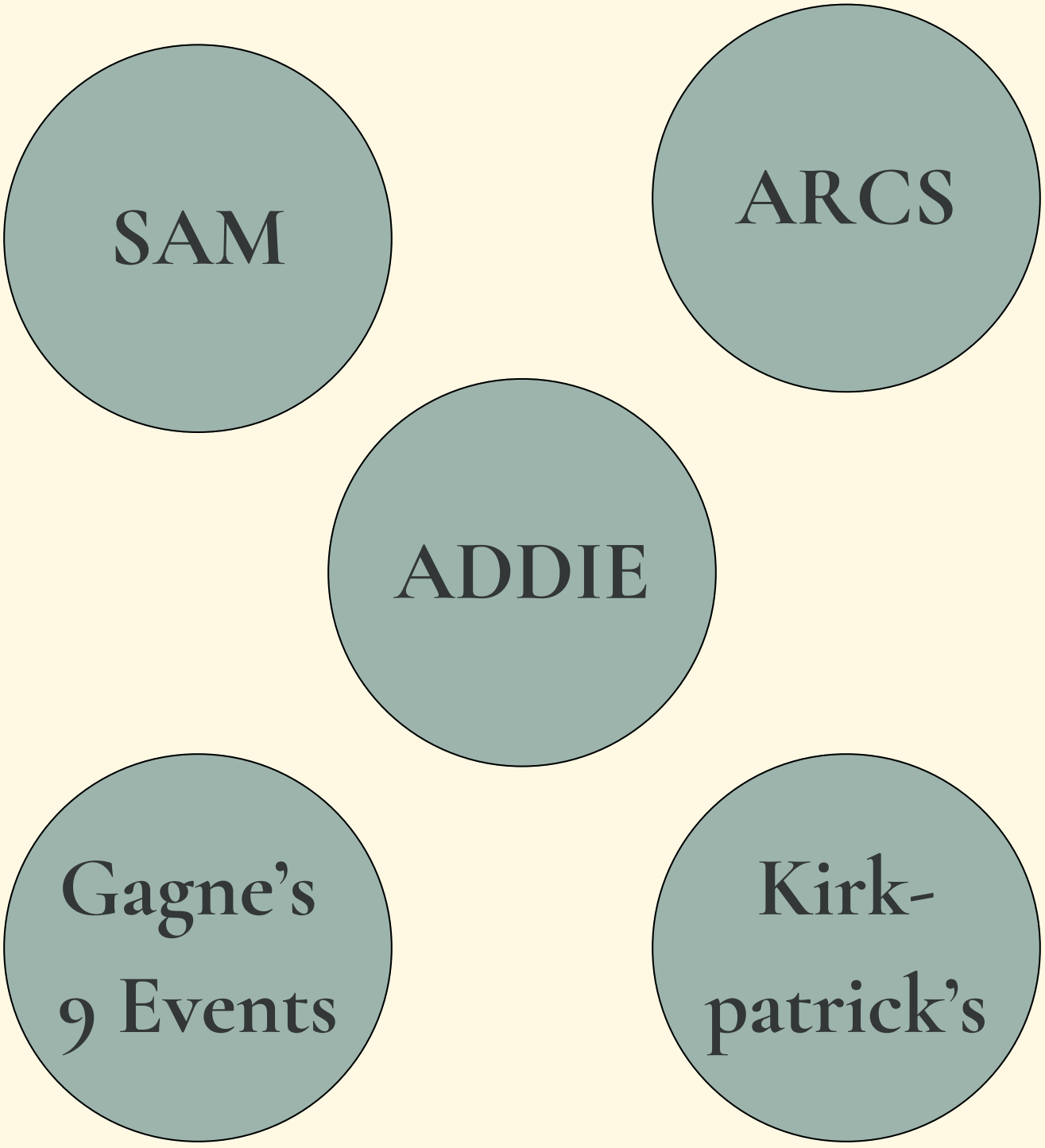
Instructional Designer

Common Instructional Design Learning Development Models



ADDIE

Analyze

Identify the learning problem, target audience, goals, and any constraints to ensure the solution fits the actual need.

Design

Plan the learning objectives, content structure, assessment methods, and visual/technical approach before development begins.

Develop

Create and assemble the content, activities, and learning materials based on the design blueprint.

Implement

Deliver or deploy the training to learners, whether online, in-person, or in a blended format.

Evaluate

Assess the effectiveness of the learning solution through feedback, performance data, and revision opportunities.

Traditional development model. Similar to the waterfall method of project management. Each step is completed before moving on to the next step.

