

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



Jennifer A. Keach
keachja@jmu.edu

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...

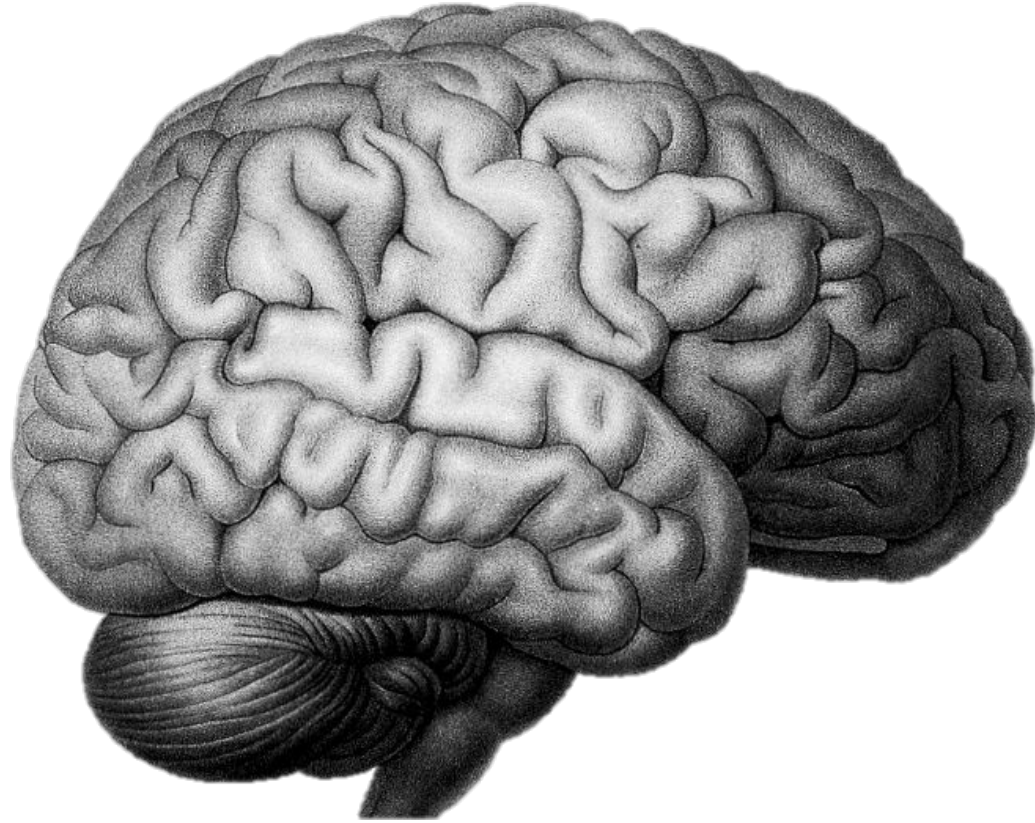
And that's all I need. The ashtray, the remote control, the paddle game, this magazine...

...and the chair.

--Steve Martin in *The Jerk*



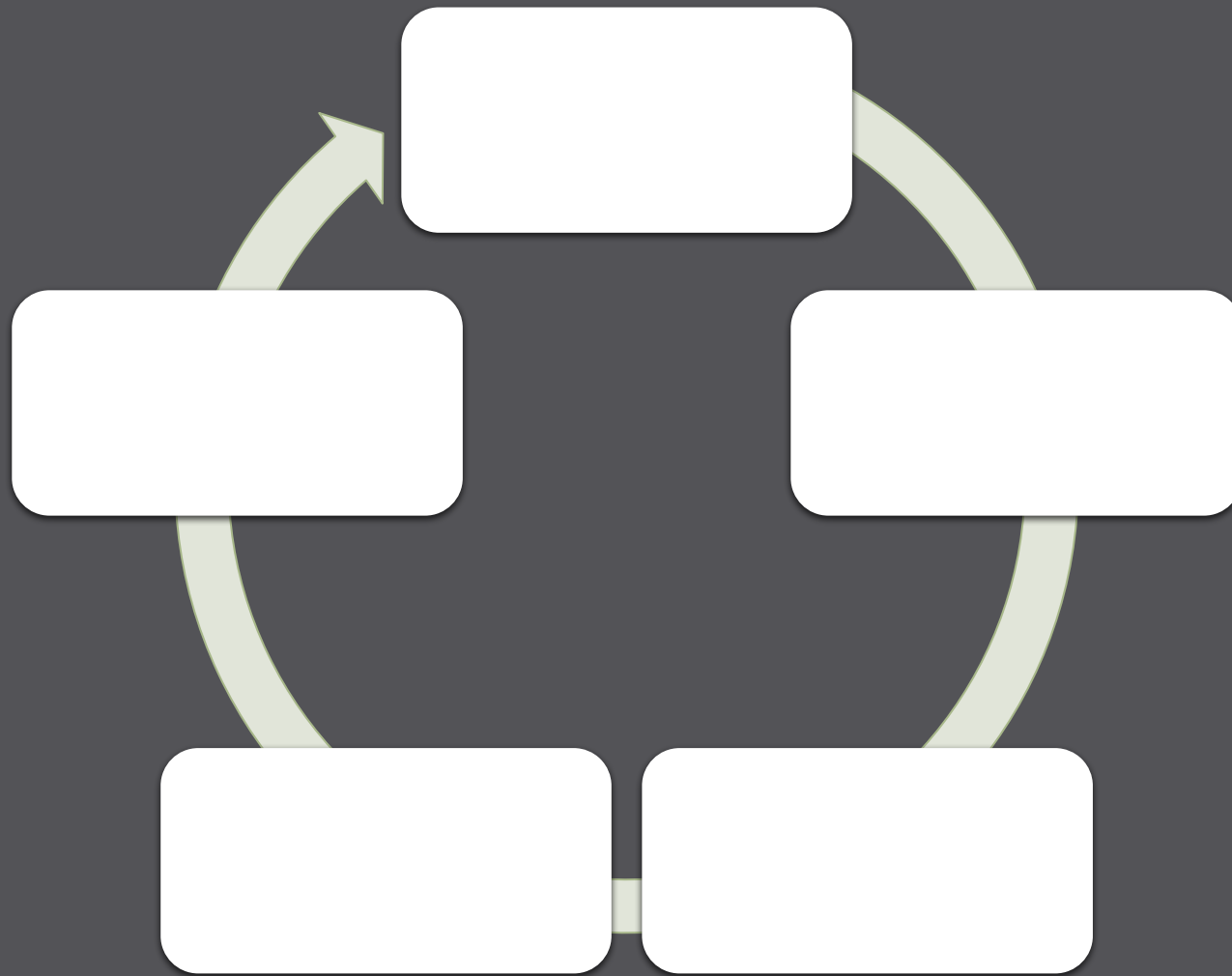
Learning Theory



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.

