Glossary

3-D presentations – representation of objects and backgrounds in a three-dimensional space.

Ability – capacity to perform a certain function.

Achievement motivation – learners’ need to accomplish things and solve problems regardless of external factors such as feedback and reward.

ACTIONS mode – acronym for Access, Costs, Teaching functions, Interaction and user friendliness, Organizational issues, Novelty, Speed of course development/adaptation. It was proposed by Tony Bates in 1997.

Active learning – type of learning activity in which learners are engaged and instruction is matched to learners’ understanding, level of progression, and interest.

Activity-based interactions – interactions or interactivities (i.e., critical thinking, creative thinking, information searching, information sharing, and collaborative problem solving) that involve different types of activities. See Bonk and Reynolds (1997) and Harris (1994a, 1994b, 1994c) for descriptions of several different types.

ADDIE – an instructional design model that stands for Analyze needs, Design instruction, Develop materials, Implement activities, and Evaluate participant progress and instructional effectiveness (Hall, 1997; Powers, 1997).
**Adult learning**—description of the process by which adults learn, especially as influenced by Malcolm Knowles, who defined various characteristics of adult learners. According to Knowles, adult learners are goal oriented, relevancy oriented, practical, autonomous, self-directed, have prior knowledge and experience, and require respect from their instructors.

**Affective**—consists of attitudes, motivations, beliefs, emotions, and values.

**Affective domain**—the affective domain relates to attitudes, feelings, and emotions. The taxonomy in the affective domain was developed to describe levels of commitment in the learning process (from lowest to highest): receiving, responding, valuing, organization, and characterization by value.

**ALT tags**—refers to the alt attribute of the `<img>` tag which is generally used to place images on a Web site.

**Analog video**—video that is stored using film, videotape, television video instruments, or any other noncomputer media.

**Analogy**—inference that two things are similar in some respect.

**Analysis**—a systematic approach to problem solving. It is a cognitive skill involving the separation of a complex problem into its constituent components for the purpose of their individual study.

**Andragogy**—a term coined by Malcolm Knowles to describe the art and science of helping adults learn.

**Animation**—dynamic images or graphics comprising a number of frames that provide the illusion of continuous motion.

**APA**—American Psychological Association, the largest association of psychologists worldwide.
Apple – a computer company founded in 1976 by Steven Jobs and Steve Wozniak.

Appletalk – networking protocol developed by Apple to communicate between Apple computer products and other types of computers.

ARCnet – Attached Resource Computer Network, a network that uses token passing. It is relatively a low-speed form of LAN data link technology (2.5 Mbps) developed by Datapoint.

Artificial intelligence – the scientific field devoted to the creation of hardware and software that mimics human intelligence and thought processes.

Assessment rubric – scoring guide, usually numerical, that gives specific criteria to assess student performance on a specific task.

Asynchronous – a two-way communication method that does not happen at the same time.

Attrition rate – rate of shrinkage in size or number; drop-out rate of learners in a distance program.

Audience awareness – the ability to write or present on the appropriate level for the intended audience using correct tone and voice.

Audio tools – radio, audio cassettes, videotapes using the audio track only, telephone, and audio-only conferences.

Audiovisual media – media that includes various audiovisual materials such as posters, paintings, slides, videos, films, audiotapes, and videotapes.

Aural learners – learners who best collect information by listening to others, for instance, in lectures and seminars.
**Authentic assessment** – a type of assessment that measures the student’s ability to perform applied work to demonstrate specific knowledge and skills.

**Automaticity** – ability to perform a skill or a habitually complex task without the conscious deployment of attention.


**Bandwidth** – refers to the amount of data that can be sent in a fixed period of time. This term can also refer to a range within a band of frequencies or wavelengths.

**Behavioral anchors** – characteristics of core competencies associated with the mastery of content.

**Behaviorism** – a theory that focuses on observable changes in behavior.

**Benchmark** – a measurement point used to provide a basis for comparison and which serves as a point of reference. It can refer to a skill that learners must master.

**Berne Convention** (Berne Union for the Protection of Literary and Artistic Property) – The countries represented in the Convention agreed that they would recognize the copyrights of each other and make any changes to their copyright laws to comply with international standards.

**Biological intelligence** – the general structure and processes of living organisms inside or related to brain regions and sense organs.

