Glossary

A

Action Statements: To help students, teachers, and administrators develop their host of skills and competencies, each of the six chapters compiles an inventory of appropriate statements (composed of various instructional technologies and appropriate action verbs) used in creating technology-based learning objectives.

Affective Domain: The domain of teaching that describes attitudes, beliefs, tastes, appreciations, and preferences.

Asynchronous Learning: Any learning event where interaction is delayed over time or where the learner and teacher are separated by geography and time. Typical examples include use of electronic mail, bulletin board posts, list servers, and threaded discussion.

B

Behaviorism: As a psychology of learning, behaviorism focuses on the observable effects of the environment to provide the impetus for learning, i.e., learner response to stimulation equates to learning. Learning must be observ-

able, measurable, and repeatable. Behaviorism with respect to technology offers numerous solutions for classroom management, curriculum design, and content presentation.

C

Cognitive Domain: The domain of teaching that refers to mental activities, an approach to teaching that focuses on the process of delivering information and imparting new concepts.

Cognitive Tools: Classroom technologies, learning systems, simulation, and automated performance aids that enhance and extend the teacher in the classroom. Includes smart boards, videoconferencing equipment, digital cameras, projection systems, etc.

Cognitivism: A psychology of learning in which knowledge is viewed as a symbolic mental construct in the learner's mind. Learning is the means by which these symbolic representations are committed to memory. Knowledge is measured by what learners know and not by what they do. The successful cognitive teacher uses technology to help students organize data and link new knowledge to existing information.

Collaboration: Level 2.0 of the Taxonomy for the Technology Domain defined as the ability to employ technology for effective interpersonal interaction.

Computer Assisted Instruction (CAI): Training or instruction where a computer program provides motivation and feedback in place of a live instructor. CAI can be delivered via CD-ROM, LAN or Internet. Creation is done by teams of people including instructional designers, and often has high development costs. Synonymous with Computer Based Training (CBT) and Computer Managed Instruction (CMI).

D

Decision-Making: Level 3.0 of the Taxonomy for the Technology Domain defined as the ability to use technology in new and concrete situations to analyze, assess, and judge.

Distance Learning: Learning where the instructor and the students are in physically separate locations. Can be either synchronous or asynchronous. Can include correspondence, video or satellite broadcasts, or e-learning.

Domains of Teaching: One of two "pillars of instructional technology," the domains offer the necessary grounding in cognitive, affective, and psychomotor teaching.

E

e-Learning: Any learning that utilizes a network for delivery, interaction, or facilitation. This would include distributed learning, distance learning (other than pure correspondence), computer-based training delivered over a network, and Web-based training delivered via the Internet. Can be synchronous, asynchronous, instructor-led, computer-based or a combination.

External Link: A uniform resource locator (see URL) that sends the learner to another site on the Internet. The URL for an external link must begin with http://.

F

Foundations of Education: Provide the critical underpinnings for the new Taxonomy for the Technology Domain and include the cognitive, affective, and psychomotor domains of teaching and the behavioral, cognitive, and humanistic psychologies of learning.

H

Harvesting: Skills related to Web browsing, navigation, and file downloads, naming conventions, and file-saving. Harvesting involves the capture of text, images, sound files, video clips, and Web pages from the Internet to a desktop computer for subsequent infusion or integration into a unit of instruction or lesson. The ability to locate, evaluate, and collect information from library resources, CD-ROM publications, online catalogs, and the Internet. Copyright and Fair Use Law restrictions apply.

Humanism: A learning psychology that emphasizes the study of the whole person. Human behavior is viewed through the eyes of the learner rather than the teacher. Learning with technology is influenced by the meanings attached to personal experiences. The more technology aids in "making meaning from information," the more successful the learning experience.

Hyperbook: An instructional resource using the advanced capabilities of word processors and desktop publishing software to integrate text-based practical exercises and activities that guides students through a teacher-authored learning experience.

I

Infusion: Level 4.0 of the Taxonomy for the Technology Domain recognizes technology as a powerful strategy for teaching with technology and is concerned with the identification, harvesting, and application of existing technology to unique learning situations.

Implementing Technologies: More complex tasks require more capable technologies to assist the teacher in demonstration. Such technologies include smart boards, simulation software, and overhead and LCD projection systems.

Instructional Systems Design (ISD): The systematic development of instructional specifications, using learning and instructional theory to ensure the quality of instruction. It is the entire process of analysis of learning needs and

goals and the development of a delivery system to meet those needs. It includes development of instructional materials and activities, and tryout and evaluation of all instruction and learner activities.

Integration: Level 5.0 of the Taxonomy for the Technology Domain is concerned with the creation of new technology-based materials, combining otherwise disparate technologies to teach.

Interactive Lesson: An instructional resource using graphics-based visual presentation materials prepared by teachers who wish to control the sequence of the instruction while allowing students to be in charge of the tempo of the lesson.

Internal Link: A uniform resource locator (see URL) that sends the learner to a file present on the same computer, in the same physical directory or on the same physical media as the home Web page. An internal link may connect to another Web page, document or presentation file, or software application.