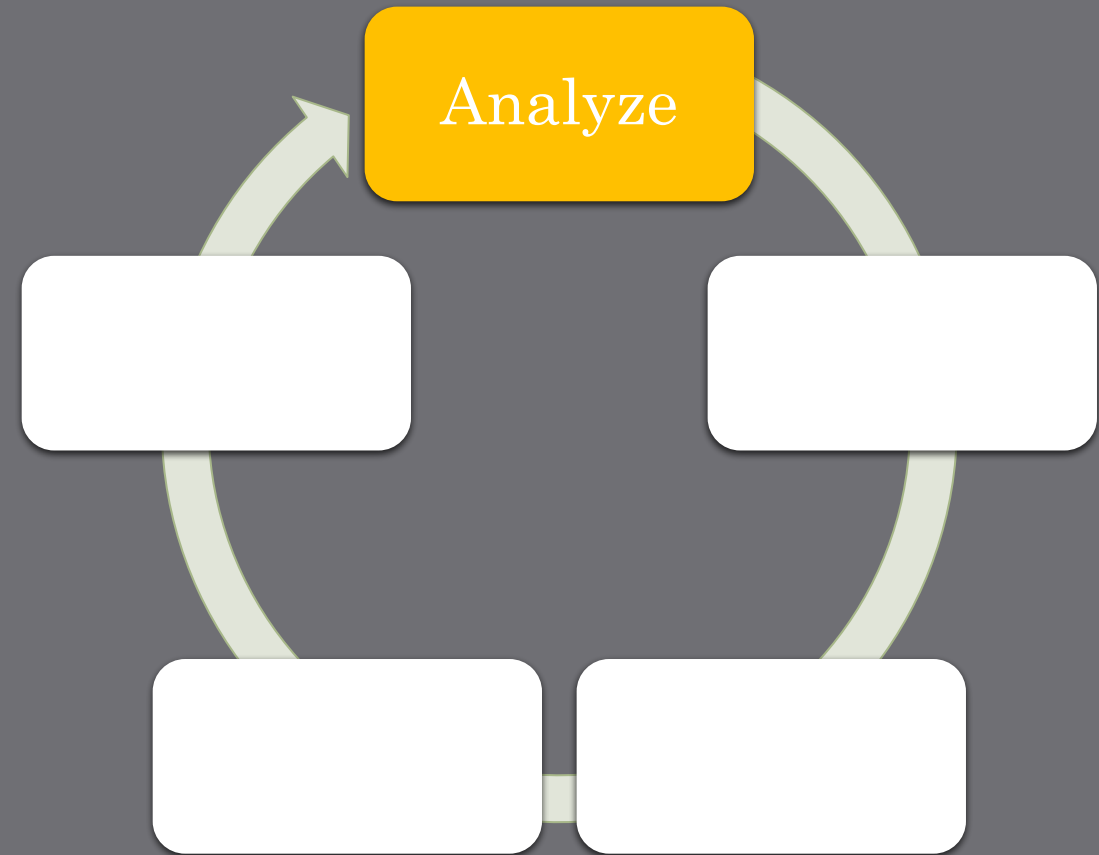
--Association of Talent Development



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

American Library Association - Core Competences of Librarianship

This document defines the basic knowledge to be possessed by all persons graduating in library and information studies. Librarians working in school, academic, public, special contexts will need to possess specialized knowledge beyond that specified here.

American Association of School Librarians (AASL) - Standards for Initial Preparation

The 2010 standards consist of five standards, each with four elements. The five standards are Reading, Information and Knowledge, Advocacy and Leadership, and Program Management, followed by a rubric for use by reviewers, a research piece to support that standard.

Association for Library Service to Children (ALSC) - Competencies for Librarians

ALSC, a division of ALA, recommends the following Core Competencies to all child librarians. Primary duties include delivering library service to and advocating library service for children.

Association of College and Research Libraries (ACRL)

- **Competencies for Special Collections Professionals**

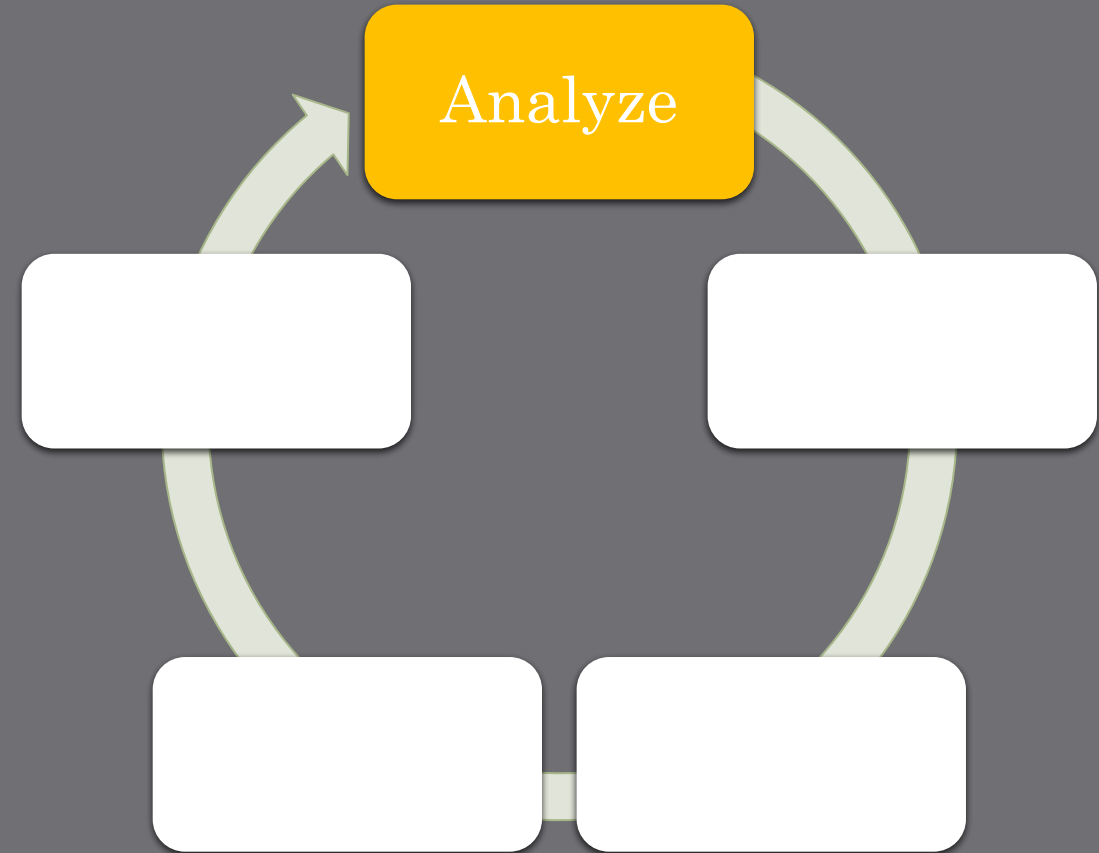
This statement is intended to define our profession and to foster a sense of community among special collections professionals, while helping others to understand our work. We hope that those planning a career in special collections, archives, and libraries, current members of our profession, LIS educators, LIS developing library and information studies (LIS) curricula, and administrators will find this statement helpful in making hiring decisions.

- **Standards for Proficiencies for Instruction Librarians and Coordinators**

The "Standards for Proficiencies for Instruction Librarians and Coordinators" provide a common definition for the scope of responsibilities for instruction librarians. At the basic level, they can be used as standards to create professional development opportunities and responsibilities in order to improve or expand their skills. They can also be used to define instructional services to define clearly responsibilities of these positions.

