

Instructional Design Glossary

Active Learning Theory

A theory of learning that involves students in doing things and thinking about what they are doing. Instruction based in Active Learning theory focus more on developing skills and allowing the students participate in learning over transmitting information.

Accessibility

Accessibility is the practice of making instruction usable by as many people as possible. This includes all aspects of usability, from accommodating individuals with disabilities, to support for mobile devices or slower network connections.

ADDIE

A conceptual and iterative Instructional Design model that includes the following processes: Analysis, Design, Development, Implementation, and Evaluation. The ID being performed will use the ADDIE, with the RoadMap project initiating the Analysis phase across JVS' instructional departments.

Applied Learning

Applied learning refers to an educational approach whereby students learn by engaging in direct, practical use of skills, theories and models.

Audio description

Audio description is a narration describing the important visual details that cannot be understood from the soundtrack alone.

Assessment

An assessment is a method of evaluating the efficacy of the learning event. An *educational assessment* evaluates the learning event, and a *learner assessment* determines if learning outcomes were achieved by a **specific learner**.

Asynchronous Learning

Forms of education, instruction, and learning that do not occur in the same place or at the same time.

Attention

A learner's available mental "workspace" for processing of new information during learning. A precious resource!

Audience Behavior, Condition, Degree (ABCD) Learning Objectives.

Also known as behavioral objective or instructional objective. Criteria for assessing the performance the learner should be able to demonstrate after the learning event.

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Authoring Tool

Software used to create e-Learns, Assessments and Software simulations. Articulate Storyline and Adobe Captivate are examples authoring tools, but some LMS have their own authoring tools.

Automatic Speech Recognition (ASR)

Software that converts spoken speech into text.

Behavior

Action that is an overt, observable, measurable performance.

Blended Learning

Also referred to as *hybrid learning*. Learning and instructional techniques that integrate e-learning (such as podcasts and online discussion) mobile learning (such as just-in-time training and performance support) and instructor-led training (such as lectures and tutorials).

Bloom's Taxonomy

Bloom's Taxonomy, popular with K-12 teachers is a learning framework that consists of six categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The model has an instructor or designer map learning activities to a student's ability to perform a task that corresponds to a hierarchical level of cognition and integration of knowledge.

Chunking

In cognitive psychology, chunking is the mental process of information being broken down and then grouped together. In Instructional Design, "chunking" breaks knowledge into digestible pieces that can be understood. Practiced, applied and stored in memory by the learner.

Closed-captioning

A process by which spoken words are converted to text (or transcribed by a human being). The text is provided in real-time along with the spoken words.

Cognitive Strategies

Specific methods used to solve problems, including reasoning, planning, rehearsal of newly learned information, and relating newly-learned information to existing knowledge. An important cognitive strategy for learning is *metacognition* (or "knowing about knowing"), which is consciously using particular strategies for learning or problem solving.

Cognitive Load

The amount of mental work a learner executes during the learning event. Germaine, Intrinsic and Extraneous loads.

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Competencies

A way of job modelling that breaks a job into specific measurable capabilities. These are often categorized in terms of Knowledge, Skills and Attitudes. Clearly defining specific competencies allows a designer to create training focused on job skills specific to a role.

Condition

Component of a learning objective that describes the specific situation in which the performance occurs. See "ABCD Learning Objectives"

Content

In terms of Instructional Design, content is the subject matter to be learned.

CoP (Community of Practice, Community of Praxis)

A community of Practice is a group of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly. CoPs are based in social learning theory.

Courseware

Courseware is educational material intended as kits for teachers or trainers or as tutorials for students, usually packaged for use with a computer. Materials that support distance learning.

Curriculum

The complete set of subjects comprising a course of study. While the term is often used in a school or college, it applies to a group of classes that form any learning program.

Deliverables

Measurable, tangible, verifiable output that must be produced to complete the project or a training course. Deliverables could include design documents, alpha/beta/final versions of eLearning modules, and instructor/student guides.

