

Learning Center of Excellence

Instructional Design Strategies
June 11, 2004



Approach

- ❑ Determine LCOE objectives
- ❑ Determine Learning Strategies
- ❑ Select Tools
- ❑ Develop Templates
- ❑ Develop Instruction



Objectives

- ❑ Produce Effective, Efficient instruction products
- ❑ Integrates with existing product delivery capability
- ❑ Consistent methodology and approach
- ❑ Opportunity for other postal institutions

ISD Strategy

ADDIE

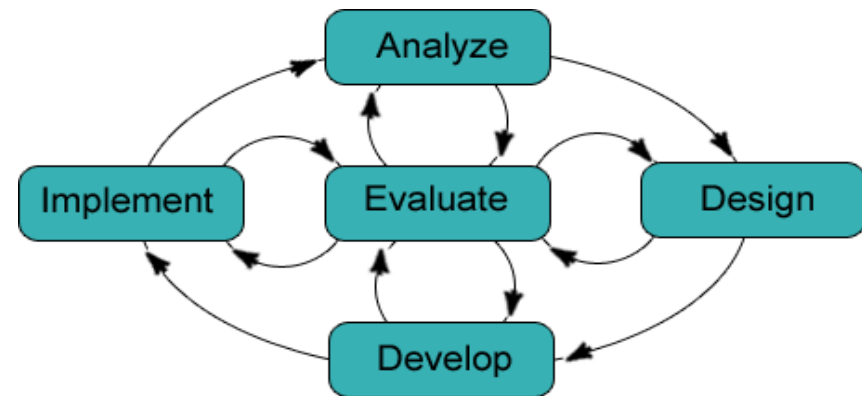
Analysis Phase

Design Phase

Development Phase

Implementation Phase

Evaluation Phase



Pebble-in-the-Pond

Problem

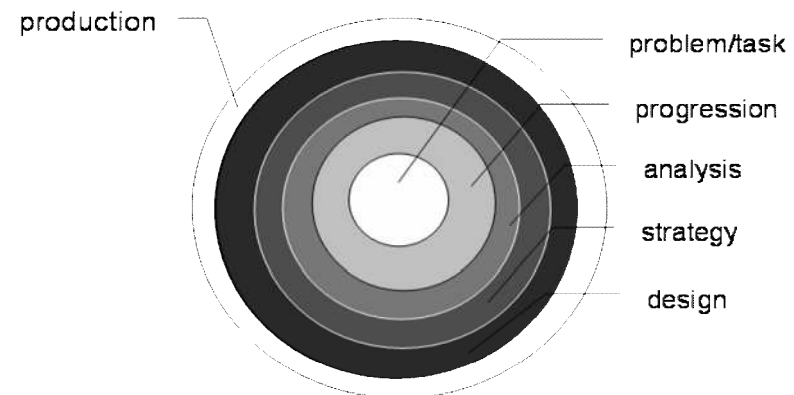
Progression

Analysis

Strategy

Design

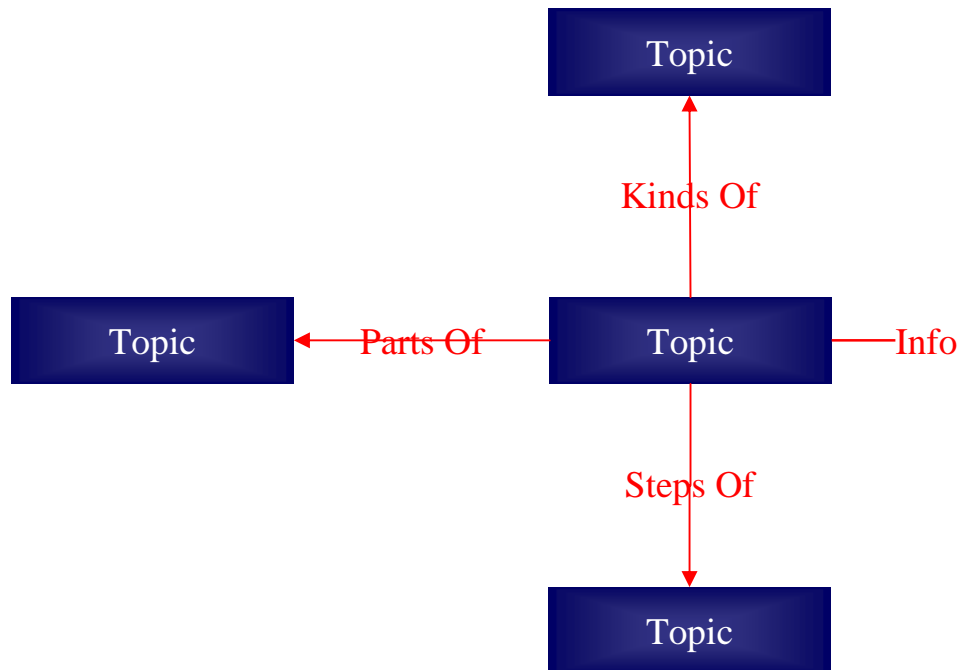
Production



Content Strategy

1. Facts (Information about ...)
2. Structure (Parts of ...)
3. Concepts (Kinds of ...)
4. Procedures (Steps of ...)
5. Processes (Events of ...)
6. Principles (Analysis of ...)

Content Relationships



Sequencing Strategy

- Lesson Sequencing (Learner Control)
- Display Sequencing
 - Rule (Tell)
 - Example (Show)
 - Practice (Do)
 - Test (Ask)
- Elaboration
 - Epitome (introduction)
 - Elaboration
 - Summary



Display Strategy

- Primary Presentation Form
 - Main presentation forms
- Secondary Presentation Form
 - Help, hints, alternatives, context, feedback
- Process Displays
 - Instructions or directions (how to think)
- Procedural Displays
 - Operational Directions (turn the page)
- Inter-display Relationships
 - Fading, Chunking, Random Order, Sequence, Criterion, Response Delay, Learner Control, Number of Items
- Information Mapping

Primary Presentation Forms

Content Mode	Generality	EG "Rule"	IG "Recall"
	Instance	Eeg "Example"	Ieg "practice"