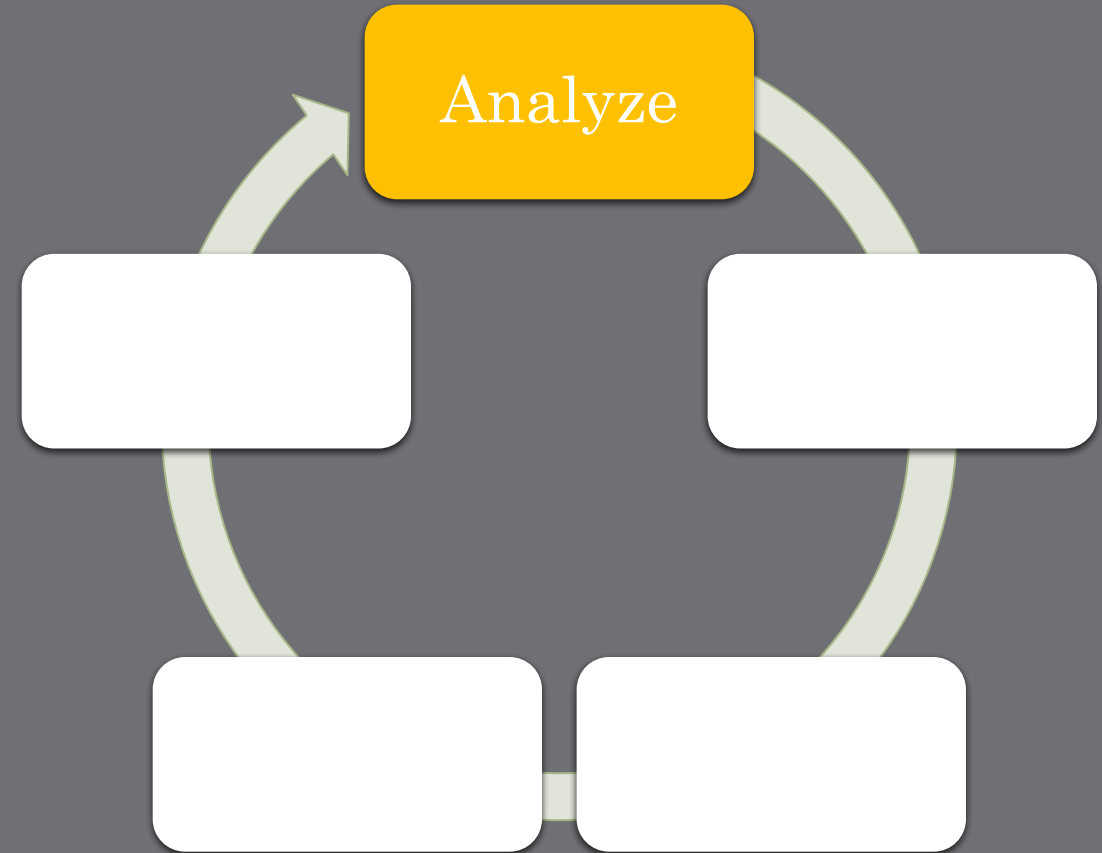
Pair & Share

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



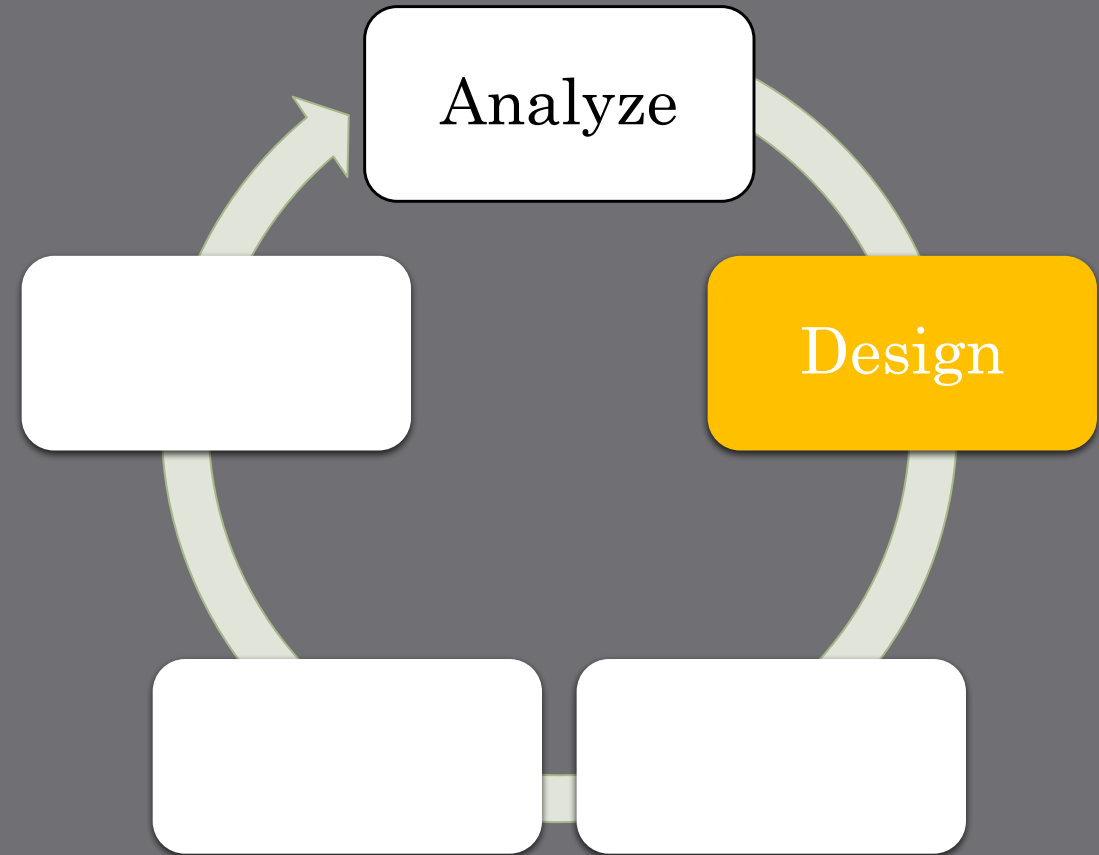
Analyze

- 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

audie

behavio

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Session attendees will select at least one

behavior

method for conducting a needs analysis for their own program

condit

before leaving the session

behavi

 The presenter ^{or} will explain the value of conducting a needs

analysis.

audien
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degree?

Reflect Pair & Share

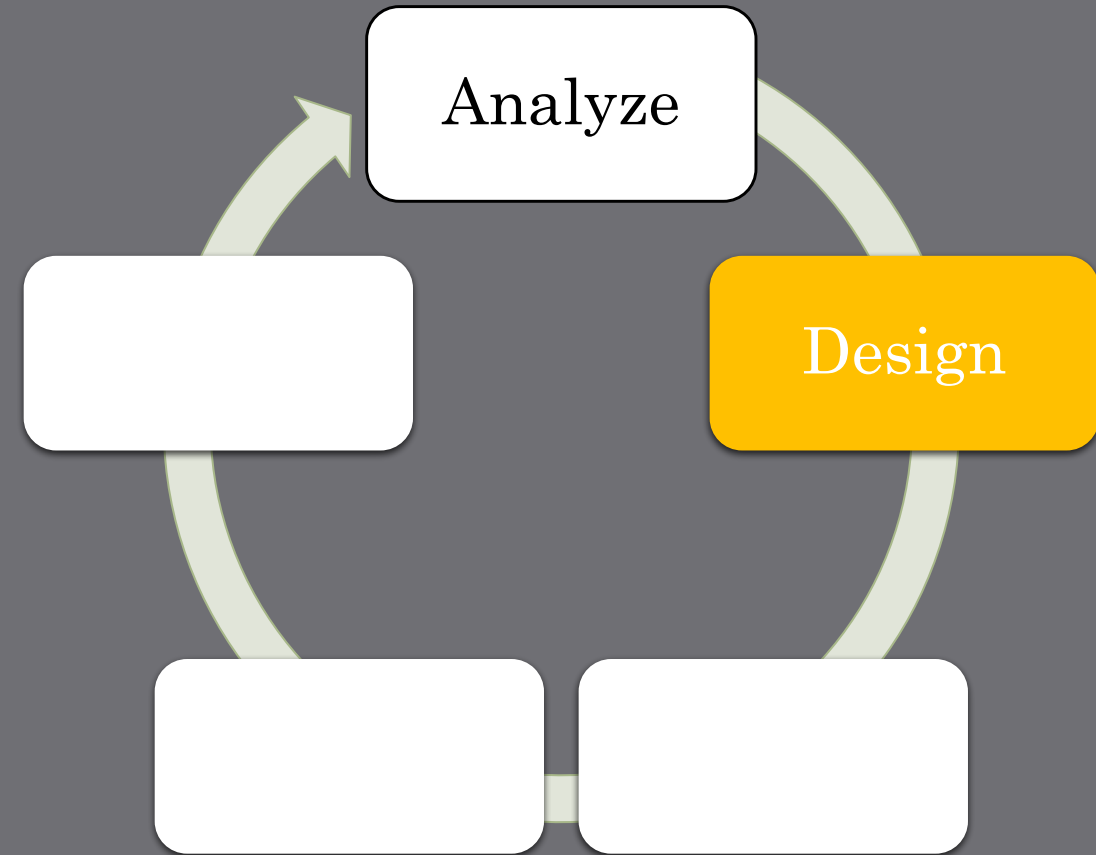
What is a learning
objective for your
program?

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

B: Does it include an observable
behavior?