Delivery

The method by which instruction is provided to learners, for example instructor-led, distance learning, computer-based, web-based, mobile, or self-instructional materials.

Dependencies

When one lesson leads into or provides required information to learn the next, the second lesson is said to be dependent on the first. Instructional Design plans the learning so that the lessons are taught in a logical, sequential order when possible.

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Differentiation

Differentiation is tailoring instruction to meet individual needs. Instructional design will include options to differentiate content, facilitation methods, pacing and length of course. In some cases this includes adjusting the learning environment.

Design Review

The document completed at the conclusion of the Design phase showing a detailed overview of the instruction. Components included are: a sequenced list of learning tasks; a sequenced list of performance (learning) objectives; a list of testing strategies, a summary of benefits derived from the training.

Distance Learning

Education that occurs when students and instructors not in the same location. There is often a geographic, and sometimes time separation as well.

Diversity

Diversity represents range of different social and ethnic backgrounds and of different genders, sexual orientations, etc. Quality instruction is effective, meaningful and relevant to a wide range of people and backgrounds. See Inclusion.

E-Learning (Electronic Learning)

Learning facilitated and supported through the use of information and communications technology. "E-learns" typically refers to asynchronous self-paced courses, usually concluding in a self-administered assessment.

Evaluation Plan

A structured plan of data-collection to assess the quality of the training materials prior to and after implementation and the ID procedures used to generate the instructional products. Includes both Formative and Summative Evaluation.

Engagement

A term that is used a lot in training – it is often conflated with interactivity. Engagement is the learner's immediate and ongoing interest, commitment and involvement to a community, topic or activity.

Feedback

Information given to the learner that either confirms a response or provides correction or remediation.

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Field Trial

The third stage in formative evaluation, referring to the evaluation of the program or product in the setting in which it is intended to be used. Also, the second phase of summative evaluation.

Flipped Classroom

The flipped classroom intentionally shifts instruction to a learner-centered model in which time in the classroom is used to explore topics in greater depth and create meaningful learning opportunities while students are initially introduced to new topics outside of the classroom.

Formative Evaluation

Iterative testing during the ADDIE Development Phase to ensure training meets the intended goals.

Group-based Instruction

The use of learning activities and materials designed to be used in a collective fashion with a group of learners in interactive, group-paced instruction.

Hierarchical Analysis

Part of a Content Analysis: A technique used with goals in the intellectual skills domain to identify the critical subordinate skills needed to achieve the goal, and their interrelationships. For each subordinate skill in the analysis, this involves asking, "What must the student know how to do in order to learn the specific subskills being considered?" See "Dependencies."

ID Model

A graphic representation of a systematic approach. Designed to facilitate efficient and effective development of instruction.

Implicit Bias

Implicit Bias refers to preconceived notions about individuals based on a social group membership or demographics.

Inclusion

Inclusion is the practice or policy of providing equal access to opportunities and resources for people who might otherwise be excluded or marginalized, such as those who have physical or mental disabilities and members of other minority groups.

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Individualized Instruction

The use, by students, of systematically designed learning activities and materials specifically chosen to suit their individual interests, abilities, and experience. Such instruction is usually self-paced.

Instruction

Instruction is the delivery of information and activities that facilitate learner's attainment of intended learning goals.

Interactive

Activities or user interfaces that require a response from the learner.

Instructional Analysis (Content Analysis)

Process of identifying the relevant knowledge, skills, and abilities required for a learner to achieve a behavioral goal. In this process, an instructional goal or a learning task is divided into the steps/elements and skill objectives to achieve the goal. Instructional analysis provides data for developing the Design Review.

Instructional Design

Instructional Design is the practice of systematically conceiving, developing and delivering instructional products and experiences, both digital and physical. ID practitioners use systematic methods to analyze learners and content, towards the goal of reliable, efficient, effective, appealing, engaging and inspiring acquisition of knowledge, skills or attitudes.

Instructional Goals

Brief statements describing the terminal tasks learners will be able to perform as a result of the training.

