5 Steps to Creating Quality Educational Programs: Lessons from the Field of Instructional Design

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5 Steps to Creating Quality Educational Programs

Lessons from the Field of Instructional Design

October 25, 2019 Virginia Library Association Annual Conference
Today’s presentation and handout found online at http://bit.ly/5StepsVLA2019
Coordinator of Organizational Learning & Development
James Madison University Libraries

Career Development
Leadership & Management
New Employee Onboarding
Organizational Culture & Engagement
Creating staff development from scratch.
Learning Outcomes

After the session, accurately describe a 5-step process for creating an educational program from scratch.

During the session, select at least one method for conducting a needs analysis for an educational program that you might create.

During the session, draft at least one useful learning objective for an educational program that you might create.

During the session, identify at least one visual design choice which gets in the way of learning.

During the session, correctly match four evaluation methods with a corresponding level of evaluation.
How We Will Get There

• Instructional design and why you should care

• The 5 Steps in ADDIE

• Tools (within context of the 5 steps):
  • Learning Needs Assessment
  • Learning Objectives
  • Mayer’s Principles of Multimedia Learning
  • Kirkpatrick’s 4 Levels of Evaluation
  • Bonus (if time allows): Gagné’s 9 Events

• Questions & observations
I don’t need anything except this. Just this ashtray.

And this paddle game, the ashtray and the paddle game and that’s all I need.

And this remote control. The ashtray, the paddle game, and the remote control, and that’s all I need.

And these matches. The ashtray, and these matches, and the remote control and the paddle ball.

And this magazine... And this lamp...

And that’s all I need. The ashtray, the remote control, the paddle game, this magazine...

...and the chair.

--Steve Martin in *The Jerk*
Learning Theory
What is Instructional Design?

*Instructional design is the creation of learning experiences and materials in a manner that results in the acquisition and application of knowledge and skills.*

--Association of Talent Development
ADDIE: A 5-Step Instructional Design Model
Analyze

• Who are the learners?
• What are the constraints?
• What is the need?
Analyze Tool: Needs Assessment

• Competency Models
  • Library Competencies (ALA)

• Identify Gaps
  • Surveys
  • Interviews & Focus Groups
  • Observation
  • Tests
  • Document Analysis
Pair & Share

How might you discover or confirm the learning needs of your learners?
Analyze

- Who are the learners?
- What are the constraints?
- What is the need?
Design

• What are the learning objectives?
• What content should I include?
• What will be the format?
• What strategies will support the learning?
Design Tool: Learning Objectives

• Guide what you include
• Guide how you evaluate
• Mager’s useful learning objectives

“An objective is a description of a performance you want learners to be able to exhibit before you consider them competent.”

–Robert Mager

Session attendees will select at least one method for conducting a needs analysis for their own program before leaving the session.
The presenter will explain the value of conducting a needs analysis.

- audience?
- condition?
- degree?
**Reflect**

**Pair & Share**

What is a learning objective for your program?

A: Does it have an audience that is not the teacher?

B: Does it include an observable behavior?

C: What is the condition under which it will be performed?

D: Is there a degree of success you’d like to see? (optional)
Design

• What are the learning objectives?
• What content should I include?
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Develop

- How does the content all fit together?
- What graphics and visual design will support the learning?
- How can I avoid cognitive overload?
Develop Tool: Mayer’s Principles

Mayer’s 12 Principles of Multimedia Learning
Develop Tool: Mayer’s Principles

Coherence Principle

People learn better when extraneous materials are excluded.

I'm a brain.
Develop Tool: Mayer’s Principles

Spatial Contiguity Principle

People learn better when you present corresponding words and pictures near rather than far from each other on the page or screen.

Image source: Wikimedia Commons. Originally from Atlas plate from Anatomie du système nerveux, 1839-1857
Pair & Share

How might you improve the next slide based on Mayer’s 12 Principles?
ADDIE is a foundational instructional design framework based on learning theory, or “brain science,”
Develop

- How does the content all fit together?
- What graphics and visual design will support the learning?
- How can I avoid cognitive overload?
Implement

- Do I need to train the trainers?
- Can I test the program before final release?
- Do I have all materials on hand?
Evaluate

• Did the program run as planned?
• What resources did I use?
• How many people participated?
• Did my participants learn what you intended for them to learn?
Evaluate Tool: Kirkpatrick’s 4 Levels

How did the organization benefit?
Did they change their behavior?
Did they learn?
Did they like it?

Level 4: Results
Level 3: Behavior
Level 2: Learning
Level 1: Reaction

Which level of evaluation?

Level 4: Results

A presenter asks the audience to share how they might do a needs assessment.

Level 3: Behavior

VLA asks in a post-conference survey: “did you enjoy the 5 Steps session?”

Level 2: Learning

A library director surveys employees: “rate the relevance of workplace training offered last year.”

Level 1: Reaction

Your supervisor asks you to describe the steps you used when developing a training plan for a new employee.
Evaluate

• Did the program run as planned?
• What resources did I use?
• How many people participated?
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ADDIE: A 5-Step Instructional Design Model
Design

• What are the learning objectives?
• What content should I include?
• What will be the format?
• What strategies will support the learning?
Gagné’s 9 Events

1. Gain attention
2. Inform learners of objectives
3. Stimulate recall of prior learning
4. Present the content
5. Provide learning guidance
6. Elicit performance
7. Provide feedback
8. Assess performance
9. Enhance retention and transfer to the job

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