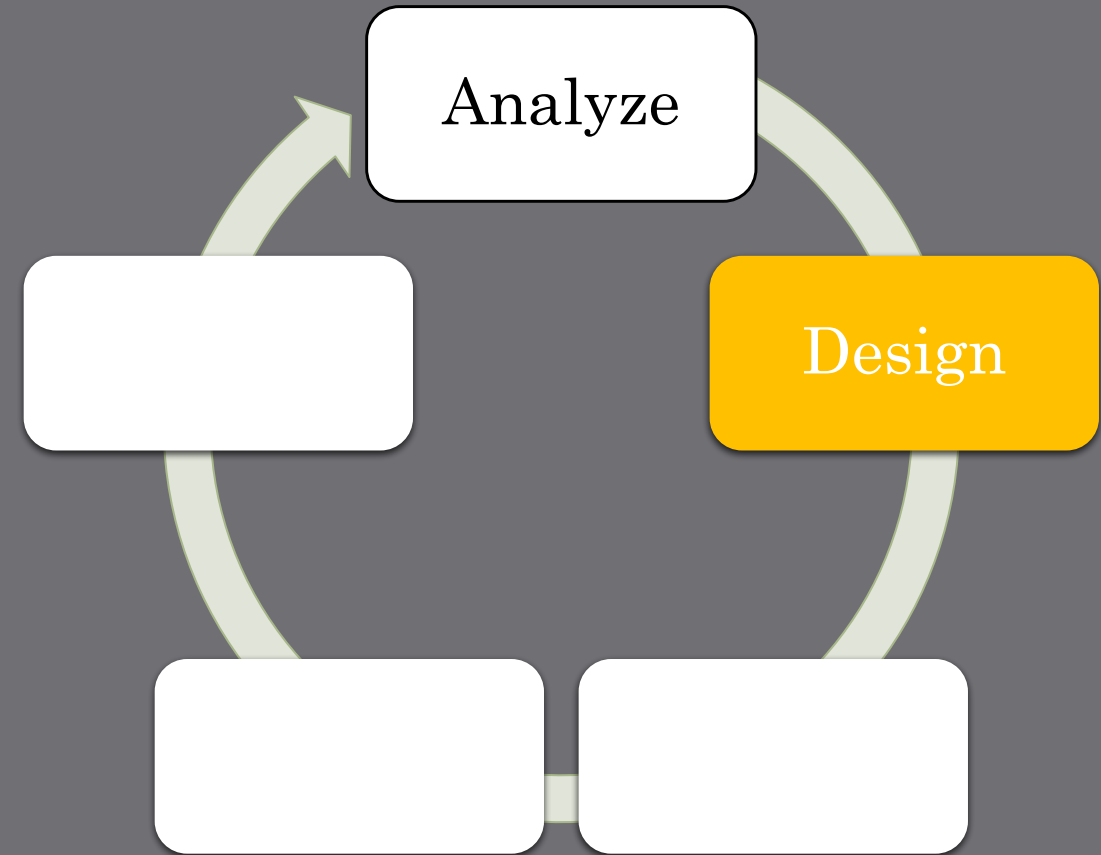
C: What is the condition under
which it will be performed?

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



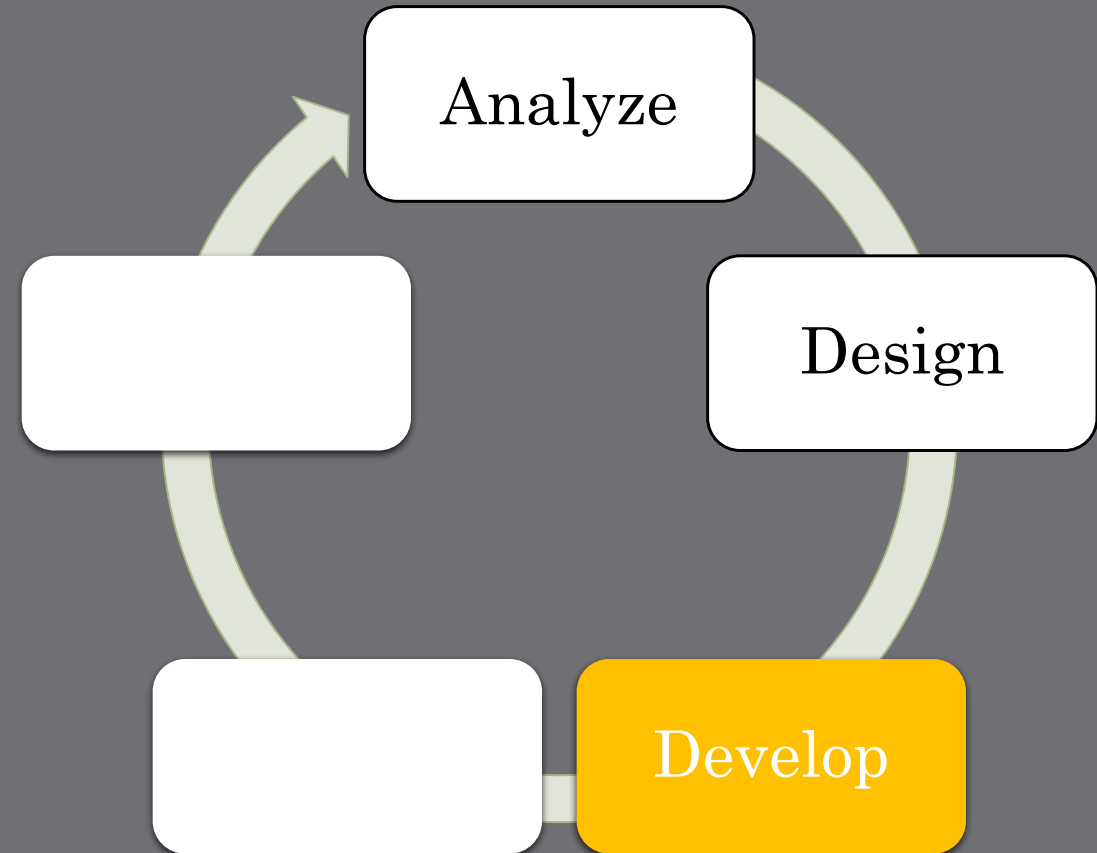
Design

- What are the learning objectives?
- What content should I include?
- What will be the format?
- What strategies will support the learning?



Develop

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



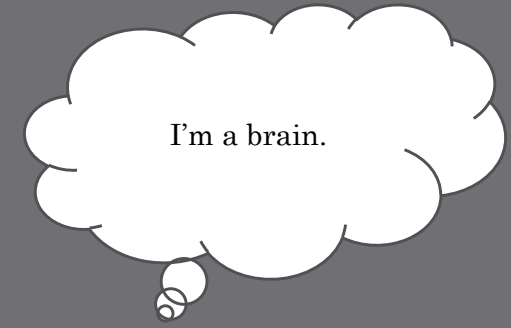
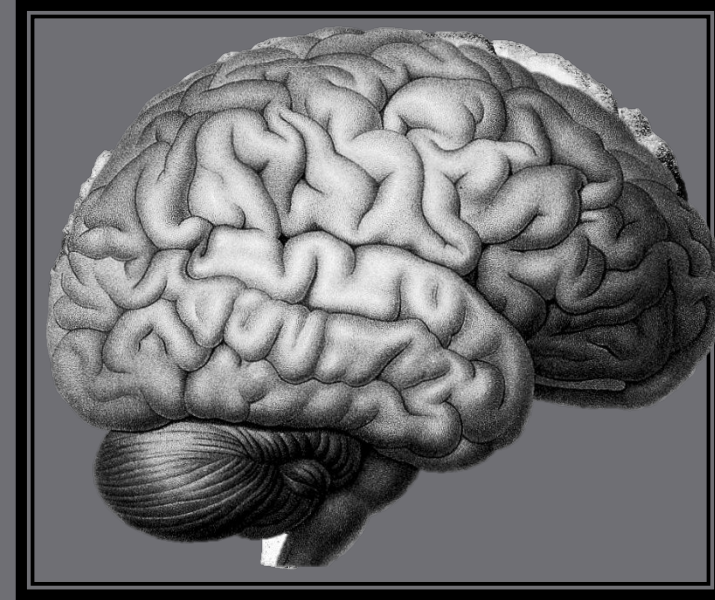
Develop Tool: Mayer's Principles

Mayer's 12 Principles of Multimedia Learning

Develop Tool: Mayer's Principles

Coherence Principle

People learn better
when extraneous
materials are
excluded.