SAM

Successive Approximation Model

Iterative prototyping model: evaluation, design, and development

Goal:

- Steadily close the gap between current behavior and goal behavior
- For eLearning: make gradual improvements in small steps instead of perfectly executing large steps

Benefits

- Minimize Rework
- Build consensus more quickly
- Develop more creative solutions

Simple SAM

- Start with evaluation/analysis, move to design and development, then back to evaluation
- Rinse & repeat - prototype & ask "Why shouldn't we do this?" (complete 3x new prototypes)

Similar to Agile development methodology

Fundamentals

- "No eLearning application is perfect (ever)."
- "Functional Prototypes are better than storyboards and design specs (much better)."
- Disposable, quick and dirty prototypes are beautiful (We try again three times, then we move on)

Three-Phase SAM

AKA: Big SAM and Formal SAM

Three Phases

1. Preparation
2. Iterative Design
3. Iterative Development

Used for bigger projects with more team members and moving parts

Preparation

- Gather background info
  - Identify project goals, stakeholders, deadlines, budget, existing content, etc
- Host a savvy start
  - Meet with design team and key stakeholders to brainstorm and (quickly) prototype solutions

Iterative Design

- Plan the project
  - Evaluate timeline, budget, scope, etc
- Do additional design work as needed
  - Can consist of more iteration, resolving inconsistencies, building new prototypes, etc
  - Breadth before depth

Iterative Development

- Create a design proof
  - First draft of final product that's tested on final systems
  - Representative of "final" quality
- Continue final iteration through an Alpha, Beta, and Gold version of the product
  - These are complete versions of the project with fewer errors and shortcomings after each iteration

Gagne's Nine Events of Instruction

1. Gain Attention
2. State Objectives
3. Stimulate Recall
4. Present Content
5. Provide Guidance
6. Elicit Performance
7. Provide Feedback
8. Assess Performance
9. Enhance Transfer

1. **Gain Attention**

Engaging story

Video, animation, or audio clip

Thought-provoking question

2. **State Objectives**

What will I learn?

Keep it conversational

3. **Stimulate Recall**

Ask questions that draw on pre-existing knowledge

Refer to pre-existing knowledge

4. **Present Content**

Use a blend of media

Chunk it well

5. **Provide Guidance**

Scaffolding

Mnemonic devices

Tips about how to study/learn the material

6. **Elicit Performance**

Provide low-risk practice opportunities

7. **Assess Performance**

Questions or observation

Gives helpful data to learner and instructor

8. **Provide Feedback**

Provide feedback as soon as possible

Give people a chance to learn from their mistakes

9. **Enhance Transfer**

Mirror the performance context

Provide job aids

Relate content to real-world situations

Events are often conducted in order, but not always

ARCS Model of Motivation

How to design motivating learning

Attention

- Present real world examples (esp. if interesting - but not too distracting).
- Use humor (sparingly).
- Promote hands-on practice and participation
- Ask thought-provoking questions
- Incorporate a variety of media and methods

Relevance

- Explain how the learning experience with help today (& in the future)
- Link new information or concepts to audience's experiences

Confidence

- Set clear expectations for success
- Provide opportunities for people to practice
- Give feedback so that people can adjust
- Give people freedom to make their own choices (minimizes likelihood that they'll blame something external).
- Scaffold the challenges (go from easiest/simplest to most difficult/complex)

Satisfaction

- Let people apply their new skill(s) in a realistic setting - and set them up for success.
- Don't rely too heavily on external rewards or threats
- Keep consequences and standards consistent
- Reinforce the new skill often

Kirkpatrick Model of Evaluation

Level 1: Reaction

Overall satisfaction and engagement

Surveys, interviews, & focus groups

Level 2: Learning

New knowledge, skills, or attitudes?

Quizzes/tests. interviews, focus groups, discussions, observations, and more

Level 3: Behavior

Are people performing the critical tasks?

Surveys, observation, work review, KPIs

Level 4: Results

Are you seeing the desired results?

Business & sales metrics

Planning for evaluation:

Which results do we aim to achieve?

What do people need to do differently?

What knowledge and skills do they need?

How do we design an attractive intervention?

Types of Analysis

1. Needs Assessment
2. Job-Task Analysis
3. Learner Analysis
4. Instructional Context Analysis
5. Performance Context Analysis

Needs Analysis

First level of analysis

Key Questions:

Why aren't people performing at the desired level?
What will help them perform at the desired level?

Answer by:

- Interviewing & Observing people
- Ask stakeholder why questions to understand

Training only necessary when there is a gap in skill or knowledge creating the problem. Cannot correct environmental problems.

