommuncations. A subscription is $100 a year and includes membership into USDLA. Write Applied Business TeleCommunications, P O Box 5106, San Ramon, CA 94583, or telephone (800) 275-5162 or visit their web site at http://usdla2.org/gotoservices/.

Educom Review is published bi-monthly by Interuniversity Communications Council, Inc. *Educom Review* is Educom's premier bimonthly magazine, explores the convergence of learning, communications, and information technology. Subscription is $18 a year. Write Educom, 1112 16th St., NW, Suite 600, Washington DC 20036, or telephone (202) 872-4200. Call (800) 254-4770 for subscription or E-mail offer@educom.edu.

Journal of Distance Education. For subscription information, contact the *Journal of Distance Education*,c/o Centre for Distance Education, Simon Fraser University, Burnaby, British Columbia, V5A 1S6 Canada, or telephone (604) 291-4776.

Journal of Educational Technology Systems deals with systems in which technology and education interface and is designed to inform educators who are interested in making optimum use of technology. It is published quarterly by the Learning Technology Institute. The journal is sponsored by the Society for Applied Learning Technology. Subscription rates are $60 for individuals and $75 for institutions. For more information, contact *Journal of Instruction Delivery Systems*, 50 Culpeper Street, Warrenton, VA 20186, or telephone (540) 347-0055.

Journal of Instruction Delivery Systems is published quarterly by the Learning Technology Institute. The journal is sponsored by the Society for Applied Learning Technology. Subscription rates are $60 for individuals and $75 for institutions. For more information, contact *Journal of Instruction Delivery Systems*, 50 Culpeper Street, Warrenton, VA 20186. Their phone is (540) 347-0055.

Journal of Interactive Instruction Development is published quarterly by the Learning Technology Institute. The journal is sponsored by the Society for Applied Learning Technology. Subscription rates are $60 for individuals and $75 for institutions. For more information, contact *Journal of Interactive Instruction Development*, 50 Culpeper Street, Warrenton, VA 20186. Their phone is (540) 347-0055.

Syllabus Magazine, now in its eighth year of publication, focuses on the use of technology in education and related learning environments. Its mission is to inform educators on how technology can be used to support their teaching, learning, and administrative activities. Each issue includes feature articles, case studies, product reviews, and profiles of technology use at various levels. Visit their web site at www.syllabus.com/syllmag.

Technological Horizons in Education Journal. T.H.E. Journal is published monthly except July. Subscription is **free** on a limited basis. Contact T.H.E. Journal, 150 El Camino Real, Suite 112, Tustin, CA 92680-3670, or telephone (714) 730-4011.

The Online Chronicle of Distance Education and Communication is the electronic source for information about distance education produced by Nova Southeastern University. The Chronicle appears semi-annually and includes abstracts, short articles, announcements, conference listings, and an information exchange all related to distance education and communication. Read it at www.nova.edu/fcae/disted. To subscribe to *The Online Chronicle of Distance Education and Communication*, send the following command to: listproc@pulsar.acast.nova.edu.
SUB DISTED your_full_name

Training & Development is published monthly by the American Society for Training and Development Inc. Their address is 1640 King Street, Box 1443, Alexandria, VA 22313-2043, telephone (703) 683-8100. www.astd.org.

On-Line Distance Education

Today, there are thousands of college courses available at a distance including hundreds of graduate courses from dozens of academic institutions. These include courses offered through the traditional correspondence programs as well as classes on video or cassette tapes and now CD-ROM and Web-based. The problem for learners is not finding courses, but choosing from the many courses available that will best suit their learning needs.

Bear's Guide to Earning College Degrees Nontraditionally
http://www.degree.net/core.html

This site has extracts from Dr. Bear's book advising you how to earn bachelor's, master's, doctorates, and law degrees entirely by distance learning, home study, exam, or over the Internet.

Distance Education and Training Council
http://www.detc.org/

The Distance Education and Training Council (formerly the National Home Study Council) is a non-profit educational association located in Washington, DC. DETC serves as a clearinghouse of information about the distance study/correspondence field and sponsors a nationally recognized accrediting agency called the Accrediting Commission of the Distance Education and Training Council. Their Web site has an alphabetical listing of institutions offering programs available at a distance.