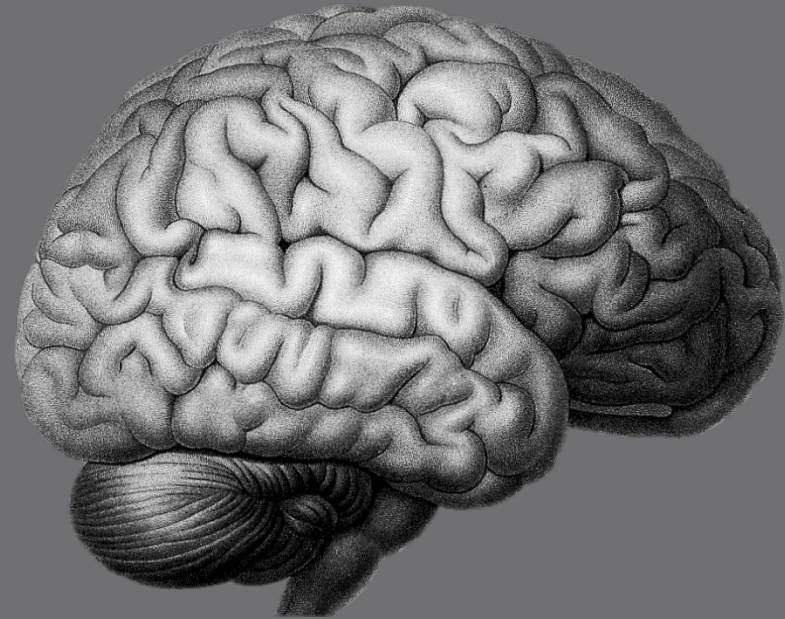


Develop Tool: Mayer's Principles

Spatial Contiguity Principle

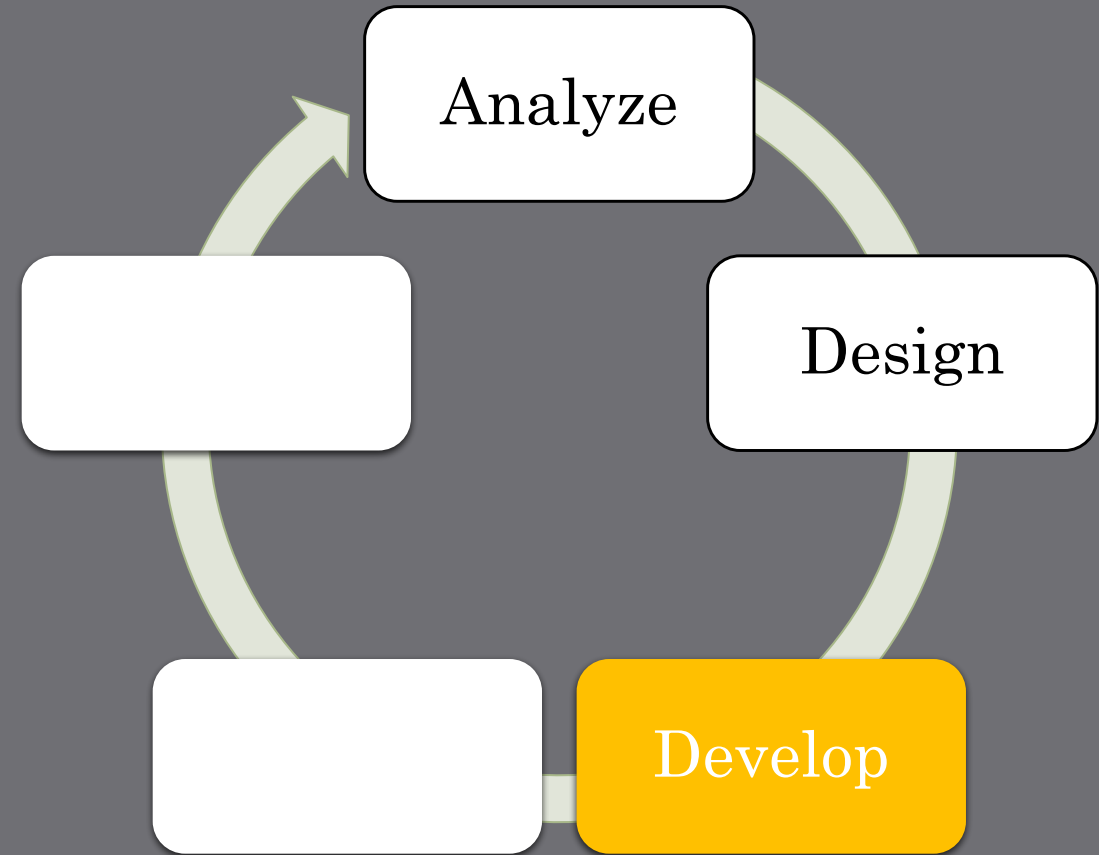
People learn better when you present corresponding words and pictures near rather than far from each other on the page or screen.

Learning Theory

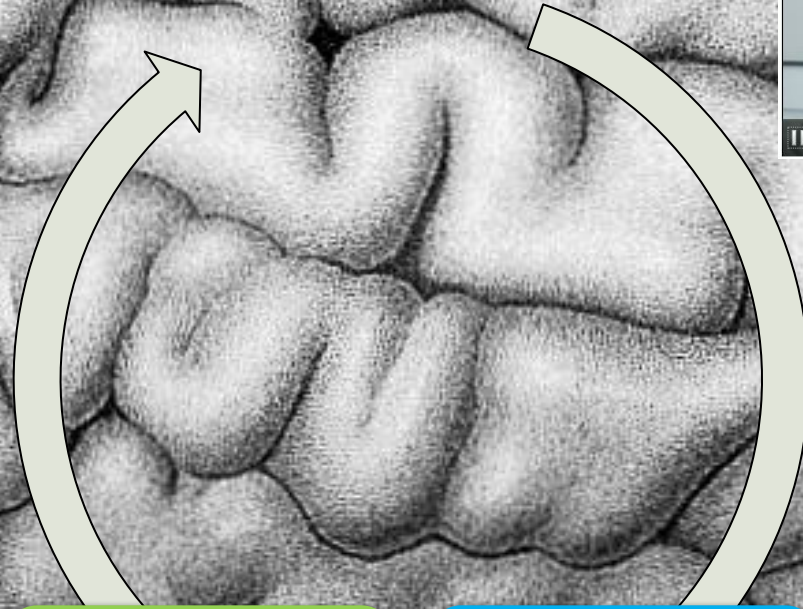


Pair & Share

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,”



