**Introduction**

Elearning is the marriage of technology and education, and most often, the instructional designer's greatest role is that of "bridging" concepts between the two worlds. This vital role ensures that a subject matter expert's (SME) concepts are properly developed by graphic designers and programmers. Unfortunately, the role of instructional design (ID) in elearning is often misunderstood - due to the perceived complexity of the process and to poor understanding of the pedagogical requirements of elearning. To a large degree, ID is the process whereby learning, not technology, is kept at the center of elearning development.

The need for instructional design is being noticed in elearning - both in corporate training departments and education institutions. It is one of the fastest growing fields: "Instructional design is one of the largest categories of e-learning jobs, and search engines produce better results with this specific keyword than the general term e-learning. There also are historical data for the job category of instructional design."

This article explores ID in terms of: definitions, models, and usage. Like many models, ID is simply naming a process that many instructors and course developers already utilize. Often, when instructors first encounter an ID model (like ADDIE), the response is..."Oh, I do that already".

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<th>What is Instructional Design?</th>
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<td>Many definitions exist for instructional design - all of them are an expression of underlying philosophies and viewpoints of what is involved in the learning process. Distinguishing the underlying philosophy of learning (in terms of: How does learning occur? What factors influence learning? What is the role of memory? How does transfer occur? What types of learning are best explained by the theory? <strong>Learning Theory</strong>) can help instructors and designers select the design model most congruent with their education philosophies. The following is a listing of ID definitions:</td>
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- Instructional Design is the systematic process of translating general principles of learning and instruction into plans for instructional materials and learning. **What is Instructional Design**
- Instructional design is a systematic approach to planning and producing effective instructional materials. It is similar to lesson planning, but more elaborate and more detailed. **Definitions of ID**
- Instructional Design is 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. In general, ID theory needs to move in the direction of flexibility and learner-empowerment if it is to allow ID to keep up with technological and institutional changes...."Like the chiropractor who realigns your spine, we might become healthier from a realignment of our theories. If we admit to and attempt to accommodate some of the uncertainty, indeterminism, and unpredictability that pervade our complex world, we will develop stronger theories and practices that will have more powerful (if not predictable) effects on human learning." **What is ID Theory?**
- Instructional design is the process by which instruction, computer-based or not, is created. Instructional design provides a framework for the creative process of design, and ensures the learners' needs are met. **ID and Development**
- Instructional design ("ID", also known as instructional systems design or "ISD") is a tested and proven methodology for developing instruction. It first gained popularity in World War II, where the Instructional design approach fared so well that it was quickly co-opted into corporate training. In the fifty years that followed, ID has become the standard for producing excellent training in both the military and corporate realms, as well as textbook authoring and development of computer-based learning material. **What is ID?**
- Instructional design is a systematic approach to course development that ensures that specific learning goals are accomplished. It is an iterative process that requires ongoing evaluation and feedback. **Instructional Design**
- Instructional Design is the art and science of creating an instructional environment and materials that will bring the learner from the state of not being able to accomplish certain tasks to the state of being able to accomplish those tasks. Instructional Design is based on theoretical and practical research in the areas of cognition, educational psychology, and problem solving. **What is ID**
Instructional Design Models
Instructional design, very loosely defined, is a system or process of organizing learning resources to ensure learners achieve established learning outcomes. As such, it is essentially a framework for learning. From a designer's perspective, various models can be followed in the instructional design process. It is important to note that, at best, a model is a representation of actual occurrences and, as such, should be utilized only to the extent that it is manageable for the particular situation or task. Put another way, perhaps one model is more effective for designing a math course, and another model is more effective for designing soft skill courses (like managing people, customer service, etc.).

Instructional Design Models offers an excellent visuals depicting various models. Here is an overview of some different models for instructional design:

- **ADDIE** - refers to Analyze, Design, Develop, Implement, Evaluate. This is possibly the best known design model, and is frequently used in academic circles.
- **Algo-Heuristic** - "The theory suggests that all cognitive activities can be analyzed into operations of an algorithmic, semi-algorithmic, heuristic, or semi-heuristic nature. Once discovered, these operations and their systems can serve as the basis for instructional strategies and methods. The theory specifies that students ought to be taught not only knowledge but the algorithms and heuristics of experts as well."
- **Dick and Carey Model** - "The Dick and Carey model prescribes a methodology for designing instruction based on a reductionist model of breaking instruction down into smaller components. Instruction is specifically targeted on the skills and knowledge to be taught and supplies the appropriate conditions for the learning of these outcomes."
- **Robert Gagné's ID Model** - "Gagné’s approach to instructional design is considered a seminal model that has influenced many other design approaches and particularly the Dick & Carey systems approach. Gagné proposed that events of learning and categories of learning outcomes together provide a framework for an account of learning conditions."
- **Minimalism** "The Minimalist theory of J.M. Carroll is a framework for the design of instruction, especially training materials for computer users. The theory suggests that (1) all learning tasks should be meaningful and self-contained activities, (2) learners should be given realistic projects as quickly as possible, (3) instruction should permit self-directed reasoning and improvising by increasing the number of active learning activities, (4) training materials and activities should provide for error recognition and recovery and, (5) there should be a close linkage between the training and actual system."
- **Kemp, Morrison, and Ross** Nine step instructional design model.
- **Rapid Prototyping** - "Generally, rapid prototyping models involve learners and/or subject matter experts (SMEs) interacting with prototypes and instructional designers in a continuous review/revision cycle. Developing a prototype is practically the first step, while front-end analysis is generally reduced or converted into an on-going, interactive process between subject-matter, objectives, and materials."
- **Thiagi - Rapid ID**
- **Epathic Instructional Design** - 5-step process: Observe, capture data, reflect and analyze, brainstorm for solutions, develop prototypes

