

Evaluation and Assessment of Instructional Design



Module #1

Educational Research Fundamentals and Ethics

Part 1: Course Introduction, Definition of Research, and Different Types of Observations

Course Introduction



Instructional Design (ID) research is critically important to affirm existing methods and develop new ones in time.

- Course Focuses
 - Concepts of Research
 - Approaches to Research
 - Best Practices for Research
 - Evaluation of Data Received
 - Application to Instructional Design
- Goal of Course – execute better ID research studies.

Concept of Research



- General definition of research
 - A way to gather information through the use of various methods that are physical and nonphysical in nature.
- Educational Research
 - More specific; focuses on the aspects of learning and design of instructional materials.
 - Infinite ways to measure
 - Application of ADDIE

Primary Research



- Most common method to apply to educational research
 - Goal of primary research: L.C.A. Method
 - Learn (something new)
 - Confirm (verified by others through additional research)
 - Affirm (bias elimination from future works)
 - Application of scientific method
 - Reasoning to use primary research method over others
 - People-based research
 - Research pool of instructional design
- Driscoll (2011)

Educational Research Foundations



- Most Commonly Applied to ID / Educational Research
 - Positivism
 - Seeking absolute truth and is impossible to find.
 - Cause and effect relationships
 - Alternately actions lead to reactions
 - Social constructivism
 - Comprehension of existing world
 - Subjective understandings in a social, political, cultural, or historical point of view.
 - Alzheimer Europe (2009)
 - Cohen (2007)

Educational Research Methods



- Most common methods applied to instructional design and educational research
 - Qualitative Research Studies
 - Quantitative Research Studies
 - Mixed Methods Research Studies
 - Common Assumptions
 - Can only apply **one** type of research
 - Complexity and difficulty
 - Available / allotted time dedicated to research study
- Castellan (2010)

Observations and Educational Research & Instructional Design



Although there are numerous types of ways to observe participants, two (2) shown below are commonly used:

- Participant observations
 - Part of the crowd; blending-in effect
 - Direct observation with enhanced knowledge of group cultures.
- Unobtrusive observations
 - Shadow studies
 - View from a distance (i.e. mouse clicks/movements)
 - Driscoll – p. 161-162 (2011)

Observations and Educational Research & Instructional Design



Biases in research can soften, adjust, or nullify conclusions that were provided via a research study.

- Great care **must be exercised** when doing observations!
- Ways to reduce / eliminate observation bias
 - Application of a 'double-entry notebook'
 - Direct inquiries
 - Honesty and integrity
- Permission to measure participants!!!
 - Driscoll – p. 161-162 (2011)