

Instructional Design for Competence-based learning

Instructional design

Systematic development of instructional specifications and supporting learning materials through applying learning and instructional theories or research to ensure the quality of instruction is called as Instructional design.

Instructional design Process includes

- Analysis of learning needs and goals.
- Design of an instructional activity to meet those needs.
- Development of instructional materials and delivery systems.
- Implementation of learning activities.
- Evaluation of effectiveness of learning activities.

Instructional Design Models –some examples

- ADDIE (Analysis, Design, Develop, Implement, Evaluate)
- Hannifan and Peck
- Dick and Carey Model
- Knirk and Gustafson
- Kemp, Morrison, and Ross
- Rapid Prototyping
- Gerlachand Ely Design Model
- SAM (Successive Approximation Model)

ADDIE (Analysis, Design, Develop, Implement, Evaluate) Model

ANALYSIS

- Analysejob/task/skills/knowledge/learner characteristics, leading to the specification of competencies and training objectives.

DESIGN

- Determine training approach;
- Select instructional strategies, media, technology, leading to the specification of instructional activities.

DEVELOPMENT

- Develop lesson plans, instructional materials, media, exercises and tests.

IMPLEMENTATION

- Setup/prepare facilities,
- Conduct training.

EVALUATION

- Assess learning.
- Conduct Student Feedback.
- Evaluate Outcomes/Student Feedback.
- Improve programmed training.

Instructional Design for Competence-based learning

Purpose of Instructional Design for Competence-based learning is to facilitate learner acquisition of competence.

Nature of competence

Competence

(Ability to perform workplace task)

- Knowledge
- Skills
- Attitude

vs

Professional Action Competence

(Ability to perform task at the workplace)

- Methodological competence
- Technical competence
- Social competence
- Personal competence

Important considerations for competence-based instructional design

1. Workplace context frames task.
 - Learning should be authentic.
2. Workplace standards determines “Ability”.

- Assessment should be authentic.
- 3. T M S P are applied holistically in an integrated manner to perform the task at workplace.
- Learning and Assessment should be holistic/integrated.
- 4. Integrated application of several Competence Elements is required.
- Appropriate sequence of learning & scaffolds needed to promote systematic acquisition and integration.
- Learning materials should support development of mental model for integrated application.

Two type of Instructional Design for Competence-based learning

- Situate Learning and
- Sequence Scaffold Support

Situate Learning

1. Provide authentic context for learning in terms of task performed at workplace.
2. Set the stage for determining the.
 - content (which Competence Units/Elements).
 - relationship between CU/CE hence nature of integrated application of CU/CE.
 - M S P.
 - relationship between T M S P hence the nature of integrated application of T M S P.
3. Guide the design of learning activities/contexts to promote systematic acquisition of competence and develop cognitive flexibility to handle varying workplace situations.
 - Identifying authentic workplace task.
 - Determining content, M S P and the relationships.
 - Designing authentic contexts.

Sequence Scaffold Support

1. Design learning activities to.
 - Facilitate learners' processing, organising & retention of content.
 - Encourage learners to take ownership of their own learning.

2. Design learning resources (e.g. instructional presentation, notes, activity sheets) that support learning.
3. Working memory is limited while long term memory is not.
4. Learning is about changes in the schematic structures of long term memory or increased automation.
5. Well organised and highly connected schemas aids.
 - Retrieval of prior knowledge; and
 - Processing of new information.
6. For effective schema acquisition (or learning) to occur, instruction should be designed to reduce the working memory load.