Distance Education on the WWW
http://tecfa.unige.ch/~lintz/staf14/staf14+ST/projet.html

This site has links to synchronous and asynchronous computer mediated conferencing, links to conferences and a bibliography. Their homepage has a disclaimer that it has not been updated since May 1995, so some of the links may be duds.

Distance Learning Resource Network
http://www.fwl.org/edtech/CollegeDistanceEd.html

"How to Find College Courses Offered at a Distance": if you are searching for institutions offering college courses and degrees via distance education technologies, there are several places you may look including your local library and accessing the Internet.

Doctorate Programs with Short Residence
http://members.tripod.com/~lepine/phd.html

As the name implies, this site lists those institutions that offer doctorate programs from a distance. Includes direct links to the sites.

Educational Resources Online
http://www.educ.iastate.edu/students/eronline/#distance

Has a number of resources for educators and learners alike including information on specific programs available at a distance.

Higher Education Traditional and Distance Learning
http://members.tripod.com/~lepine/index.html
  This is a 'must visit' site because it is jammed-packed with useful information on a wide variety of topics. In addition to undergraduate and graduate sites, this link has a description on accreditation issues, an on-line bookstore, training and development programs and more.

Library & Information Studies
Directory of Institutions Offering Accredited Master's Programs
http://www.ala.org/alaorg/oa/lisdir.html
  Tailored for librarians and those interested in degrees in library science, this site has listing of all applicable programs.

Life Long Learning
http://homepages.together.net/~lifelong/
  Lifelong Learning is a private consulting firm that researches, develops, and authors adult and distance education materials and reports for the general public and in partnership with private providers. What's unique about this group is that they will do a search for you. So, if you are interested in completing a MBA program at a distance, they will do the legwork for you, for a modest fee.

Peterson's Education Center
http://www.petersons.com/preview/distance.html
  This site also has links to institutions that offer educational programs at a distance as well as useful information on financing education, studying abroad, summer programs and special schools.

Pocket Guide to College Credit and Degrees
http://www.iat.unc.edu/guides/irg-38.html
  Published by the American council on education, this Pocket Guide was written to provide valuable information for adult learners seeking to start or complete college degrees.

Postgraduate Courses in Adult Education and Training
http://lionfish.jcu.edu.au/dept/Interdisciplinary/adultedu.html
  Provides information on graduate certificate, graduate diploma, and masters degree programs.

Internet Basics:

Search Engines

With millions of sites currently available on the World Wide Web and thousands being added daily, finding what you need can be a nightmare. One of the tools you can use to navigate your way through the Web is a search engine. While there are more than 900 search engines, listed below are some of the more popular ones.

AltaVista
www.altavista.com

Excite
www.excite.com

Hotbot
www.hotbot.com

InfoSeek
www.infoseek.com

Lycos
www.lycos.com

Magellan
www.mckinley.com

Metacrawler
www.metacrawler.com

Webcrawler
www.webcralwer.com

Yahoo
www.yahoo.com

Search Engine Reviews Chart
http://www.searchenginewatch.com/reports/reviewchart.html
Summarizes different reviews of search engines by PC magazines and other groups

SuperSeek Web Search
http://www.super-seek.com/
Allows you to research a topic using different search engines simultaneously

Copyrights and Distance Learning

10 Big Myths about Copyright Explained
http://www.clari.net/brad/copymyths.html

A Copyright Law Resource Center For Writers
http://www.masseypub.com/cpyrght.htm
       Has a listing of links to educate the writer on copyright law and how to obtain a copyright.

Copyright Clearance Center
http://www.copyright.com/
       "Copyright Clearance Center is a not-for-profit organization created at the suggestion of Congress to help organizations like yours comply with U.S. copyright law. Through its collective licensing programs, CCC provides authorized users with a lawful means for making photocopies from its repertoire of more than 1.75 million titles."

Distance Education Clearing House
http://www.uwex.edu/disted/intprop.html
       Sponsored by the University of Wisconsin, this site has both background information and hot links to sites that provide additional information.

International Federation of Library Associations and Institutions
http://www.nlc-bnc.ca/ifla/II/cpyright.htm
       Highly recommend visiting this site as it has a great bibliography on copyright laws.

New Copyright Legislation Introduced to US Senate
http://www-ninch.cni.org/#copyright
       This provides a link to a site describing the latest legislation on copyrights.