Instructional Strategies

Means that enable learners to master course content and skills. Examples include: demonstrations, role plays, hands-on activities, practice, simulations, discussion, lecture, illustrated diagrams, step-by-step review; self-study exercises, reviews, on-the-job training, practice with coaching, video demonstrations, examples, etc. Often organized by these categories: pre-instructional activities, content presentations, learner practice, feedback, and closure.

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Instructor Guide (Facilitator Guide)

The resource that is used by the facilitator to lead the instruction; can be either printed or electronic, such as PDF. Incorporates all aspects of analysis and design into its development, making it the primary vehicle to house all facets of the instruction: instructional strategies, testing strategies, learning objectives, content, pacing, timing, introductions, closure, transitions, and reviews.

Job Aids

Teaching devices intended to be self-explanatory and self-instructional; a formalized set of textual and/or graphical step-by-step directions for accomplishing a task through one or more techniques. Job aids are often designed to be used on the job following training.

Kirkpatrick's 4-Levels of Evaluation

A model of evaluation for Workplace Learning:

Level 1: Reaction: The degree to which participants find the training favorable, engaging and relevant to their jobs. (E.g. The learner completes a favorable evaluation after the learning event/training)

Level 2: Learning: The degree to which participants acquire the intended knowledge, skills, attitude, confidence and commitment based on their participation in the training. (E.g. The learner passes assessment immediately after the learning event/training)

Level 3: Behavior: The degree to which participants apply what they learned during training when they are back on the job. (E.g. new skills confirmed through on-the-job observation 1-week, 30-days, and 60 days after the learning event/training).

Level 4: Results: The degree to which targeted outcomes occur as a result of the training and the support and accountability package. (E.g. metrics and reporting confirm new behavior has been adopted consistently after 6 months to a year after training, ROI achieved, etc.)

KSA

Knowledge Skills and Attitudes. The building blocks of a job-description. The learning goals for Workplace training often are defined by outcomes that include specific, measurable gains in one or more of these areas.

Learner Analysis

Data collected about learner group that is used to impact decisions throughout the instructional process. Components include learner group identification, general characteristics, numbers, and location, experience level, attitude, and skills that impact the design and delivery of training.

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Learning Assets

Learning assets are resources that are used to deliver information for the purpose of training and development.

Learning Experience

Learning experience refers to any interaction, course, program, or other experience in which learning takes place, whether it occurs in traditional academic settings (schools, classrooms) or nontraditional settings (outside-of-school locations, outdoor environments, internships, externships, etc.)

Learning Event

A session of structured learning such as classes, subjects, courses, and training programs. Learn more in: Taxonomies for Technology. A session of structured learning such as classes, subjects, courses, and training programs.

Learning Context

The circumstances that are necessary for learning. The learning context must be taken into account for meaningful learning to occur.

Learner Guide

Resource used in the instructional process to enhance the learning during the training and, in some situations, to use as a reference tool following training.

Learning Management System (LMS)

A Software (usually web or cloud-based) application used to plan, implement, and assess learning processes. An LMS provides instructors with a way to create and deliver content, monitor learner participation, and assess performance. An LMS provide interactive features such as threaded discussions, video conferencing, and discussion forums, etc.

Learning Object

A learning object is a set of content items, practice items, and assessment items that are combined towards the goal of achieving a single learning objective.

Learning Objectives

The desired outcomes for the training event (what the training should accomplish in terms of performance the learners should exhibit in the learning environment in order to be considered competent); consist of three components (the performance, criterion and standard); are

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congruent with the tasks and testing strategies. (Objectives can also be established for on-the-job performance, business or impact performance, or ROI).

Lesson Plan

A lesson Plan is a document prepared in advance of a learning event that describes what will occur in a detailed, step-by-step way. WLS suggests that the Lesson Plan include the learning objectives, content presentation methods, activities and learner assessment. It should include information about timing and all of the materials and learning assets required to conduct the learning event. With a well-organized Lesson Plan, an instructor can prepare to deliver training, and will be aware if the event is running ahead or behind schedule, and make adjustments mindfully.