		Expository	Inquisitory
Presentation Mode			



Performance Strategy

- Defining Objectives (performance with content)
- Performance Types
 - Remember-Generality (rule)
 - Remember-Instance (example)
 - Use (apply)
 - Find (derive)

Asset Strategy

The multimedia Principle

- ❑ Use graphics and text to present instructional content.
- ❑ Use relevant rather than decorative graphics.
- ❑ Use representative graphics to illustrate concrete facts, concepts, and their parts.
- ❑ Use animation to illustrate processes, procedures, and principles.
- ❑ Use organizational graphics to show relationships among ideas or lesson topics.
- ❑ Use interpretative illustrations such as graphs to show relationships among variables or to make invisible phenomena visible.
- ❑ Use graphics as a lesson interface for case studies.

The Contiguity Principle

- ❑ Place explanatory text adjacent to the graphics they describe.
- ❑ Place feedback on the same screen as the question.
- ❑ Place procedural directions on the same screen in which the steps are to be applied in an exercise.
- ❑ Do not use linked information that does not cover related information on the primary screen.
- ❑ Use techniques such as pop-up text and reduced graphics to support integration of text and graphics.

The Modality Principle

- ❑ Use audio narration to explain onscreen graphics or animations.
- ❑ Use text for information that learners will need as reference, such as directions for practice exercises.

The Redundancy Principle

- ❑ Do not explain graphics with both audio narration and redundant text.
- ❑ Onscreen text can be narrated when the screens do not include graphics.
- ❑ When language is challenging, onscreen text is narrated.