**Cable modem** – a broadband Internet device that transmits data over cable TV networks.
Chunk – a term that was coined by G.A. Miller in 1956 to describe the memory records that encode a small number of units. This method can be used to collect/group stimuli that are stored in short-term memory.

Cognitive – adjective that describes thinking mechanisms that impact an individual’s ability to learn and understand.

Cognitive domain – a mind-/knowledge-based domain of learning. The major idea of the taxonomy is that what learners are expected to know can be arranged in a hierarchy from simple to more complex.

Cognitive information processing (model) – describes fundamental mental operations such as how we perceive and remember information.

Cognitive levels – according to Bloom’s taxonomy, cognitive levels are from lowest to highest: knowledge, comprehension, application, analysis, synthesis, and evaluation.

COGSS – a Comparison of Generative/Supplantive Strategy. It was created by Smith and Ragan in 1999 based on Gagné’s theory. It helps instructors, instructional designers, and learners determine the balance between instructional strategies and learning strategies based on context, learner, and task variables.

Coherence – the development of a clear thesis and introduction, and the inclusion of well-constructed paragraphs with smooth transitions from one part to another in written and presentation materials.

Collaboration – involvement of two or more individuals on a project.

Commission on New Technological Uses of Copyrighted Works (CONTU) – a committee developed by the U.S. Congress in 1974 to investigate copyright issues. In 1978, CONTU suggested an amendment that would clarify the scope of copyright protection on computer software, which resulted in the Computer Software Copyright Act of 1980.
**Communication-based interaction** – interaction that allows learners to manipulate electronic tools to complete tasks and participate in other learning events. The interface acts as the point or means of interaction, between the learner and the content, instructor, or other learners.

**Compatibility** – the degree to which a present (current) act or innovation is perceived as consistent with a past act or experience.

**Competencies** – the underlying knowledge, understanding, and practical and thinking skills to perform a task.

**Competency-based behavioral anchors** – performance capabilities needed to demonstrate knowledge, skill, and ability acquisition.

**Competency models** – descriptions of identified roles, outputs, and competencies of a given profession. Competency models can be used as a tool for recruitment and selection, assessment, content development, coaching, counseling, mentoring, career development, and behavioral benchmarking.

**Computer-based interactions** – a purpose-based framework that includes five basic functions for computer-based interactions: confirmation, pacing, inquiry, navigation, and elaboration described by Hannifin (1989).

**Concept mapping** – a concept map is a special form of a web diagram for exploring knowledge and gathering and sharing information. Concept mapping is the strategy implemented to develop a concept map, a special form of diagram consisting of nodes or cells that contain concepts, ideas, and links. The links are generally represented by arrow symbols that describe the direction of the relationships.

**Consortium** – the association of two or more groups/agencies to share information, resources, or services.
Constructivist – a person who espouses the learning theory that the learner acquires the information or solves problems based on existing learning infrastructures.

Continuum – continuing in time or space without break, interruption, or deviation.

Conventional – formal and traditional.

Copyright – the protection granted to authors and developers while also allowing flexibility for the public to have access to original works.

Corrective feedback – type of feedback that identifies areas that need improvement and provides insights into how to revise assignments.

Counterproductive – adjective describing actions interrupting the achievement of a goal.

Course management tools – interface and management of online courses to provide efficiency for the instructor and ease of use by the learners.

Courseware – the media (text, computer program, or CD-ROM) used for educational purposes.

Crystallized (intelligence) – according to Cattell (1963), “Crystallized ability loads more highly those cognitive performances in which skilled judgment habits have become crystallized (hence its name) as a result of earlier learning application of some prior, more fundamental general ability to these fields” (p. 3). Crystallized implies being firmly established and thus not considered consciously.

Cyclical Redundancy Check (CRC) – four-byte error detection information that is used to verify the integrity of the data.
**Decision making** – the cognitive process of choosing a course of action among two or more alternatives.

**Destination address** – provides the unique six-byte ethernet address of the device that is supposed to receive the packet. This address can be a computer, server, printer, telephone (in the case of Voice over IP or VoIP) if the final destination is on the same LAN or the default router if the final destination is on another LAN.

**Didactical** – instruction that is primarily led by the teacher or trainer; lecture.

**Diffusion** – the process by which an innovation is communicated through communication channels over time from one person to another in a social system.