Avoid assuming a gap in skill/knowledge or that it is the only problem.

Job-Task Analysis

AKA: JTA

Process:

- Interviewing & Observing people to determine which tasks they must perform.*
- Rate each task in terms of difficulty, frequency, and importance.
- Identify and train for the high-priority tasks

*This is an exhaustive list of every step (no matter how small) necessary to complete the job.

Use action mapping to mark down and assess job tasks.

Learner Analysis

Commonly overlooked

This type of analysis is helpful to determine how much scaffolding is needed for the intended audience.

Process:

- Interview & survey people to determine preferences and background knowledge.
- Assess comfort level with tech & topic. Discover preferences for art-style & modality, etc.
- Identify and train for the high-priority tasks
- Helps you design learning that's more tailored, appealing, and effective.

Main point: Know your audience

Instructional Context

Informs the Deliverable

Key Questions:

What context will people be in when they engage with the learning experience?

What resources are available in that context?

F2F

Think About:

- Seats
- Projector
- Computer
- PowerPoint
- Etc

elearning

Think About:

- Screen size
- Processing Power
- Sound Cards
- Etc

Without this analysis, your learning experiences may be ineffective due to contextual issues.

Performance Context

Informs the Deliverable

Key Questions:

What context will people be in when they apply what they've learned?

What resources are available in that context?

Ensure the solution works in real context. Emulate the real context in the learning experience.

Example:

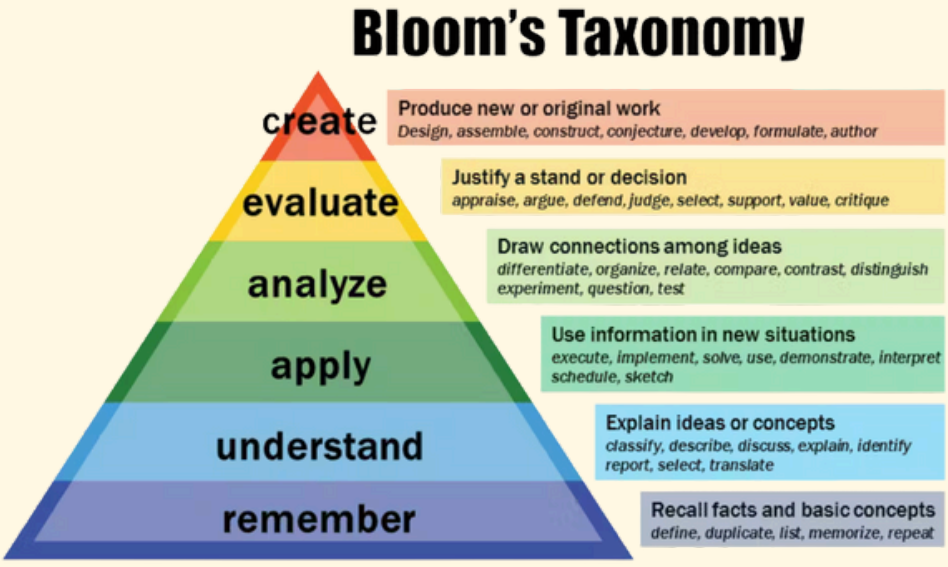
A job aid designed for a desktop computer is not helpful for learners who rely on smartphone access on the job.

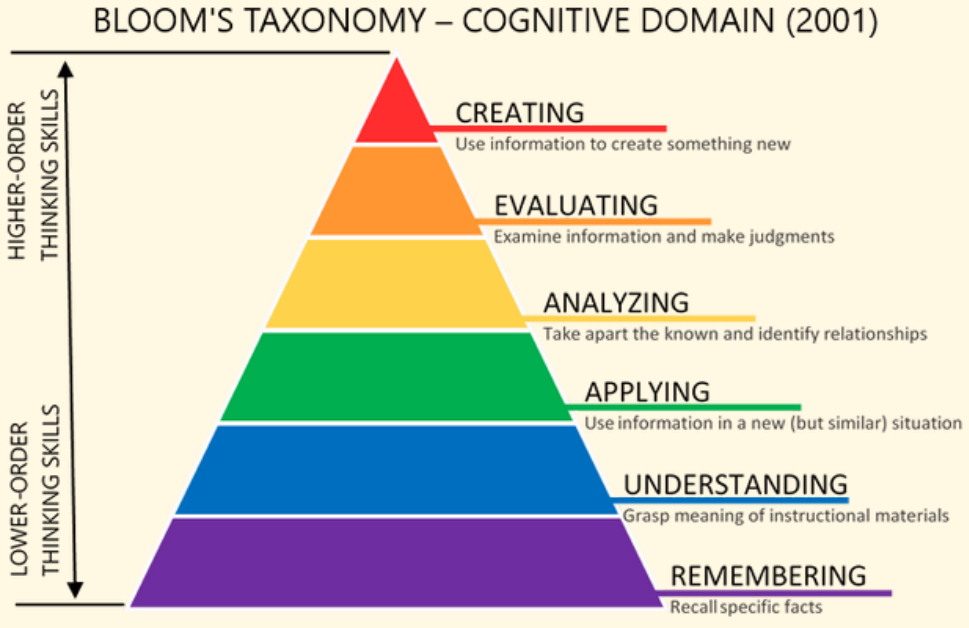
Without this analysis, your learning experiences may not translate to meaningful improvement for the learners.