Analyze

Implement

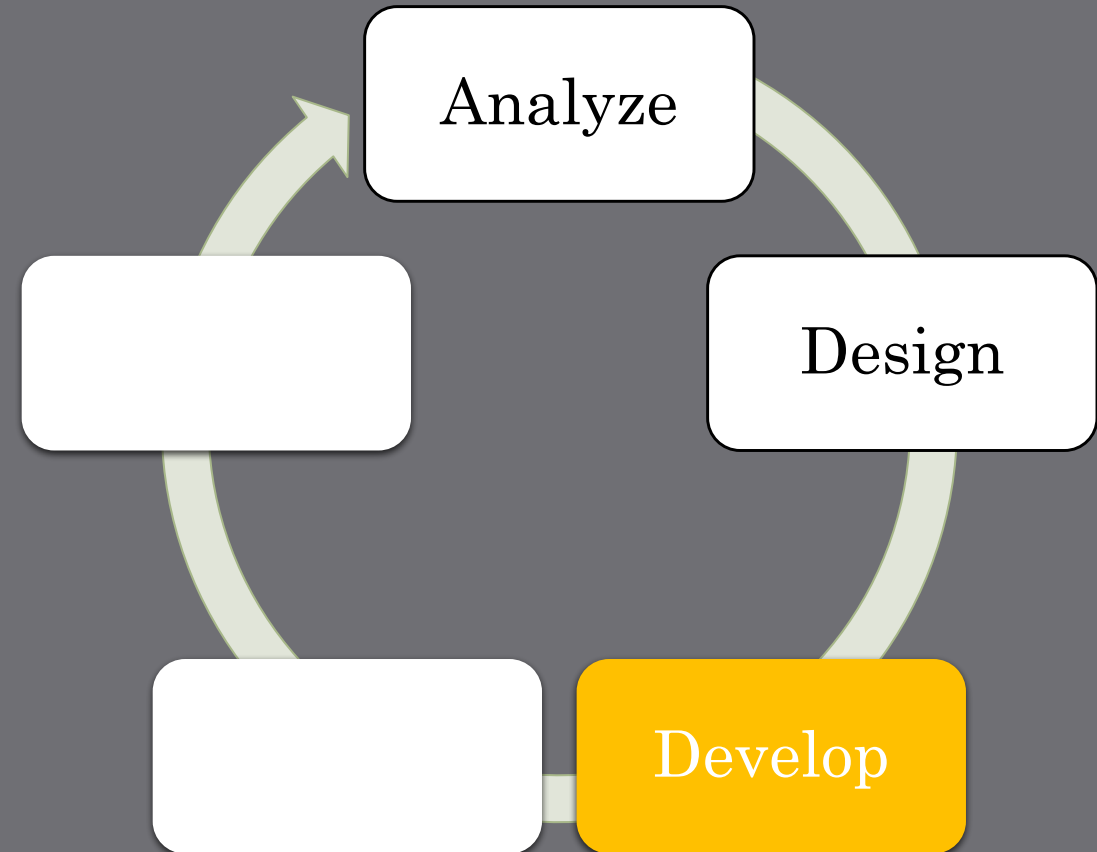
Develop

Design

Evaluate

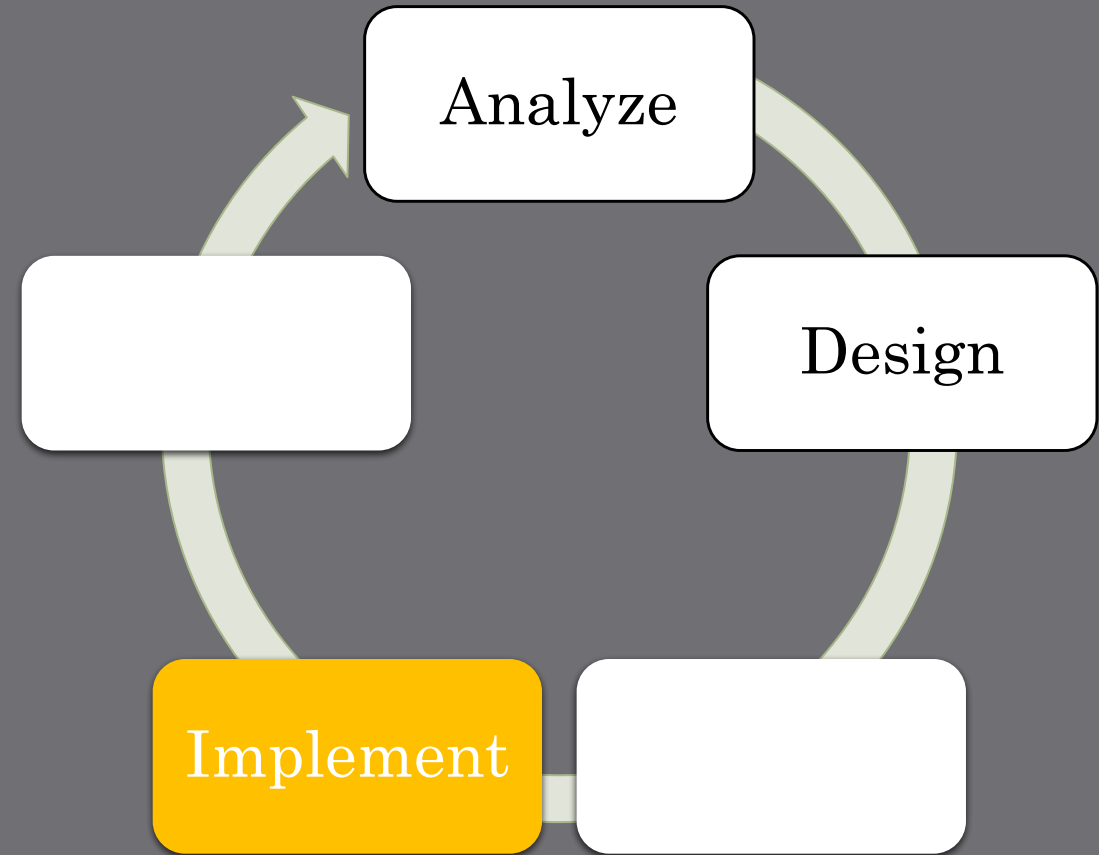
Develop

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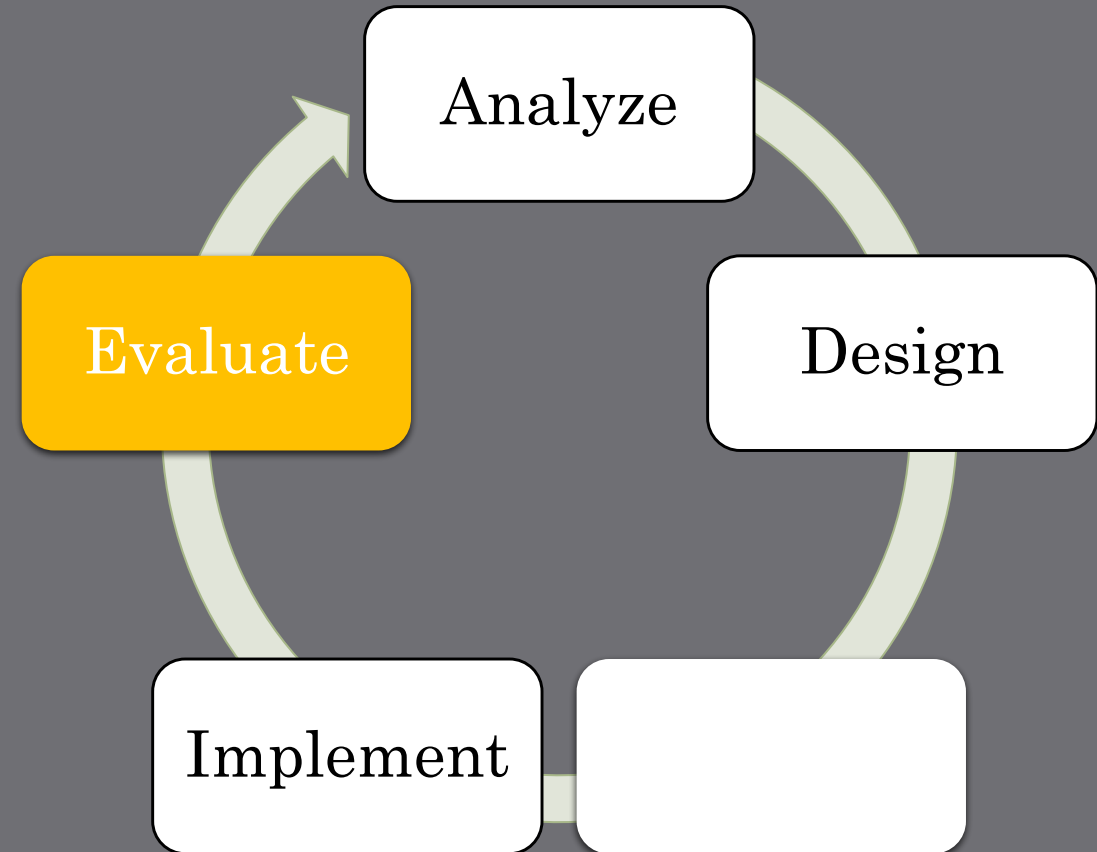
Implement

- 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?