**Digital** – refers to the use of a series of 0s and 1s (binary code) to represent information as opposed to waves.

**Digital Millennium Copyright Act** – a copyright act with implications for online education: “service providers” are responsible for ensuring that copyright permission is given before materials are accessible from Web sites; the owners of copyrights should control access and reproduction of protected materials; and the service provider should prevent unauthorized access.

**Digital video (DV)** – video that is stored in a digital format. It generally refers to moving images that can be stored in a computer hard disk.

**Distance education** – process of delivering instructional resource-sharing opportunities to locations where the learner and the instructor do not physically meet at the same place or time.

**Distance learners** – learners who are separated from the instructor by geographic distance or by time. The learner–instructor interactions are often supported by communications technology such as television, videotape, computers, or mail.
**Domain name servers** – the Internet protocol (IP) uses addresses that are unique and globally assigned. The IP addresses are represented by a four-byte address such as 128.194.15.2. Blocks of network addresses are assigned to institutions to be reassigned to individual computers. To prevent end users from having to remember these complex numbers, a domain name system is used.

**Dunn and Dunn’s model** – a model developed in 1974 that is based on learning styles. The model measures the learner’s preferred modes for concentration and learning difficult information. The authors’ conception takes into account multiple interacting factors including environmental, sociological, and emotional variables.

**Egos** – the conditional mind. The individual’s consciousness and inflated feeling to his or her identity.

**E-mail servers** – repositories of incoming and outgoing e-mail messages. E-mail servers will accept incoming messages and hold them until the recipient is ready to retrieve them. They also filter traffic, discarding messages with viruses attached and unsolicited messages such as spam mail.

**Empiricism** – the philosophical view that all knowledge is based on experience.

**Episodic memory** – memories that are learned and cannot be recalled without also recalling the “episode” and the environment in which they were created.

**Epistemology** – a branch of philosophy that describes the theory of knowledge.

**ESEA** – acronym for Elementary and Secondary Education Act that was enacted in 1965. It is also known as the No Child Left Behind Act (NCLB). The main mission of ESEA (NCLB) is to provide guidance and funds to K–12 schools, and provide educational opportunities to all children regardless of their background and abilities.
**Evaluation** – a systematic process applied to educational programs. It became a widely formalized endeavor in 1965 after President John F. Kennedy signed into law the Elementary and Secondary Education Act (ESEA) mandating a formal evaluation for all federally funded educational programs. It is a systematic process to determine the merit, worth, or value of an object, product, or process.

**Excel** – spreadsheet and reporting program distributed by Microsoft.

**Extrinsic motivation** – is derived from learners’ responses to forces beyond themselves. Extrinsicly motivated people respond to reward, praise, good grades, money, and so forth.

**Eyeball cameras** – also referred to as PC cameras. They are generally attached to the host PC by a cable and mounted on computer monitors to capture moving and still images. Connectix pioneered the industry, and has held over 75% of the market since 1994. Recently, other large companies, such as Kodak, Intel, and Philips, and other smaller companies started contributing to the manufacturing and promoting of PC cameras.

**Feature recognition** – specific features or components of ideas or concepts are stored and searched for in new stimuli.

**Fiber optics** – a technology that uses glass or plastic fibers instead of metal cables to transmit data, images, and sound.

**Firewall** – a specialized computer that is installed between the institutional LAN and the Internet. Depending on its configuration, it can be used to filter inappropriate information such as sexually explicit Web pages, it can be used to protect the institutional LAN from viruses and other harmful traffic, and it can be used to prevent computers from within the institution from being used to launch attacks on the rest of the Internet were a virus to infiltrate the security.

**Flash** – a software/Internet application created by Macromedia for the purpose of publishing animations on the World Wide Web.
Font – an array of glyphs. It is associated with a set of parameters such as size, posture, weight, and style. Examples of font types include Times New Roman, Arial, Arabic Transparent, and Book Antiqua.

Formative assessment – the process by which information is gathered either through instructor observation, assessment of student work, or various class activities, and used to adapt teaching and learning practices to satisfy student needs.

Frame type or length – the section of the packet that specifies either the type of data that is contained within the frame or the length of the frame.

Functional evaluation approach – evaluation related to the technical and design area of a program, course, or activity and is associated with equipment requirements and specifications. The quality of the program’s outcomes cannot be achieved in isolation from functional and managerial levels of quality.

Gagné’s Nine Events of Instruction – nine instructional components that can improve instructional planning and engagement to optimize learning.

Gen-Xers – children who were born in the 1960s and 1970s.