Proposal for Educational Fair Use Guidelines for Distance Learning
http://www.uspto.gov/web/offices/dcom/olia/confu/appendix.htm#i
       This is a proposal to courseware developers on what constitutes 'fair use' for distance learning programs.

Sites to Visit for Copyright Information
http://www.libraries.psu.edu/avs/copyright_sites.html
       Probably your best bet for answers to your copyright questions; this is a 'must visit' site.

United States Copyright Office
http://lcweb.loc.gov/copyright/
       Might as well start here to learn what the rules are.

Distance Learning Books

Albright, Michael, and Graf, David, eds., (1993). *Teaching in the Information Age*. New Directions for Teaching and Learning, No. 51. Jossey-Bass Inc. Publishers. (415) 433-0499.

American Society for Training and Development (1994). *The Best of Technology in Training*. Alexandria, VA. ASTD. 1-800-628-2783.

Apple Computers (1993). *Demystifying Multimedia*. San Francisco. Vivid Publishing.

Azarmsa, R. (1993). *Telecommunications: A Handbook for Educators*. New York: Garland Publishing, Inc.

Bailey, Gerald D. (1993). *Computer-Based Integrated Learning Systems*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Barron, A., & Orwig G. (1995). *Multimedia Technologies for Training*. Englewood, CO: Libraries Unlimited, Inc.

Bates, Tone (1994*). Technology, Open Learning and Distance Education*. Routledge & Kegan Paul. 1-800-634-7064.

Bear, John B. and Bear, Mariah P. (1997). *Bear's Guide to Earning College Degrees Nontraditionally*. C&B Publishing. Benicia, CA.

Berge, Zane, and Collins, Mauri, eds., (1994). *Computer-Mediated Communication and the Online Classroom in Distance Education*. Hampton Press, Cresskill, NJ. (201) 894-1686.

Bergman, Robert E., and Moore, Thomas V. (1990). *Managing Interactive Video and Multimedia Projects*. Educational Technology Publications. Englewood Cliffs, NJ.

Braun, Michael. (1991). *IBM Multimedia Handbook*, Brady Publishing. New York.

Brock, Patricia Ann. (1994). *Educational Technology in the Classroom*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Brooksfield, S., ed. (1985). *Self-Directed Learning: From Theory to Practice*. San Francisco. Jossey-Bass Inc. Publishers. (415) 433-0499.

Brunzel, Mark J., and Morris, Sandra K. (1994). *Multimedia Applications Development*. McGraw-Hill. New York.

Candy, Philip C. (1991). *Self-Direction for Lifelong Learning: A Comprehensive Guide to Theory and Practice*. Jossey-Bass Inc. Publishers. (415) 433-0499.

Connick, George P. (1996). *Sources of Information About Distance Education.* Distance Education Publications. Portland, ME. (207) 797-4768.

Connick, George P. (1996). *The Bibliography of Distance Education.* Distance Education Publications. Portland, ME. (207) 797-4768.

Constanzo, William V. (1989). *Electronic Text: Learning to Write, Read and Reason with Computers.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Corrigan, D. (1996). *The Internet University: College Courses by Computer.* Harwich, MA. Cape Software Press.

Cyrs, Thomas E., and Smith, Frank A. (1990). *Teleclass Teaching: A Resource Guide.* Virginia A. Ostendorf, Inc. Littleton, CO. (303) 797-3131.

Cyrs, Thomas E. (1997). *Teaching At a Distance with the Merging Technologies: An Instructional Systems Approach* Center for Educational Development. Las Cruces, NM.

Davenport, Thomas H. (1997) *Information Ecology: Mastering the Information and Knowledge Environment.*

Dean, Chris and Whitlock, Quentin. (1983, Revised 1992). *A Handbook of Computer-Based Training,* Gulf Publishing Company. Houston, TX.

Dunning, Becky S., Van Kekerix, Marvin J., and Zaborowski, Leon M. (1993). *Reaching Learners through Telecommunications.* Jossey-Bass Inc. Publishers. (415) 433-0499.

Evans, Terry, and Nation, Daryl (1989). *Critical Reflections on Distance Education.* The Falmer Press, Bristol, PA. (800) 821-8312.

Forcier, Richard. (1996). *The Computer as a Productive Tool in Education.* Prentice Hall.

