


Chapter 9

The Respective Roles of Broad and Deep Research in Instructional Design and Development Work

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ABSTRACT

The work of instructional design (ID) requires new content learning, which often requires various types of published or secondary research as well as direct elicitations from the cooperating subject matter experts (SMEs) about the topic. For instructional design projects, both design and development, a range of information is required: who the target learners are; what content knowledge is required (as knowledge, skills, and abilities); what pedagogical designs may be most effective; what technologies will be required for the build; what learning sequences, objects, assignments, and assessments are needed; what legal and technological standards need to be abided by. This work describes research strategies for instructional design, research documentation, research citations, and applying the many acquired research insights to the instructional design and development work.

INTRODUCTION

Typical professional job descriptions for instructional designers may list some of the following features: needs assessment, outlining, writing, learning object

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development, and teamwork. A critical capability involves the ability to conduct both direct primary and indirect secondary research and analyze the results for application to the work. “Broad” research is generally conceptualized as easily accessible and lightly applied research; it is conducted in a quick and efficient way. “Deep” research involves effortful primary research. Deep research may include access to protected information. Both broad and deep research are applied to the actual instructional design and the related digital learning objects for the project. “Instructional design,” defined generally, refers to the systematic work of building learning experiences for effective learning. Some of the informing data and information may be part of ongoing research regimens related to the teaching and learning context. Some of the research, of course, may not apply directly to the work at hand but may be kept in a formal or informal “knowledge base” to inform other work projects. (Figure 1)

This chapter explores some of the required types of research for instructional design projects in higher education (public sector) and in private industry.

REVIEW OF THE LITERATURE

A variety of theories / models / frameworks / research inform the design of instruction. There have been decades of research on how people learn at different life stages, a variety of human intelligences, people’s different learning preferences, and different teaching and learning methods. With the advent of online learning, these research studies have been applied to that space as well. Indeed, the research literature has long informed instructional designs (McLoughlin, 1999). There are some understood “givens” on how multimedia may be packaged for learning effects based on human cognition, whether in print or digital formats and “different media environments” (Mayer, 2003, p. 132).

“Design experiments” have enabled the “engineering” of learning, with domain-specific theories informing respective designs in different fields (Cobb, Confrey, diSessa, Lehrer, & Schauble, Jan.-Feb. 2003, p. 9). Some approaches focus on the importance of cultural competence on instructional design in order to better connect with target learners, especially for online learning designed for export (Rogers, Graham, & Mayes, 2007, p. 197). Some research is engaged to assess instructional content prototypes (Tripp & Bichelmeyer, 1990). “Developmental research” in the field of instructional design and development is inclusive of “the study of the process and impact of specific instructional design and developmental efforts; or a situation in which someone is *performing* instructional design, development, or evaluation activities and *studying* the process at the same time; or the study of the instructional design, development, and evaluation process as a whole or of particular process components” (Richey, Klein, & Nelson, 2004, p. 1099). “Design research”

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