Writing Learning Objectives Using Bloom's Taxonomy

Bloom's Taxonomy

Includes verbs for writing cognitive objectives





Learning Objectives

Objectives guide your instructional design

Alignment

Objectives --> Content --> Activities --> Assessment -->

Writing Objectives

- Start with the stem
- Use Bloom's Taxonomy
- Make it measurable and meaningful
- Include the performance, criteria, and condition

Start with the Stem

By the end of this lesson, students will be able to:

- Read a book
- Tie their shoes

The Whole Objective

- Performance (do what?)
- Criteria (to what standard)
- Condition (under what condition)
- Ex: Given a microscope, identify the nucleus with 90% accuracy

Make it measurable

- How do you know if someone achieved it?
- Avoid "understand, learn, know" etc.

Make it meaningful

- Does the person need to do it in real life?
- Will it enable them to do something else that they need to do in "real life"?

Common Mistakes

- Showing formal objectives to the audience
- Using objectives that are not measurable
- Mistaking activities for objectives
- Unrealistic expectations

Alignment with business goals is an important thing to prioritize

Mayer's Principles of Multimedia Learning

Multimedia Principle

Use words and graphics instead of just words

Include graphics that help people understand and organize

Contiguity Principle

Align words to the graphics that they describe

Put label close to whatever it's labeling

Explain the graphic or animation as it occurs

Modality Principle

Describe graphics with narration rather than on-screen text

Don't overload the visual channel

Show the words if complex or unfamiliar

Redundancy Principle

Explain visuals with narration or text, but not both

Don't add text to the screen when narrating graphics

Segmenting Principle

Break a continuous lesson into bite-sized segments

Chunk based on background knowledge and complexity

Coherence Principle

Adding extraneous material can hurt learning

avoid unnecessary info and distracting graphics

Keep everything aligned to the objectives

Personalization Principle

Use a conversational style, human voice, and polite wording

Emulate a human-to-human conversation

Embodiment Principle

Use on-screen coaches and characters

Can be photo-realistic or illustrated

Signaling Principle

Guide attention with visual cues

Pre-training Principle

Introduce key terms and concepts beforehand

Action Mapping

Streamlined approach to business training

Focus on performance instead of information

Avoid "course"
Focus on the problem from first contact
Schedule a kickoff meeting

<u>Kickoff meeting</u>
Invite key stakeholders
Identify the <u>business goal</u>, what people need to do, and why they're not doing it

<u>Create the Action Map</u>
Business Goal in center
Actions and sub-actions
Brainstorm with SME and stakeholder (completed in kickoff meeting)

<u>Business goal</u>
A measure that we already use will increase/decrease X% by a specific date as people in a specific group do something.

<u>Action Map</u>
Looks like a mind-map
What do people need to do?
Why aren't they doing it?

Prioritize Actions

Which contribute most to goal?

Often performed incorrectly?

Have horrible consequences?

Ask "Why?"

Why aren't they doing it?

Environment?

Knowledge? Skill?

Motivation?

Add notes in the action map

Design Practice Activities

Brainstorm with SME

Create strong questions

Decision, context, realism, and consequences

Create a Prototype

Consider the format

Design a functional prototype

Get Feedback

The prototype only needs to be functional

Get feedback from SME(s), client, and the intended audience

NEXT STEPS:

Create and get approval on a project plan

Write activities in batches

Work on next batch while last one is reviewed

Deliver activities to intended audience

Use success case method to measure impact

Resources for IDs

Freepik.com

Storyset.com

Illustrationkit.com

UnDraw.co

Getillustrations.com

Blackillustrations.com

Pexels.com

Pixabay.com

Elements.envato.com

Stock.adobe.com