Franklin, Nancy, Yoakam, Michael, and Warren, Ron, (1995). *Distance Learning: A Guide to System Planning and Implementation.* Indiana University School of Continuing Studies.

Garrison, D.R. (1989). *Understanding Distance Education: A Framework for the Future.* Boston: Routledge & Kegan Paul. (800) 634-7064.

Gayeski, Diane M., ed. (1995). *Designing Communication and Learning Environments.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Gibson, Chere, ed. (1997). *Distance Learners in Higher Education: Institutional Responses for Quality Outcomes.* Atwood Publishing. Madison, WS. (888) 242-7101.

Hackbarth, Steven. (1996). *The Educational Technology Handbook: A Comprehensive Guide—Process and Products for Learning.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Hansen, Douglas E. (1991). *Educational Technology Telecommunications Dictionary with Acronyms.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Harasim, Linda, ed. (1990). *On-line Education and Training: Perspectives on a New Environment.* Praeger, New York, NY; Greenwood Publishing Group. (203) 226-3571.

Harasim, Linda, ed. (1994). *Global Networks: Computers and International Communication.* Cambridge, MA. MIT Press.

Henderson, E. S. and Nathenson, M. B., eds., (1984). *Independent Learning in Higher Education.* Educational Technology Publications. Englewood Cliffs, NJ.

Hodgson, Vivian E., Mann, Sarah J. and Snell, Robin S. eds., (1987). *Beyond Distance Teaching Towards Open Learning.* Education and Open University Press, Philadelphia, PA.

Kaufman, Roger, Rojas, Alcia M. and Mayer, Hanna. (1993). *Needs Assessment: A User's Guide.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Kearsley, Greg and Lynch, William. (1994). *Educational Technology: Leadership Perspectives.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Keegan, D. (1990). *Foundations of Distance Education.* 2ed. New York. Routledge & Kegan Paul. (800) 634-7064.

Keegan, Mark. (1995). *Scenario Educational Software: Design and Development of Discovery Learning.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Kember, David. (1995). *Open Learning Courses for Adults.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Kemp, Jerold E. and Cochern, George W. (1994). *Planning for Effective Technical Training: A Guide for Instructors and Trainers.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Khan, Badrul H. (1996). *Web-Based Instruction.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Knowles, Malcolm Shepherd. (1978). *Self-directed Learning: A Guide for Learners and Teachers.* Chicago. Follet Publishing Company.

Knowles, Malcolm Shepherd. (1988). *The Modern Practice of Adult Education: From Pedagogy to Andragogy*. Cambridge Book Co. ISBN: 0842822135

Lambert, Michael P. and Welch, Sally R. eds., (1993). *Homes Study Student Services Handbook, Second Edition*. Distance Education and Training Council. (202) 234-5100.

Lambert, Michael P. and Welch, Sally R. eds. *The DETC Accreditation Handbook*. $20. Distance Education and Training Council. (202) 234-5100.

Laurilard, Diana (1993). *Rethinking University Teaching: A Framework for the Effective Use of Educational Technology*. Routledge & Kegan Paul. (800) 634-7064.

Lee, William W. and Mamone, Robert A with Roadman, Kenneth H. (1995). *Computer Based Training Handbook: Assessment, Design, Development, Evaluation*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Lochte, R. H. (1993). *Interactive Television and Instruction*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Maddux, Cleborne D. (1992). *Distance Education: A Selected Bibliography*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Mantyla, Karen, and Gividen, Richard (1997). *Distance Learning: A Step-by-Step Guide for Trainers*. ASTD. Alexandria, VA. (703) 683-7100.

Masie, Elliott. *The Computer Training Handbook*. (800) 986-2743.

Merrill, David and Tennyson, Robert D. with Posey, Larry O. (1992). *Teaching Concepts: An Instructional Design Guide*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Milheim, William D., ed (1994). *Authoring-Systems Software for Computer-Based Training*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Milheim, William D. (1992). *Computer-Based Simulations in Education and Training: A Selected Bibliography*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Moore, Michael, G., and Kearsley, Greg (1995). *Distance Education: A Systems View*. Wadsworth Publishing Company, Belmont, CA. (800) 347-7707.

Moore, Michael G., ed. (1990). *Contemporary Issues in American Distance Education*. Pergamon Press, Inc. Elmsford, NY.