L

Learning Management Environments: An LME is a system of teaching and learning that uses technology to enhance and make more effective the network of relationships between learners, teachers and designers of instruction through integrated tools for communications and student tracking. Synonymous with Virtual Learning Environment (VLE).

Literacy: Level 1.0 of the Taxonomy for the Technology Domain defined as the minimum degree of competency expected of teachers and students with respect to technology, computers, educational programs, office productivity software, the Internet, and their synergistic effectiveness as a learning strategy.

Low-Tech Devices: Typically portable, low in cost, easy to use, and may be virtually transparent in use. For example, a rubber pencil grip enables a student with poor motor control to grasp a pencil more securely and produce more legible work. Other examples include sticky notes, highlighter pens, removable

tape, correction tape, tape recorders, calculators, overhead projectors, film projectors, radio and television, and telephones.

M

Mindtools: Jonassen (1996) describes "mindtools" as a way of using a computer application program to engage learners in constructive, higher-order, critical thinking about the subjects they are studying.

N

Netiquette: Network etiquette, the dos and don'ts of online communication. Netiquette covers both common courtesy online and the informal "rules of the road" of cyberspace.

P

Psychologies of Learning: The second of two "pillars of instructional technology" presented, the traditional schools of educational psychology include behavioral, cognitive, and humanistic learning.

Psychomotor Domain: The domain of teaching concerned with the development of physical skills ranging from simple physical competencies to those that demand complicated muscle coordination.

S

Synchronous Learning: Any learning event where interaction happens simultaneously in real-time and requires learners and teachers to participate at a mutually scheduled time. Typical examples include the traditional classroom, chat room discussions, and videoconferencing.

T

Taxonomy for the Affective Domain: David Krathwohl (in collaboration with Bloom and Mascia) took the lead to produce a parallel taxonomy to explain the development of human attitudes, principles, codes, and values.

Taxonomy for the Cognitive Domain: Benjamin Bloom (et al.) identified six levels of cognitive development, from the simple recall or recognition of facts, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order, which is classified as evaluation.

Taxonomy for the Psychomotor Domain: R.J. Kibler (in conjunction with Bloom and Krathwohl) defined the domain concerned with the physical dimensions of learning from gross to fine movements and nonverbal to verbal activities.

Taxonomy of Technology as Media: Bertram Bruce and James Levin developed a view of the effects of technologies as operating to a large extent through the ways that they alter the environments for thinking, communicating, and acting in the world (1997).

Taxonomy of Technology SeSDL: Scottish Electronic Staff Development Library (SESDL) classification system applied from the perspective of communications and information technology and concerned with the process of classifying electronic library resources that pertained to teaching and learning.

Teacher-as-Expert: The most far-reaching stage of a lifelong career in education, the Teacher-as-Expert is the teacher in the classroom. With regards to technology, the teacher-as-expert masters the theoretical foundations and practical applications to infuse and integrate technology into the scope and sequence of their everyday instruction.

Teacher-as-Learner: The first stage of a lifelong career in education, the pre-service teacher completes an initial certification program of study. With regards to technology, the teacher-as-learner concentrates on the acquisition of

technical knowledge and practical skills to enhance their own learning with technology while providing a novice degree of competent technology-based classroom instruction.

Teacher-as-Scholar: The third stage of a lifelong career in education considers the professional teacher and the demands to continuously pursue excellence in teaching through reading and writing, professional interactions with peers and others, professional study, and active participation in professional organizations. With respect to technology, the teacher-as-scholar enhances quality teaching by continuous advancement of their technical skill and ongoing investigations of and solutions to classroom challenges.

Technology Domain: The domain of teaching that addresses technology as its own viable content area and as a teaching strategy centered on established computer literacy skills to be mastered.

Tech-ology: Level 6.0 of the Taxonomy for the Technology Domain refers to the ability to judge the universal impact, shared values, and social implications of technology use and its influence on teaching and learning. Tech-ology is a contraction of "tech" (technology) and "ology" (the study of) and is therefore the study of technology.

Telecommunications: Generic term for the component elements of the Internet include electronic mail, newsgroups, list servers, file transfer protocol, telnet protocols, online chat rooms, and the World Wide Web.

U

URL: A Uniform Resource Locator (URL) is a means of identifying an exact location and target file on the Internet. Synonymous with a Web address. For example, http://www.webusiness.com/temp/home.htm identifies a Web page home.htm in the /temp directory on the webusiness.com web server. As the previous example shows, a URL is comprised of four parts: the protocol type (http), machine name (webusiness.com) directory path (/temp/), and the file name (home.htm). Every Web page on the Internet has its own unique URL.

V

Virtual Tour: An instructional web-based teaching strategy that presents multi-sensory, multimedia instruction appropriate for student exploration, enrichment resource materials, and group learning experiences. The virtual tour employs teacher-authored Web sites with links to internal (computer-based) and external (Web-based) materials important to the learner.