Globalization – a rapidly increasing social, cultural, political, and economic process of awareness, though not necessarily acceptance, of a global consciousness and interdependence by which people make decisions about their life, their work, and their physical environment; decisions affected or influenced by expansion and interconnectedness of linkages throughout the whole world, not just the region or country in which they live and work; and decisions that over time collectively result in social, cultural, political, economic, and environmental consequences, both intended and unintended (Christiansen, 2002).

Graphics – images, either photographs or artwork other than text generated by data fed into a computer via a keyboard or a database.
Grasha-Reichman’s student learning styles scale – a social interaction scale with patterns of preferred styles for interacting with instructors and fellow learners in a learning environment.

Gregorc’s learning style delineator – a measure of bidimensional patterns of learning preferences for making sense of the world through the perception and ordering of incoming information.

Grow’s hierarchical stages of learning model – this model includes four stages of self-directedness that can impact instructional design and delivery of distance education.

Hallmark – distinctive feature or characteristic.

Haptic learners – learners who best collect information by feeling, holding, or touching things.

Heterogeneity – diversity and variety in traits or characteristics; different.

Homogeneous – unvaried or undiversified in traits or characteristics; similar.

Hill’s cognitive style mapping – a diagnostic technique for determining an individual’s cognitive styles. It was developed by Joseph E. Hill, president of Oakland Community College in Bloomfield Hills, Michigan, during the 1960s and 1970s.

Honey and Mumford’s learning style questionnaire – Honey and Mumford (1982) expanded upon Lewin’s cycle of adult learning which stipulated that adults move through learning in stages: by engaging in a “real-world” experience, by reflecting on this experience, by making general rules about this experience, and then by experimenting with a slightly modified event reflecting the first experience.
HTML – Hypertext Markup Language is the coding language used to create hypertext documents on the Web.

Hub or Switch – a nonintelligent device that sends all information input into any one port or to all other ports on a computer, server, or other information collecting device.

Human resource development – an organized learning experience that involves planning, administering, or evaluating programs designed to enhance competence and professionalism.

Hybrid courses – a blend of online learning with face-to-face teaching.

Hyperlinks – a graphic or piece of text on a Web page that is linked to another Web page, either on the same or on another Web site.

IBM – acronym for International Business Machines Corporation. It develops hardware, operating systems, and applications that support Oracle.

Icebreakers – activities that are used to help learners get acquainted in new subjects or situations.

Ideology – a set of beliefs that form a group or theory.

IEEE – Institute of Electrical and Electronics Engineers known for developing standards for the computer and electronics industry.

Individualization – discrimination of an individual from a generic group.

Inductive reasoning – process of reasoning and drawing conclusions based on prior observations.
Information technologies – the forms of technology that enables one to design, develop, install, store, transmit, implement, and manipulate information using computer and telecommunication systems.

Innovation decision process – process through which an individual (or other decision-making unit) passes from knowing, to forming an attitude about, to making a decision to adopt or reject, to confirm a decision, or finalize a thought.

Instant Messaging (IM) – Web-based service that combines the live nature of chat rooms with the direct contact of e-mail.

Instructional design – a systematic process or organized procedure for developing instructional materials including steps of analysis, designing, developing, implementing, and evaluating.

Instructional method – a strategy the instructor uses to accomplish an instructional objective.

Instructor centered – the instructor determines the content and organization of the course, activity, or process.

Interactive learners – learners who are actively engaged at different levels in the instructional and learning process.

Interactive video – the use of two-way audio and video for conferencing and instructional purposes.

Interface – a linkage, a shared boundary usually between a computer and a user, or between a computer and a communication medium. Interface with a user usually refers to the components of computer and software that can be manipulated by the user, such as the screens, icons, menus, and dialogues.
Interlacing – a progressive display of graphic images commonly used in televisions and computer display screens to minimize choppiness and to smooth transitions.

Internet Protocol (IP) – the telecommunication protocol used to route a data packet from its source to its destination based on address information carried in the message.

Intrinsic motivation – motivation that is derived from learners’ internal drive. Intrinsically motivated people want to learn for the sake of learning and curiosity.

ITU – International Telecommunications Union is an international organization within the United Nations system that coordinates global telecommunications networks.

JPEG – acronym for Joint Photographic Experts Group, a type of file format that uses a lossy compression technique to store for bitmap images to make the file size smaller for transmission.