Why Use Instructional Design?
With a foundation of what instructional design is, and various models for implementation, we will now focus on the WHY of ID in elearning. Many classroom activities don't leave a "trail" that can be viewed by others (at least not directly - successes of graduates of a program can be evaluated and the relevance of courses assessed). Online learning is far more transparent. Classroom discussion is generally not archived (though certain lectures can be taped and shown to students)…whereas every aspect of elearning is transparent and can be used as a resources for subsequent courses.

Content, discussions, interactions, etc. can all be evaluated and reviewed by persons other than the instructor. As such, quality can be assessed more objectively in elearning. ID is a quality process. It seeks to ensure that critical concepts are explored through content presentation and learning activities.

Beyond quality and transparency issues, the greatest value ID offers is to students of online programs. The greatest objective of ID is to serve the learning needs and success of students through effective presentation of content and fostering of interaction.

Additional benefits instructional design offers elearning:

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Additional benefits instructional design offers elearning:
“Distance learning courses are likely to fail if they are delivered as if they were traditional courses.” (Smith, 1996)

“Pedagogy must drive the choice of instructional technology, not the other way around.” (Chizmar & Walbert, 1999)

“Compared with a human instructor, technology is less adaptive. Once a plan of integration is implemented, it is less likely to change it according to student's reactions. This is why instructional design plays an important role in bridging pedagogy and technology. Subject contents have to be well organized and strategies for teaching via a chosen medium have to be well-thought-out. Instructional design can help educators making the best use of technology; therefore guarantee a successful integration.”

**ID Approach for Integrating Pedagogy and Technology**

- Provides consistency between various courses developed by various instructors/designers. The general look and process of content exploration is standardized.
- In a classroom, an instructor can adjust “on the fly”...if, during the design process, a concept was not communicated clearly, a classroom instructor can clarify. Online, this type of adjustment is usually not possible. The design process must anticipate and meet potential concerns/amibiguities...or put another way ID tries to do online what the instructor does in a classroom.
- ID focuses on the most effective way to present content
- ID begins with the learner and the learner experience
- Quality of course is ensured through ID - covers all the phases of good development
- ID gives structure to the student's process of working through course material
- Appropriate use of technology: “With e-learning and blended learning proving to be no more effective than traditional classroom methods, why are so few training professionals recognising this simple fact: Technology, no matter how advanced, cannot compensate for its misapplication. Here's why instructional design is - and always has been - the key to unlocking the true potential of available learning technologies.”

**Leading edge training technologies**

- Accelerate development. A current concern in elearning is development time. ID can speed up development time.
- Creates a transparent process - easier to track and utilize the experiences of development teams (a knowledge management issue)
- "Too much of the structure of educational technology is built upon the sand of relativism, rather than the rock of science. When winds of new paradigms blow and the sands of old paradigms shift; then the structure of educational technology slides toward the sea of pseudo-science and mythology. We stand firm against the shifting sands of new paradigms and "realities." We have drawn a line in the sand. We boldly reclaim the technology of instructional design that is built upon the rock of instructional science.”

**Reclaiming ID**

**Conclusion**

The growth and success of elearning is closely linked to the design of quality learning, enabled through the use of technology. Instructional designers play the pivotal role of bringing together these disparate fields - for the benefit of students, instructors, and organizations. Many of the concerns of online learning drop out rates, learner resistance, and poor learner performance can be addressed through a structured design process. The resulting benefits - reduced design costs, consistent look and feel, transparency, quality control, standardization - make organizational investment in ID a simple decision.

**References for further interest**

- ID Standards
- ID for the Web
- Benefits of ID Models
- Why Instructional Design
- Instructional Design - ION/
- Instructional Design and Learning Theories

**History**

- Brief History of ID
- Hypertext History of ID
Fuente: http://www.elearnspace.org/Articles/InstructionalDesign.htm