Motivational theory

Motivational theory addresses what drives individuals to work towards a goal or outcome. Motivation is often broken into intrinsic and extrinsic factors. Intrinsic factors are related to an individual's interest, enjoyment and willingness to partake in an activity. Extrinsic factors include monetary rewards or other consequences of completing (or not completing) the outcome. Keller's ARCS Model of Motivation is based on the idea that Attention, Relevance, Confidence and Satisfaction are the building blocks of engaging learners through motivation.

Maslow's Hierarchy of Needs

Maslow's "Hierarchy of Needs" is a theory of motivation developed by psychologist Abraham Maslow in the 1940s. Maslow stated that there are five areas of human needs, and each must be met before the next can be satisfied. (Physiological needs → Safety need → Love & Belonging → Esteem → Self-Actualization).

Materials

Learning materials are the actual handouts, slides, job-aids, equipment, etc. required to fully run a given learning event.

Media

Physical means selected or developed to communicate instructional messages. Examples include drawings, presentation, video, computer, tablet, model, etc.

Mobile Learning

Learning that is delivered using mobile communication technologies, such as tablets, smartphones, and similar devices. Mobile learning can include performance support systems, brief tutorials, checklists, and videos.

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Model (a.k.a. Instructional Design Model)

Instructional Designers endeavor to be systematic when creating learning experiences and events. Different models correspond to different approaches to learning. Also, different models may be more applicable in various environments, and for different types of content and learning objectives. Models are often combined and adapted by practitioners. Well-known, foundational models include:

- ADDIE (general all-purpose ID methodology)
- ARCS (Keller's Motivational Theory)
- Backward Design (Wiggins & McTighe – start with the assessment and work backward for design)
- Cognitive Apprenticeship (came out of Constructivist Theory, Dewey, etc. Big on mentoring, modelling, scaffolding, fading)
- Dick & Carey Model (very straightforward objective-oriented, top-down design)
- Discovery Learning (inquiry-based instruction, see PBL & Experiential Learning, Bruel)
- Rapid Prototyping (used mostly for e-Learning, which are expensive & labor/team intensive to create. Involves creating fast samples that represent the course).

Module

Instructional element with a single theme that provides the information needed to develop mastery of specified knowledge and skills. Courses are made up of modules. Very similar to what most people think of as a "Lesson", modules are broader, and often encompass more than one Lesson. A Lesson has a narrower focus, and only one or two specific "Learning Objectives", whereas Modules support groups of Learning Objectives that connect to a chunked idea. E.g. A lesson may teach how to multiply by 2 and 3-digit numbers by hand, and a Module might be "Multi-digit Multiplication." The Module will explain the concept, and have a few lessons on 2, 3 and possibly 4 digit multiplication.

MOOC

A massive open online course is an online course aimed at unlimited participation and open access via the web. In addition to traditional course materials, such as filmed lectures, readings, and problem sets, many MOOCs provide interactive courses with user forums or social media discussions to support community interactions among students, professors, and teaching assistants (TAs), as well as immediate feedback to quick quizzes and assignments.

Needs Assessment

Tool used to identify "the gap" between what is already known and what needs to be learned in order to address particular organizational or personal needs. Needs assessment uses

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questionnaires, surveys, interviews, observation, etc. to collect data. The RoadMap has elements of Needs Assessment.

PBL (Problem-Based-Learning)

Problem-Based Learning (PBL) is a teaching method in which complex real-world problems are used as the vehicle to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts.

Performance Objectives

Describes what the learner should be able to do on-the-job (as opposed to what the learner should be able to do within the learning environment as a result of the training). Detailed description of what students will be able to do when they complete a unit of instruction.

Performance Discrepancy (Performance Gap)

Gap that exists between the Actual Performance (the current performance of learner) and the Desired Performance (required or requested performance). Specific to Workplace instructional design. Corporate and workplace ID often involves closing a performance gap.