Moore, Michael G., ed. (1992). *Distance Education for Corporate and Military Training*. The Pennsylvania State University. University Park, PA. (814) 863-3764.

Moore, Michael G. and Thompson, Melody. (1997). *The Effects of Distance Learning*. Penn State University. ISBN 1-877780-18-9.

Newby, Timothy J. (1996). *Instructional Technology for Teaching and Learning: Designing Instruction*. Prentice Hall.

Olive, J Fred. (1995). *Educational Technology Profession: A Bibliographic Overview of a Profession In Search of Itself: A Selected Bibliography*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Ostendorf, Virginia. (1997). *Distance Learning Directory*, 5th Edition. Ostendorf Publications. Littleton, CO. (303) 797-3131.

Ostendorf, Virginia. (1995). *Teaching Through Interactive Television*. $75. Ostendorf Publications. Littleton, CO. (303) 797-3131.

Paul, Ross H. (1990). *Open Learning and Open Management*. Nichols Publishing. New York, NY.

Phillips, Rob. (1997). *The Developer's Handbook to Interactive Multimedia*. Kogan Page. London.

Piskurich, George M. (1993). *Self-Directed Learning: A Practical Guide to Design, Development, and Implementation*. Jossey-Bass Inc. Publishers. (415) 433-0499.

Pollak, Rubyanna R. (ed). (1993). *Videodisc Compendium for Education and Training: Laser Discs, CDs, and Multimedia Software*. Emerging Technology Consultants. St. Paul, MN.

Porter, Lynnette R. (1997). *Creating the Virtual Classroom: Distance Learning with the Internet*. John Wiley & Sons, Inc.

Portway, Patrick and Lane, Carla. (1992). *Guide to Teleconferencing and Distance Learning*. $50. Applied Business teleCommunications. San Ramon, CA. (800) 829-3400.

Roberts, Linda G. and Office of Technology Assessment (OTA) Project Staff. (1989). *Linking for Learning: A New Course for Education*. Superintendent of Documents, US Government Printing Office, Washington DC 20402-9325.

Romiszowsli, Alexander J. (1992). *Computer Mediated Communications: A Selected Bibliography*. Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Schwier, Richard A. and Misanchuk, Earl R. (1993). *Interactive Multimedia Instruction.* Educational Technology Publications. Englewood Cliffs, NJ.

Seidel J., & Chatelier P. (1993). *Advanced Technologies Applied to Training Design.* New York, NY. Plenum Press.

Spector, J. Michael, Polson, Martha C., and Muraida Daniel J., Editors. (1993). *Automating Instructional Design: Concepts and Issues.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Stevens, George H and Stevens, Emily F. (1995). *Designing Electronic Performance Support Tools: Improving Workplace Performance with Hypertext, Hypermedia, and Multimedia.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

Thach, Elizabeth C., (1996). *Effective Distance Learning.* ASTD. Alexandria, VA. (703) 683-8100.

Tiffin, J. and Rajasingham, L. (1995). *In Search of the Virtual Class: Education in an Information Society.* New York. Routledge.

Troyka, Lynn Q. (1997). *Simon & Shuster Multimedia Handbook for Writers.* Prentice Hall.

Verduin, J. R. and Clark, T. A. (1991). *Distance Education: The Foundations of Effective Practice.* San Francisco: Jossey-Bass Inc. Publishers. (415) 433-0499.

Watkins, Barbara L., and Wright, Stephen J. (1992). *The Foundation of American Distance Education: A Century of Collegiate Correspondence Study.* Texas Tech University, Lubbock, TX. (806) 742-2352. ISBN 0-8403-7101-2

Willis, Barry. (1993). *Distance Education: A Practical Guide.* Educational Technology Publications. Engelwood Cliffs, NJ.

Willis, Barry, Ed. (1992). *Distance Education: A Selected Bibliography.* Educational Technology Publications. Englewood Cliffs, NJ. (800) 952-2665.

For more information, reference http://acacia.open.ac.uk/Online.html. References, including abstracts, to over 7,500 items of literature on all aspects of distance education is now available on World Wide Web. The new version contains entries describing over 8,000 books, journals, journal articles, conference papers and research reports covering all aspects of open and distance learning as practiced worldwide. Also included are over 850 descriptions, complete with addresses and telephone and fax numbers, of institutions all over the world which teach at a distance.

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