Key informant – a person whose testimony or description of what exists in or for the client population is available and credible. Program managers often solicit information from such an individual so as to have input to assist in making decisions.

Kiersey temperament sorter – a personality assessment tool that determines the temperament of an individual based on his or her inclinations.

Kinesthetic learners – learners who best collect information by moving or touching.

Knowledge – a body of information applied directly to the performance of a given activity. Also, the condition of knowing facts, processes, or procedures gained through association or experience.
Kolb’s learning style inventory (1976) – it ranks strengths and weaknesses in four abilities—Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE).

Layout – the physical arrangement of text blocks, headlines, subheadlines, or body copy of any printed or Web-based material.

Learner centered – description of organization and content of instruction largely determined by the learner’s needs and perceptions with the instructor’s role mainly as that of a facilitator or a coach.

Learner-centered approaches – different techniques and methods that focus on individual learners and their needs to make decisions about how the learning process should occur and how it can be enhanced.

Learner-centered instructional environment – a teaching environment that takes into account the learners’ backgrounds, personal beliefs, experiences, perspectives, capacities, and how the instructional methods need to be manipulated to promote high standards of learning and achievement for all learners.

Learner-content interactions – process of interacting with content to affect the learner’s understanding, perspective, or cognitive structures. Examples of learner-to-content interactions are online books, online instructional materials, support materials, worksheets, and case studies.

Learner-environment interactions – interactions that occur when learners manipulate tools, equipment, or other objects outside of the computer interface.

Learner-human and learner nonhuman interactions – those interplays or back-and-forth actions and activities that occur between and among the learner and other learners, instructors, resource personnel, and so forth, and the content resources they provide to enhance instruction.
**Learner-instruction interactions** – interactions that consist of a series of events that are necessary to achieve a defined set of objectives to learn a specified content area.

**Learner-instructor interactions** – student–teacher interactions undertaken to attempt to motivate and stimulate the learner and to allow for the clarification of misunderstandings by the learner in regard to the content. Examples of learner-to-instructor interactions are lecture, e-mail, online editing and feedback, evaluation of learning, ITV, streaming video, and voice over PowerPoints.

**Learner-learner interactions** – type of interaction that occurs between one learner and another learner, alone or in group settings, with or without the real-time presence of an instructor. Examples of learner-to-learner interactions are online chats, threaded discussion, e-mail, point-to-point video conference, and audio calls.

**Learner-self interactions** – interactions that occur within the mind of the learner. They include both the cognitive operations that constitute learning as well as metacognitive processes that help individuals monitor and regulate their learning.

**Learning styles or preferences** – tendencies of the learner to prefer to process information in different ways.

**Learner-technology interactions** – examples of learner-to-technology interactions include online tutorials on how to use educational technology, getting help online, downloading plug-ins, installing software, file management including uploading and downloading files, and electronic libraries.

**Learning theory** – a theory that attempts to explain and predict behavior during the learning process.

**Legitimate peripheral participation** – an activity that provides a way to speak about the relations among newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice.
Local Area Networks (LANs) – information networks that are typically built within a building or contiguous buildings and run at high to very high speeds (billions of bits per second up to 10 billion bits per second). They are made up of two types of devices: the first could be considered infrastructure devices and the second, network servers. The infrastructure devices consist of the network interface cards that connect the hosts to the network, the wire plant, the switches, and the routers. The servers each provide a specific network function such as file or print serving, domain name resolution, firewall, rate shaping, network management, and address assignment.

Long-term memory – the portion of memory that is relatively permanent.

Lower-level thinking – information processing at the lowest levels of Bloom’s taxonomy (knowledge, comprehension, and application).

Management – the action of planning, organizing, coordinating, running, directing, coordinating, controlling, and evaluating the use of people and materials to accomplish the goals of an organization.

Managerial evaluation approach – related to how successfully the relationships within and outside the parent organization are fostered and managed as they relate to the distance education mission of the organization.

Mediator – intermediator, go-between to link people; can be an ombudsman in some cases.

Meta-analysis – a method that combines the results of several studies to integrate their findings.

Metacognitive – adjective describing learners’ automatic awareness of their own thoughts and cognition in the process of metacognition.