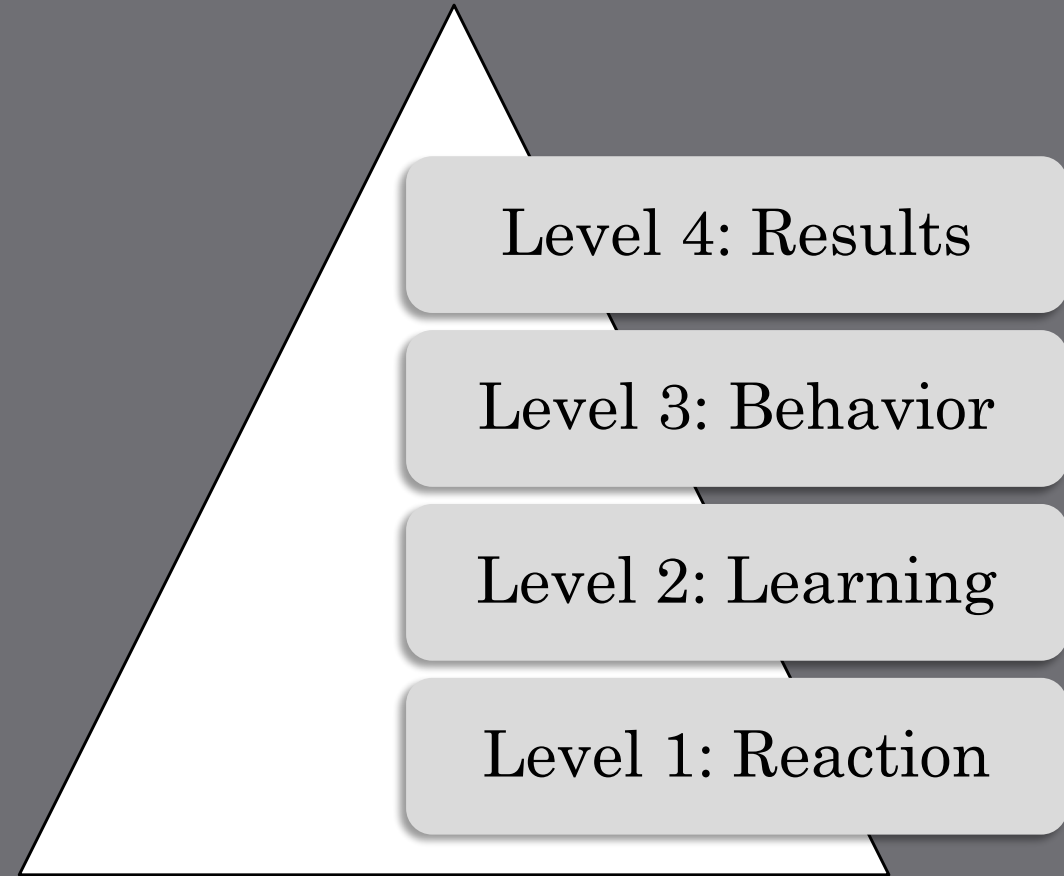
Evaluate Tool: Kirkpatrick's 4 Levels

How did the
organization benefit?

Did they change their
behavior?

Did they learn?

Did they like it?



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

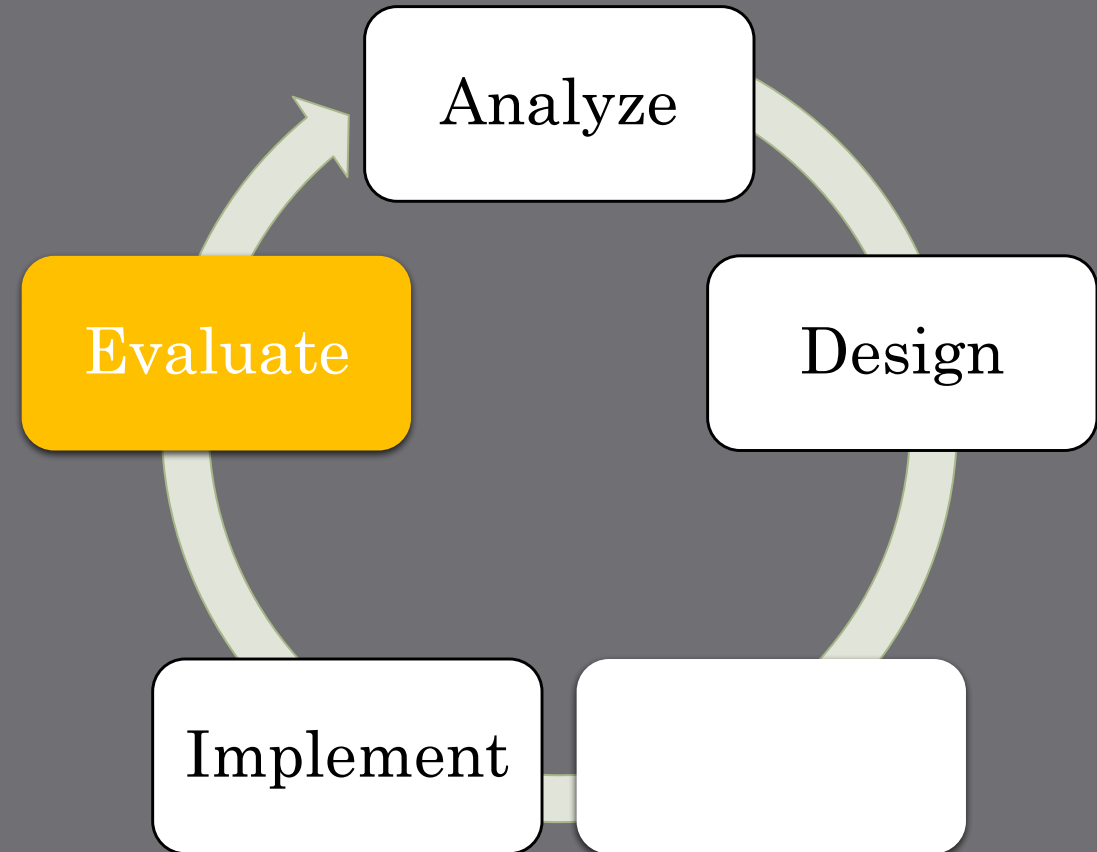
A library director surveys employees: “rate the relevance of workplace training offered last year.”