Pilot Test

The last step in the Field Trial (the third phase of formative evaluation). Data collected is provided to the client who uses it to make the final decision about whether to proceed with implementation.

Post-test

A criterion-referenced test designed to measure performance of objectives to be taught during a unit of instruction; given after the instruction.

Pre-test

A criterion-referenced test designed to measure performance of objectives to be taught during a unit of instruction and/or performance on entry behaviors; given before instruction begins.

Prototype

A functional version of a new process and/or product, usually in an unfinished state, whose effectiveness and efficiency to be tested.

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Roadmap

The 60-day project started mid-September during which WLS provides recommendations and a 3-year plan for the agency-wide Instructional Design effort to support the implementation of the Learning Management System (LMS).

Repository

The collection of all the learning objects and assets in an LMS (Learning Management System). An LMS can be compared to library of learning content, and the “repository” is then the stacks or shelves of books.

Scenario-based Learning (SBL)

Scenario-based learning is a technique that allows learners to practice use of knowledge, skills and attitudes by being placed in a situation and applying the learning. Immediate consequences usually help the learner to adjust and fine tune their understanding and application. SBL is based in situated learning theory, and is particularly useful for implicit knowledge domains. (See implicit/explicit knowledge).

SCORM

Stands for Sharable Content Object Reference Model. Collection of specifications that enable interoperability, accessibility, and reusability of e-learning content. The SCORM standard is used to facilitate the interaction of eLearning modules with a Learning Management System to record data such as course completion and assessment scores.

Seat Time

The amount of time the learner is actively participating in a Learning Event. This metric is used to help estimate Instructional Design resources and costs for an ID project.

Situated Learning

The idea that the learner will learn best in the environment in which the learning will be required.

Social Learning

Social learning theory is a theory of learning process and social behavior which proposes that new behaviors can be acquired by observing and imitating others.

Albert Bandura built on the behaviorist learning theories of classical conditioning and operant conditioning. Bandura focuses on how behavior is learned from the environment through the observation.

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Storyboarding

A design technique for showing as individual scenes the proposed sequence of visual, textual, and audio elements in a learning module (such as a video or eLearning module)

Subject Matter Expert (SME)

Person responsible for the accuracy of facts, concepts, and other instructional content.

Summative Evaluation

Testing done following the Implementation phase (including pilot testing and subsequent Kirkpatrick's Levels of Evaluation).

Synchronous

Learning in which learner(s) and instructor(s) are in the same place, at the same time, in order for learning to take place. This includes in-person classes, live online meetings when the whole class or smaller groups get together.

Task Analysis

Process of identifying, sequencing, and relating the tasks and subtasks that should be performed in order to meet learning objectives. Driving force in performance technology and instructional systems development.

Test Criteria

Test criteria are the component of a learning objective that describes the quality or standard of performance that will be considered acceptable.

Trainer (Facilitator or Instructor)

This is the person who will be presenting the portions of the training that require lecture, facilitation, or other types of live coordination.

Turn-key Courseware*

The idea that your courseware can be used by multiple instructors if need be, that another instructor could step in and pick up where another has left off because of the thorough, step-by-step instructional materials in place. A shared, agreed-upon framework of instruction.

* WLS term



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Version Control

Ensuring materials are kept up-to-date, and being clear about which files/digital/print content is the most up-to-date, and where to locate them.

VILT (Virtual Instructor-Led Training)

Instructor-led, synchronous learning performed online. Usually employs video-conferencing across Internet-enabled devices or personal computers.

Web-based Training (WBT)

Instructional or training technique, which utilizes the Web environment.

Wrap-Around

A method of quickly moving content online by putting a "wrapper" around it. For example, converting PowerPoint slides to asynchronous e-Learns could involve a wrap-around approach.

WLS (Wecksell Learning Studio) ID Levels*

6 approaches to Instructional Design engagements defined by WLS to help frame and scope instructional design projects.

* WLS term