Metadata – information, data about data.
Glossary

**Metaphor** – a figure of speech in which an expression is used to refer to something in terms of another.

**Millennials** – people born in the 1980s.

**Mnemonic** – the use of letters in a sequence to facilitate storage and recall.

**Modem (modulator-demodulator)** – a device that enables a computer to convey data over telephone or cable lines.

**Monochrome** – having only one color (text or background). Most frequently applied to black-and-white photographs but can also apply to a computer screen that displays information in only one color on a black or dark background.

**Motivation dimensions in instructional theory** – when a learner is engaged in the instruction because he or she is interested, finds the material to be relevant, expects to apply the information, and finds it satisfying.

**MPEG** (Moving Pictures Expert Group) – an international standard for a compression algorithm for video/audio files.

**Multilevel evaluation approach** – use of evaluation techniques that include more than one level, such as functional, managerial, and instructional.

**Multimedia** – refers to bringing together a number of diverse technologies of visual and audio media for the purpose of communicating. Examples of multimedia include text, graphics, audio, video, animations, and simulations.

**Municipal Area Networks (MANs)** – typically fiber optic or wireless-based networks that connect two or more buildings within a community to each other at high and very high speed.

**Myriad** – countless, multitudinous.
Myth – tradition or fable; popular unfounded belief.

Negative reinforcement – the removal of a consequence that the learner found rewarding.

Network Management Servers – devices that monitor the performance of networks, report changes in operational status, and support security, such as end-user authentication.

Novice – someone who is new to an activity.

Object-oriented software – an object considered a “black box” that receives and sends messages. A black box contains sequences of computer instructions (code) and information on which to operate (data).

Observability – the degree to which the results of an innovation are apparent to other people.

Olfactory learners – learners who process information best by tying it to smells or tastes.

One-way live video – demonstrated by programs downloaded by a satellite receiver to an audience or individual not able to participate by being on location with the speaker or instructor. In this case, the learner would participate as a passive listener similar to watching a television program.

One-way live video with two-way audio – a delivery technology using one-way live video with phone, Web, or -mail/chat features for participant interaction.

Openers – methods that are used to introduce participants to the content at the outset of the learning experience.
**Operant** – a type of response that produces an effect or has an influence on the environment.

**Overt** – apparent; observable.

**Pattern** – the process whereby environmental stimuli are recognized as examples of concepts and principles already in memory.

**Payload** – the actual data to be delivered through a network. This section of the packet can vary between 46 and 1,500 bytes in length.

**Pedagogy** – the art and science of teaching children and applying educational theory to enhance their learning.

**Philosophy of education** – a philosophical study or view of education. Major schools of thought include liberal, progressive, behaviorist, humanist, radical, and analytical philosophies.

**Portfolio** – a collection of work that exhibits the learners’ process, progress, and achievements.

**Preconceptual activity** – activity where no conscious thought is involved.

**Primary distance learners** – learners who are not actually tied to a campus or learning facility but who are motivated by a need to have access to a continuing education or formal program for personal advancement.

**Principles of good practice** – guiding principles for the field of distance education that improve support, instruction, and learning.

**Problem solving** – a systematic process of identifying, analyzing, and evaluating a particular problem to arrive at workable solutions.
Prototype – a standard or typical example used as a reference for later work.

Psychomotor domain – learning domain that refers to the use of basic motor skills and physical movement.

Psychomotor levels – domain described with six different levels where the lowest level is represented by simple reflexes and the highest level is represented by more varied neuromuscular coordination.

Quantum-bit computing – a classic computer based on quantum theory. Quantum theory explains the nature and behavior of matter and energy on the atomic and subatomic level.

Reflection – a metacognitive activity in which the learner thinks about and organizes information from various learning activities, such as reading and discussion.

Relative advantage – the degree to which a new idea, process, or product is perceived as being better than a previous idea, process, or product.

Resolution – the number of pixels per square inch creating a visual image; the higher the resolution, the clearer the image.

Rigor – level of hardship, severity, difficulty.

Search engines – databases of Web sites that help users to search the Internet for other Web sites based on keywords or sentences. Examples of search engines include Google, Infoseek, Lycos, Excite, and Altavista.

Selective attention – refers to the learner’s ability to direct attention in specific directions.

Self – an individual’s inner or mental consciousness.
**Self-directed learning** – the ability of learners to direct their own learning.

**Session-initiated protocol (SIP)** – the session spent on a Web site by a user with a unique IP address.

**Shaping** – the reinforcement of successive approximations to a goal behavior.

**Simulation** – a series of photographs, drawings, videos, or sound recordings creating the impression of a virtual experience.

