Review of The Instructional Design Knowledge Base: Theory, Research, and Practice

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Abstract

The Instructional Design Knowledge Base: Theory, Research, and Practice by Rita C. Richey, James D. Klein, and Monica W. Tracey describes the instructional design knowledge base and further provides a taxonomy to frame the elements and related theories, thus approaching ID from both a practical and scholarly perspective. Geared toward the graduate student or scholar and not for the novice in its extensive explanations and source citations, the text should be required reading for all students of instructional design. Concepts are explained clearly and succinctly with well-organized chapters that provide headings and subheadings with introductions and transitional cues. The historical development and current research of each theory and model is well documented, and the references list alone would serve as a helpful reference for the student of instructional design. Scholars of ID will also find thought-provoking the suggestions for future research at the end of each chapter.

Keywords: instructional design, instructional design knowledge base

The Instructional Design Knowledge Base: Theory, Research, and Practice, by Rita C. Richey, James D. Klein, and Monica W. Tracey. New York, NY: Routledge, 2011. 219 pages, $44.95 (paperback); 240 pages, $155.00 (hardback).

One word characterizes Richey, Klein, and Tracey’s The Instructional Design Knowledge Base: Theory, Research, and Practice: thorough. Intended for “ID scholars and advanced graduate students,” the text provides a comprehensive education in ID development and theory (p. xvii). As a university instructional technologist and a graduate student in the field of computing technology in education, I found this book to be an excellent textbook and resource. Definitely geared toward the graduate student or scholar and not for the novice in its extensive explanations and source citations, the text should be required reading for all students of instructional design. Its six-part taxonomy of the ID knowledge base offers a valuable resource to support instructional design decisions. The three authors are scholars and practitioners
in instructional design, and Richey and Klein have also presented and published in the field of instructional technology. The book meets the authors’ goal of describing the instructional design knowledge base and further provides a taxonomy to frame the elements and related theories, thus approaching ID from both a practical and scholarly perspective.

Chapter 1 offers an overview of the history and definition of instructional design. In addition, the authors introduce six content domains of the ID knowledge base, which they use to provide a structural context for the theories explained in the book as well as for the taxonomy they posit in the final chapter; the domains are: learners and learning processes, learning and performance contexts, content structure and sequence, instructional and noninstructional strategies, media and delivery systems, and designers and design processes. The authors provide an excellent review of the literature in support, for example, of a definition of instructional design. All terms are defined, including “knowledge base,” “theory,” and “model,” and if the reader needs additional help, a complete glossary of terms is provided at the end of the book.

Each of the next eight chapters of the book focuses on one of the key theories foundational to instructional design, first four theories from other disciplines that pre-date instructional design as its own field of study (general systems theory, communication theory, learning theory, and early instructional theory), and then four theories borne out of instructional design research (media theory, conditions-based theory, constructivist design theory, and performance improvement theory). In each chapter, the authors explain the history and development of the theory, the philosophical underpinnings of the theory, how the theory undergirds and relates to instructional design with examples of application, and expectations of future research related to that theory and instructional design. Each chapter concludes with a table summarizing the theory and a table illustrating how that theory contributes to each of the six domains of the instructional design knowledge base, thus providing helpful summative redundancy.

In Chapter 2, General Systems Theory, the authors explain that the systematic thinking of understanding what a system is and how it operates is useful in solving instructional design problems. An example of how the theory relates to instructional design is provided, noting that a system or instructional design solution may need to change based on the influence of the external environment. This topic is well researched and discussed from all angles, for example, exploring the varying philosophies related to general systems theory. The chapter concludes with a description of the various instructional systems design models, including the authors’ model, all related to the basic ADDIE model.

Chapter 3 explains the development of communications theory and its applications to instructional design, including culture-based models, message design, and multimedia design. Chapter 4, Learning Theory, provides a comprehensive explanation of behavioral, cognitive, and social learning approaches and instructional design applications of each. Chapter 5 explains early instructional theory, the forerunner of current instructional design theory. The authors provide an illuminating comparison of early instructional theories, demonstrating that most of the elements are also found in current ID models; all “specifically address the importance of learner characteristics” and “include the concept of learner participation,” and “most address sequencing” (p. 75). Other common elements include “providing meaningful feedback,” using instructional objectives, and “aligning objectives, instructional activities, and assessment” (p. 75). The explanations of the foundational theories in Chapters 3 through 5 provide helpful insight into their influence upon and interrelationship with instructional design.

Chapter 6 addresses media theory. Since “technology permeates instruction at all levels” and given that technology advancements occur rapidly, this chapter was already dated upon publication; the most recent research articles cited were in 2008, before the popularity of social networking, wikis, blogs, and other new technologies in education, so the graduate student of ID would need to supplement this chapter with a review of current literature (p. 98). Although the chapter is thorough in its history of media theory, a more robust discussion of current research can be offered in a new edition of the text, especially given Klein’s and Richey’s expertise in instructional and educational technology (Richey, 2000; Richey, 2008; Klein, Driscoll, Hannafin, & Richey, 2011).

Chapters 7 through 9 explore three key theories developed through current instructional design research. Chapter 7 explains conditions-based theory and its ID applications: domains of learning, events of instruction, generative and supplantive strategies, problem solving, learning hierarchies, performance-content matrix, complex learning, and motivational design. Chapter 8 illustrates constructivist design theory and its impact on ID; its key