

Instructional Design

Best Practices

Presented by Michele Matossian

Senior Instructional Designer

What is Instructional Design?

- **Instructional Design** is the practice of maximizing the effectiveness, efficiency and appeal of instruction and other learning experiences.
- The process consists broadly of:
 - Determining the current state and needs of the learner
 - Defining the end goal of instruction
 - Creating some "intervention" to assist in the transition

Adapted from Wikipedia, the free encyclopedia

What is Instructional Design?

- As a field, instructional design is rooted in cognitive and behavioral psychology
- In practice, instructional design incorporates writing, graphics, and interactivity
- There are many models of instructional design, but most are based on the ADDIE model

Adapted from Wikipedia, the free encyclopedia

The ADDIE Model

- Analyze
- Design
- Develop
- Implement
- Evaluate

Analyze

- Who is your target audience?
- What do they need to accomplish?
- What do they need to know to succeed?
- What are the most common obstacles?
- What resources are available to you?

Design

- Develop list of learning objectives
 - These become tasks
- Choose an approach and method of delivery
 - **SCORM** – **S**hared **C**ontent **O**bject **R**eference **M**odel
 - Online (WBT) – Offline (Print/ILT) – Blended
- Create a proposal
- Obtain approval from stakeholders

Design

■ Proposal

- Purpose – List learning objectives
- Outline – Revise, revise, revise
- Storyboard – As tight as possible
- Resources – Content, technology, expertise
- Budget – Justify numbers, present options

Design

- **Storyboard**
 - Shows sequence and timing of events
 - Provides a template for development
 - Shows stakeholders what they will be getting
 1. Start with outline
 2. Drop in sketches, still frames, iStock photos, charts
 3. Caption audio, video, interactivity, animations
 4. Add timing for each of the above

Design

- **Storyboard Examples**
 - [Bronchial Thermoplasty - Initial](#)
 - [Bronchial Thermoplasty - Final](#)
 - [Animation Storyboard](#)

Why Use Interactivity?

- *Engaging*
 - *Meaningful*
 - *Memorable*

What does it accomplish?

- Adds *interest*
 - Creates *excitement*
 - Improves *learning outcomes*

Develop

- **Best Practices – Writing**
 - Use active voice
 - Write in a friendly, conversational tone
 - Be clear, concise and accurate
 - Use familiar analogies
 - Put important stuff at the end
 - Read your work out loud

Develop

- **Simplify!**

- Use simple words and sentences
- Avoid jargon
- Eliminate descriptors
- Stay on point
- Be clear and logical
- Use pop-ups and hyperlinks to lighten pages

Develop

- **Best Practices – Visual Design**
 - Include more graphics – a picture is worth 1,000 words!
 - Give designers clear specifications
 - Select and crop graphics intelligently
 - Make navigation dead simple
 - Design for interactivity
 - Replace heavy text with audio
 - Demonstrate tasks with video
 - Create practice drills with interactivity

Develop

- **Chunk Content**

- Use short sentences
- Use short paragraphs
- Break down tasks to 7 +/- 2 steps
- Replace paragraphs with:
 - Bullets, tables, grids, graphics, charts, audio and animations
- Leave plenty of white space

Examples

- [GERD course from nurses.com](#)
- [GERD course redesign](#)

Implement

- Test content for accuracy
- Test navigation for correctness
- Test interface for ease of use
- Test delivery for convenience & speed

In sum...

Make it simple, smooth and beautiful!

Evaluate

- Test to be sure that:
 - User interface doesn't create frustrations
 - Materials are error-free
 - Learning is fun and efficient
 - Learners accomplish learning objectives

Cognitive Principles

- **Multimedia** Using words and pictures together is more powerful than words alone.
- **Interactivity** Fiddling with the controls better than complete passivity.
- **Contiguity** Place corresponding words and graphics near each other on the page.
- **Modality** If more than 150 words, present words as audio narration rather than text.
- **Redundancy** Audio and text together can create cognitive overload. Avoid!
- **Coherence** Leave out extraneous materials. No distractions!
- **Personalization** Write in a conversational style appropriate to learning level.
- **Practice** Provide opportunities to apply material to situations.
- **Worked Examples** Real-world examples allow learners to rehearse thought processes.
- **Reflection and Feedback** Provide regular opportunities to reflect and solve problems.

From "The Science of E-Learning" by Clark and Mayer

Good Teaching

- Explains clearly
- Uses concrete examples
- Is well-paced, with plenty of pauses
- Is relaxed and engaging
- Invites participation
- Provides timely feedback
- Solicits and answers questions
- Reads the audience well and adjusts accordingly
- Is vigorous, vital, and shows true interest in topic
- Most importantly, is motivated by a sincere desire to teach

Examples

- [Creating Presentations](#)
- [Gynecare Thermachoice III](#)