**Skill** – an observable competence to perform a learned act that requires motor ability.

**Stakeholder** – any groups or individuals within or outside the organization who have an interest in the activities and performances within the organization.

**Streaming video** – sequence of moving images delivered in packets rather than as a complete download over the Web.

**Student-centered, technology-rich learning environment (SCenTRLE) model** – a model with eight instructional events for facilitating construction of knowledge and the development of metacognitive skills associated with lifelong learning.

**Survey** – the act of gathering and studying information to improve comprehension or analysis of a subject matter.

**Synchronous** – two-way communication that is simultaneous or occurs at the same time. Examples of synchronous methods are Internet chat rooms and desktop videoconferencing systems.

**Synthesis** – refers to the combination of ideas, facts, or elements to form a new whole.
**Systematic instructional design** – the process of translating general principles of learning and instruction into plans for teaching and learning.

**Taxonomy** – a classification system to order concepts or ideas.

**Technology, Education, and Copyright Harmonization Act (TEACH Act)** – copyright act that expands categories performed in distance education to reasonable and limited portions, recognizes that a learner should be able to access the digital content of a course wherever he or she has access to a computer, allows storage of copyrighted materials on a server to permit asynchronous performances and displays, permits institutions to digitize works to use in distance education, and clarifies that participants in authorized distance education courses and programs are not liable for infringement.

**Template matching** – an exact mental copy of the stimulus is stored in memory.

**Tool-based interactions** – five levels of interactions based upon telecommunication tools, such as electronic mail and delayed messaging, remote access and delayed collaboration, real-time brainstorming and conversation, real-time text collaboration, and real-time multimedia and/or hypermedia collaboration.

**Traditional correspondence** – form of written instructional materials sent or received by traditional mail.

**Transactional distance** – a measure of distance as a pedagogical phenomenon. It involves the interactions between and among the instructors, the learners, the content, and the learning environment.

**Transcript** – a text representation of sounds in a media representation or an auditory tract.

**Transmission Control Protocol (TCP)** – a major part of TCP/IP networks. IP protocol deals only with packets whereas TCP protocol enables two hosts to establish a connection and exchange streams of data.
**Trends**—tendencies, general directions, overall movements.

**Trialability**—the degree to which an innovation may be experimented with on a limited basis before making a decision to adopt or reject.

**Two-way live audio and two-way live video** (compressed video or ITV) allows for the transmission of synchronous video and audio between two or more sites. A computer, called a “CODEC,” compresses the video and audio signals so that they can be transmitted using lower bandwidth.

**Universal design**—designing materials that everyone can access. The concept of universal design has been used in the field of architecture for generations, yet it has become important in education and training in the past decade with the integration of technology.

**Vicarious interaction**—the intersection of various interactions that promotes or maximizes learning.

**Video**—electronic recording and playback of imagery in a television system.

**Videoconference**—the act of conducting a conference or a meeting using video and audio signals to link participants at different and remote locations.

**Virtual reality**—use of computers to simulate a real or imagined environment that appears as a three-dimensional (3-D) space.

**Visual learners**—learners who collect information best when looking at charts, diagrams, pictures, and observing other people at work.

**Western Association of Schools and Colleges**—a regional accrediting association that is composed of three commissions: Accrediting Commission for Senior Colleges and Universities, Accrediting Commission for Schools, and Accrediting Commission for Community and Junior Colleges.
**Western Interstate Commission for Higher Education (WICHE)** – this commission was established by the Western Regional Education Compact in the 1950s for the purpose of facilitating resource sharing among its member states and has published a number of documents including *Good Practices in Distance Education* (WCET, 1997).

**Wide Area Networks (WANs)** – networks that connect LANs and MANs to each other over much longer distances, usually using circuits provided by carriers. These circuits can be carried over fiber optic cable, microwave, wireless, or satellite facilities.

**Wire plant** – consists of four-pair twisted pair wires between the offices or classrooms and the wiring closets. Wiring closets are typically connected to each other using a fiber optic cable which supports ethernet connections at long distances (typically up to 550 m for 1 billion bit per second connections and up to 2,500 meters at lower speeds).

**World Wide Web (WWW)** – a network of information that includes text, graphic, sound, and moving images. A collection of all the resources accessible on the Internet mainly via HTTP or via older protocols and mechanisms, such as FTP or Gopher.