The Coherence Principle

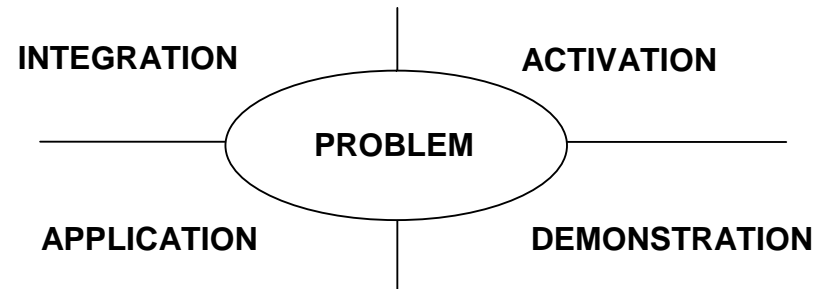
- ❑ Do not include extraneous sounds in the form of background music or unrelated environmental sounds.
- ❑ Do not use graphics and video clips that are related but not essential to the knowledge and skills to be learned.
- ❑ Use lean text or narration that presents the main points.

Assessment Strategy

- Aligned with Learning Objectives
- Types of Assessments
 - True or False
 - Multiple Choice
 - Matching
 - Fill in the Blank
 - Essay
- Random order questions
- Dynamic Tests
- Question Banks

Evaluation Strategy - Quality

- Demonstration
 - Consistency
 - Guidance
 - Relevant Media
- Application
 - Consistency
 - Information feedback
 - Diminishing coaching
- Problem
 - Show problem
 - Components
 - Progression
- Activation
 - Experience
 - Right content
 - Structure
- Integration
 - Go public
 - Reflect
 - Create
- Implementation
 - Navigation
 - Learner Control
 - Collaboration
 - Personalization

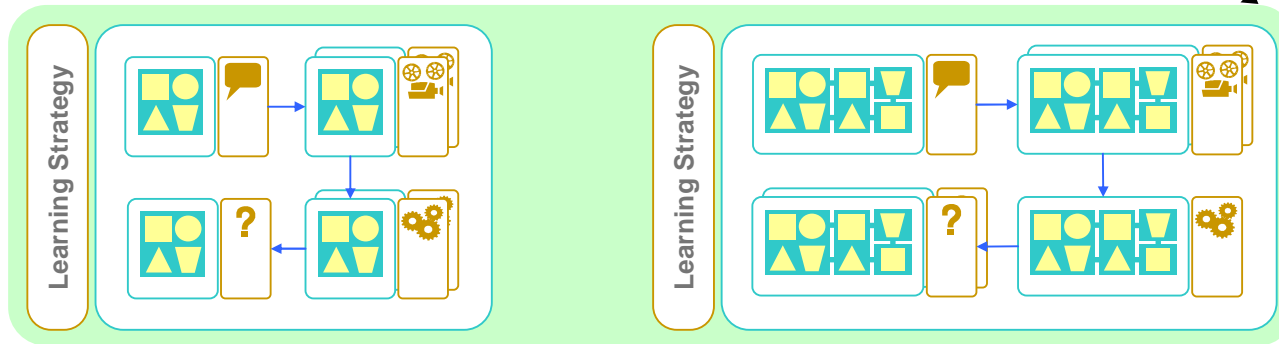




Distribution Strategy

- Internet
- CD
- Classroom
- Print
- SCORM Compliance
- XML based

Component Based Learning



Learning Product

- Multi Learning components
- Module, Lesson, Course, etc.

Learning Component

- Achieves one objective
- One or more of each instruction component type
- Tell, Show, Do, Ask sequence
- Include Learning strategies



Instruction Component

- Combines knowledge component with instruction strategy
- Tell – describes content
- Show – Provides examples
- Do – Practice activities
- Ask – Assess learning



