

Annotated Bibliography—Instructional Design

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Faculty Development Series

Instructional design involves the determination of the content, methodologies, activities, sequencing, and assessment of learning. The instructional design process follows a recursive structure of analysis of learning outcomes, design and development of learning events, implementation, and assessment. The design process is driven by learning outcomes which are derived from desired long-term behaviors. These behaviors are assessed with measures that can be compared to performance criteria. This structure operates at the levels of program design, course design, and activity design. This annotated bibliography provides a starting point for finding resources on instructional design, with an emphasis on program and course design.

Books

Diamond, R. M. (1997). Designing and assessing courses and curricula: A practical guide. San Francisco: Jossey-Bass.

This text provides a systematic, learner-centered approach to instructional design. While most books focus on course design, Diamond also addresses designing an entire program of study and how individual courses fit within this framework.

Dick, W., Carey, L., & Carey, J. (2000). The systematic design of instruction. (5th ed.). Boston: Pearson, Allyn, and Bacon.

This book is considered the best single text on instructional design. A common textbook for graduate courses, it provides an overview and instructions for the classical instructional design process. This book is a great starting point for understanding instructional design.

Fink, L. D. (2003). Creating significant learning experiences: An integrated approach to designing college courses. San Francisco: Jossey-Bass.

Fink proposes a shift from teacher-centered to learner-centered learning environments to create significant learning experiences. This book provides a blueprint for both faculty and administrators about how to make that shift. As with other approaches, the process includes determining the learning goals, developing an assessment process to verify that the student has met those goals, and designing learning activities. Fink's approach is integrated and practical.

Gagne, R., Briggs, L., & Wager, W. (1992). Principles of instructional design. (4th ed.). New York: Holt, Rinehart, and Winston.

This text serves as the foundation for all of the others in the area of instructional design. The concepts and ideas presented are still pertinent for instructional designers and also provide an understanding for the principles developed in more recent approaches to the instructional design process.

Mager, R. F. (1997). *Preparing instructional objectives: A critical tool in the development of effective instruction.* (3rd ed.). Atlanta: Center for Effective Performance.

Mager pioneered the writing of learning outcomes in the 1960s, and his book is still the classic for this critical aspect of instructional design. All instructional design models start with learning outcomes, and this is the best book to address the development of learning outcomes specifically.

Reigeluth, C. M., ed. (1999). Instructional-design theories and models: Vol. 2. A new paradigm of instructional theory. Hillsdale, NJ: Lawrence Erlbaum.

This volume of essays covers the state of the art in instructional design theory. Articles from the major thinkers represent divergent theoretical perspectives on instructional design. While the text is theoretical, it still maintains a practical focus on application. The previous volume, published in 1987, provides the thinking of the 1970s and 1980s. This volume updates and expands the earlier work.

Wiggins, G., & McTighe, J. (1999). Understanding by design. Englewood Cliffs, NJ: Prentice-Hall.

Wiggins and McTighe label their approach to instructional design a "backward" design methodology because they begin design by identifying the desired results of the learning process. In practice, this follows the same general structure of the classic ADDIE instructional design approach. This book does provide excellent practical methods for analyzing the learning through the use of essential questions and for sequencing assessment and learning activities. A companion workbook is available.

Articles

Reiser, R. (2001). A history of instructional design and technology: Part II: A history of instructional design. *Educational Technology* Research and Development, 49 (2), 57-67.

This short article provides an excellent historical review of instructional design theories and theorists. The article introduces the topology of the field from a historical perspective. Part I of the article focuses on instructional technology and is not required pre-reading for Part II.

Van Merriënboer, J. J. G., Clark, R. E., & De Croock, M. B. M. (2002). Blueprints for complex learning: The 4C/ID-model. *Educational Technology, Research and Development*, 50 (2), 39-64.

The 4C/ID-model (four component instructional design) provides a structure for instructional design based on task-specific skills: learning tasks, supportive information, just-in-time (JIT) information, and part-practice. The model provides a framework for integrating these components and associated learning activities to support instructional design for learning complex tasks. The model is used frequently in the design of computer-based training.

Web Sites

Self Study Guide in Instructional Design. <www.id2.usu.edu/MDavidMerrill/IDREAD.PDF> [No longer active.]

M. David Merrill is an influential teacher and leader in the instructional design field. This annotated bibliography provides a structured introduction and tour of instructional design. By following Merrill's advice in the guide, readers can develop a very thorough understanding of instructional design processes and approaches, especially instructional technology and computer-mediated learning.

Survey of Instructional Development Models. ERIC Digest. < www.ericfacility.net/ericdigests/ed411778.html> [No longer active.]

This resource summarizes instructional design models from 1997. The article includes a taxonomy of models with references to key examples of each approach to instructional design. This is a great starting point for investigating approaches to instructional design.

Instructional Design and Learning Theories. < www.usask.ca/education/coursework/802papers/mergel/brenda.htm>

Brenda Mergel, University of Saskatchewan Educational Communications and Technology, provides an overview of the learning theories of behaviorism, cognitivism, and constructivism and their relationship to instructional design. The paper provides a very accessible introductory overview of these theories. The bibliography also contains links to additional resources.

Tips for Rapid Instructional Design. <www.thiagi.com/rid.html>

Sivasailam "Thiagi" Thiagarajan is a leading writer and instructional designer, especially in instructional games and activities. The resources from this page are tips for rapid approaches to instructional design. Traditional instructional design techniques require a great deal of analysis and development. Thiagi provides a model for how to develop a training session in seven days and produce a training video in one day. An essential part of his strategies is the use of templates for training and instruction. While these models are not ideal for rigorous instructional design, they do offer a methodology that might provide some structure in a crunch.

Problem-Based Learning. < http://chemeng.mcmaster.ca/pbl/pbl.htm>

This page provides a general overview of problem-based learning as a model for instructional design. The page includes links to two full-length books in electronic format: *Problem-based Learning: Helping your students gain the most from PBL* and *Problem-based Learning: Resources to gain the most from PBL*. Both texts are free downloads written by Don Woods, McMaster University Chemical Engineering Department. Woods provides an alternative approach to instructional design that positions the question (problem to be solved) prior to the learning. These two texts provide a detailed explanation of this concept in the design of courses and programs, including design and implementation issues.

Organization

American Society for Training and Development (ASTD). <www.astd.org>

The leading organization for trainers and instructional designers in the United States. In addition to the national organization, ASTD has many local chapters around the country. ASTD has primarily a business focus, but the resources and networks are very valuable to professionals in the educational setting as well.