Knowledge Component

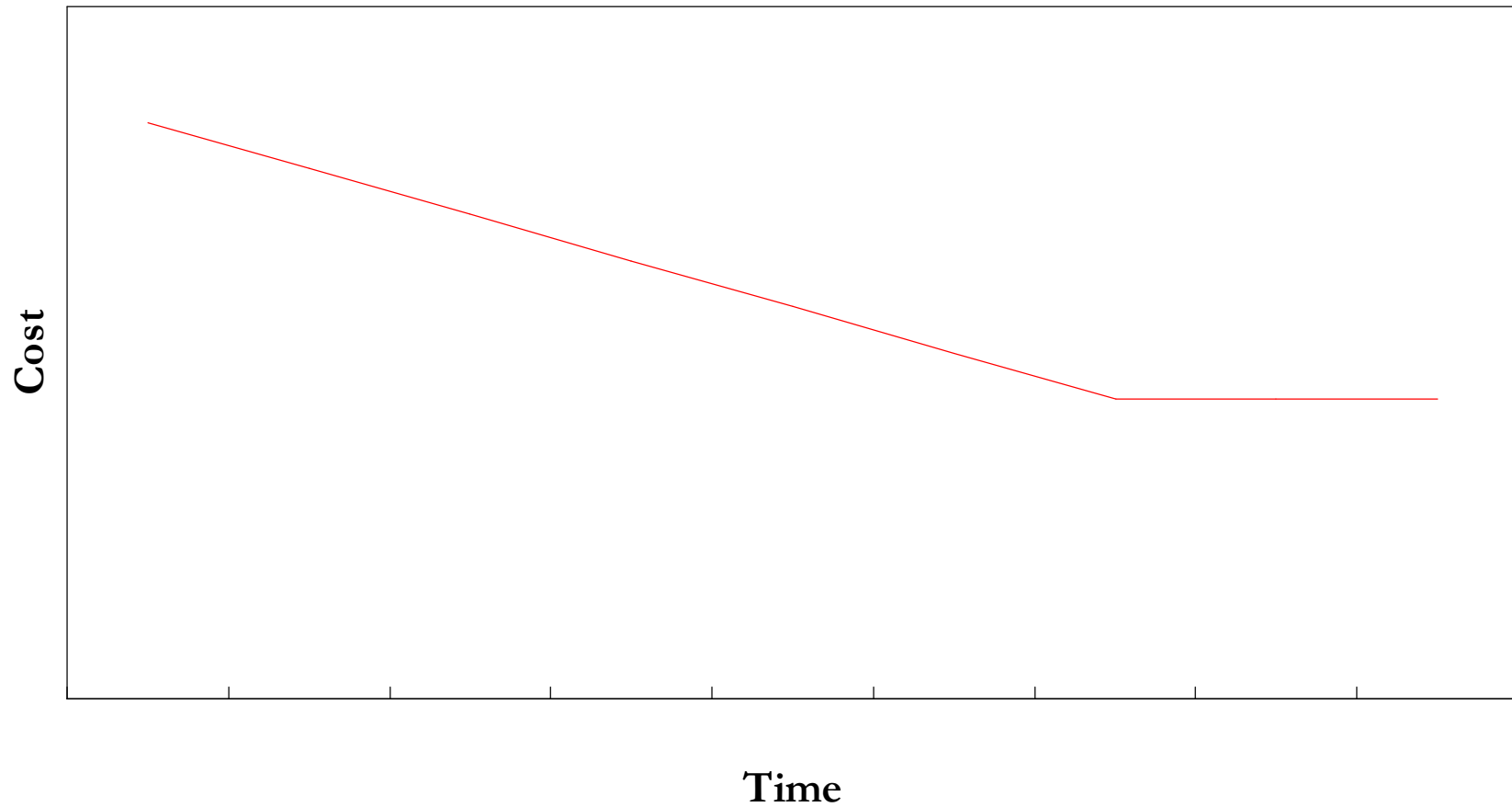
- Fact – Information
- Concept – Kinds Of
- Procedure – Steps Of
- Process – How it works
- Principles – Analysis Of
- Structure – Parts Of



Content Component

- Descriptions, articles, recordings, movies, pictures, etc.

Development Costs (Based on Reuse)



Tools Evaluation

- Authoring Tools
 - Authorware, Toolbook, Trainersoft, Powerpoint, Flash, Breeze, RoboDemo, HTML)
- Instructional Design Tool
 - Designers Edge, WIDS, CourseWriter, Other
- Learning Management System
 - LRN, other
- Media Development
 - Graphics, Audio, Video