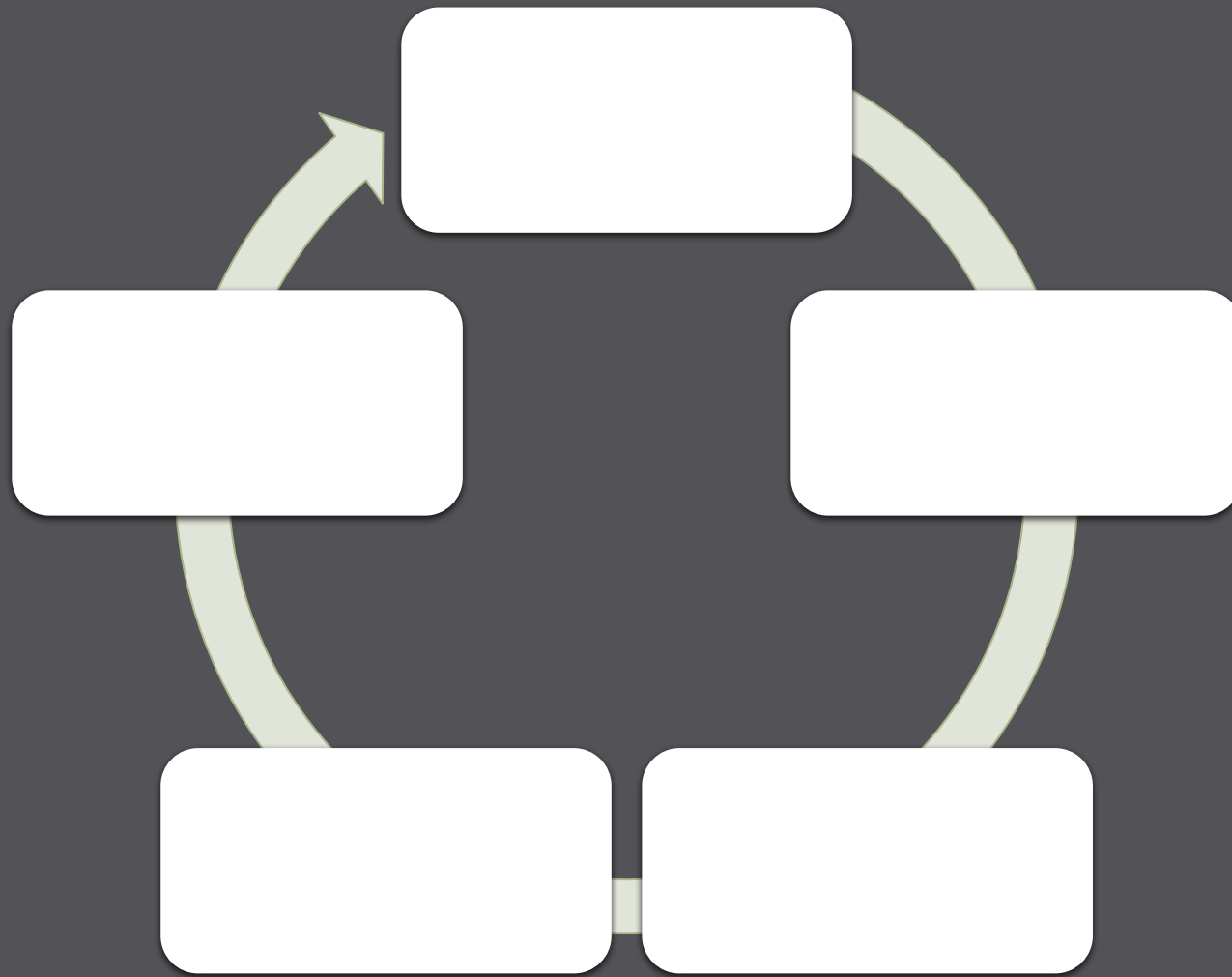
Level 1: Reaction

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

Evaluate

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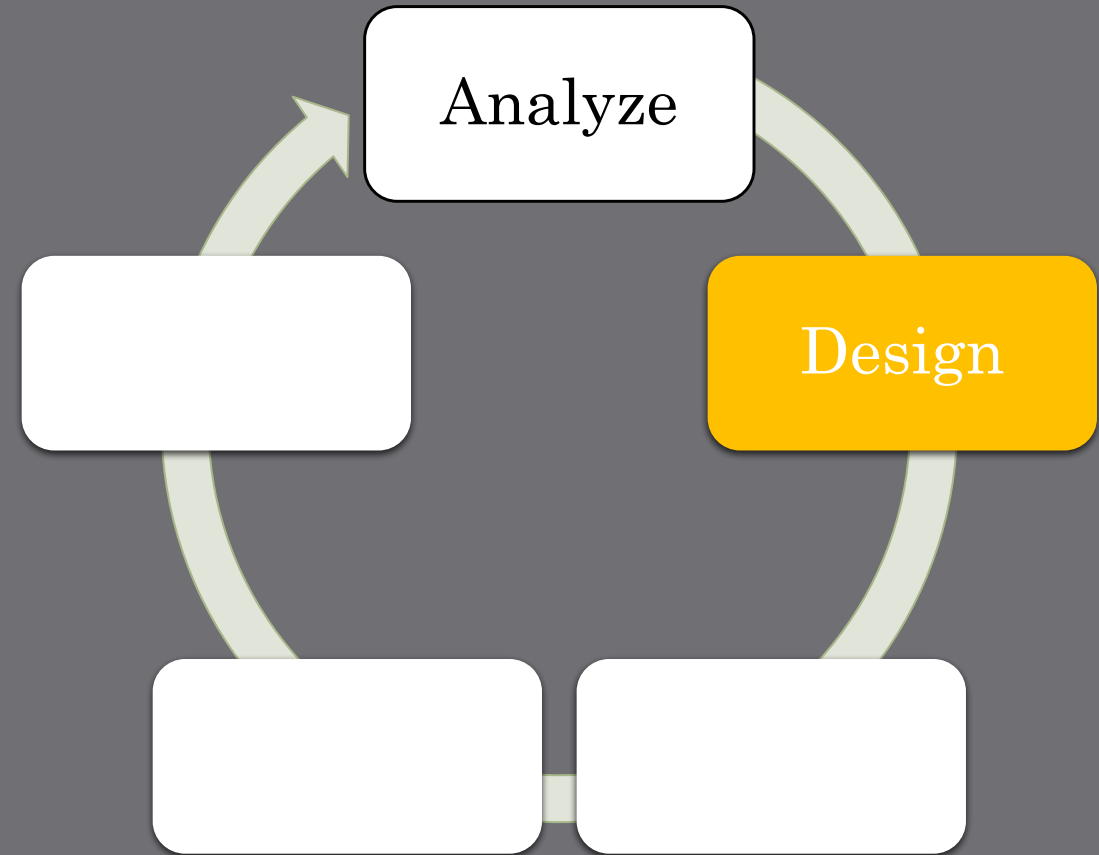




ADDIE: A 5-Step Instructional Design Model

Design

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- What content should I include?
- What will be the format?
- What strategies will support the learning?



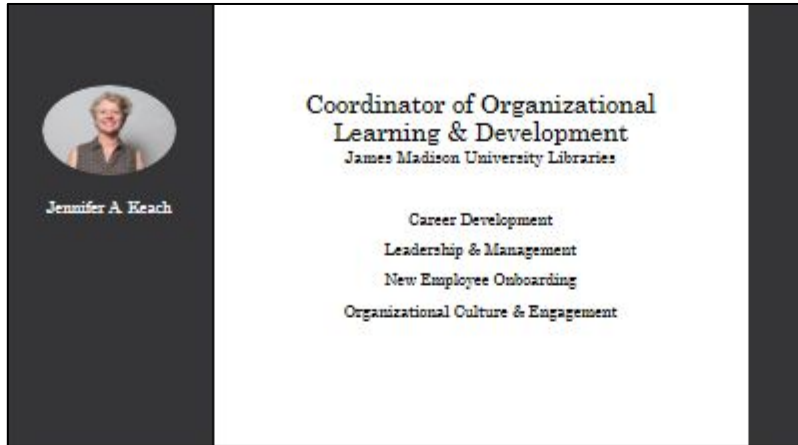
Design Tool: Gagné's 9 Events

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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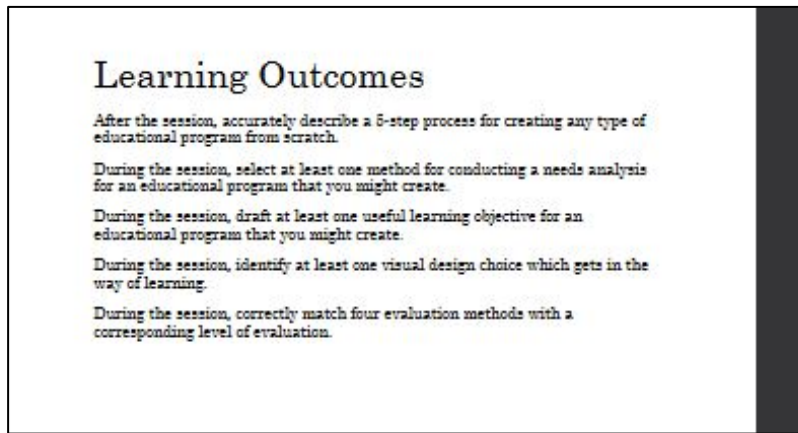
A slide with a dark background on the left and a white background on the right. On the left, there is a circular portrait of Jennifer A. Keach, a woman with short blonde hair, wearing a dark top. Below the portrait, her name "Jennifer A. Keach" is written in white. On the right, the text "Coordinator of Organizational Learning & Development" and "James Madison University Libraries" is centered in black. Below this, a list of services is centered: "Career Development", "Leadership & Management", "New Employee Onboarding", and "Organizational Culture & Engagement".

Jennifer A. Keach

Coordinator of Organizational Learning & Development
James Madison University Libraries

Career Development
Leadership & Management
New Employee Onboarding
Organizational Culture & Engagement

1. Gain Attention



A slide with a white background and a dark border on the right. The title "Learning Outcomes" is at the top left. Below it, five paragraphs of text describe learning objectives for an educational program.

Learning Outcomes

After the session, accurately describe a 6-step process for creating any type of 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.

2. Inform learners of objectives

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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*



3. Stimulate recall of prior learning

audience *behavior* *degree*

Session attendees will select at least one

the rest of the behavior

method for conducting a needs analysis for their own program

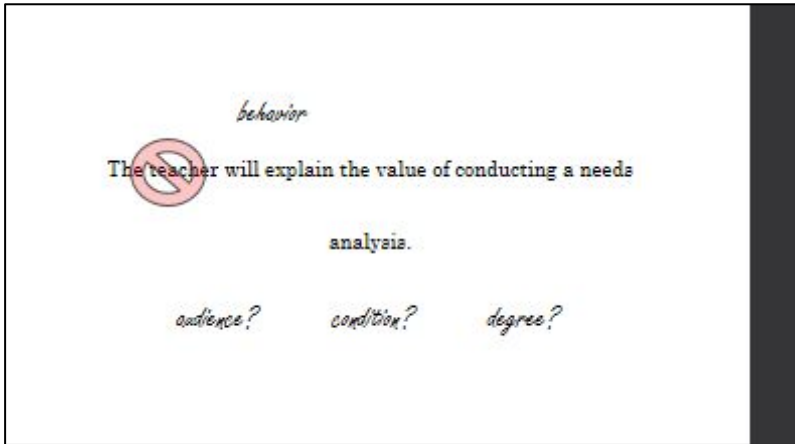
condition

before leaving the session

4. Present the content

Gagné's 9 Events

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5. Provide learning guidance

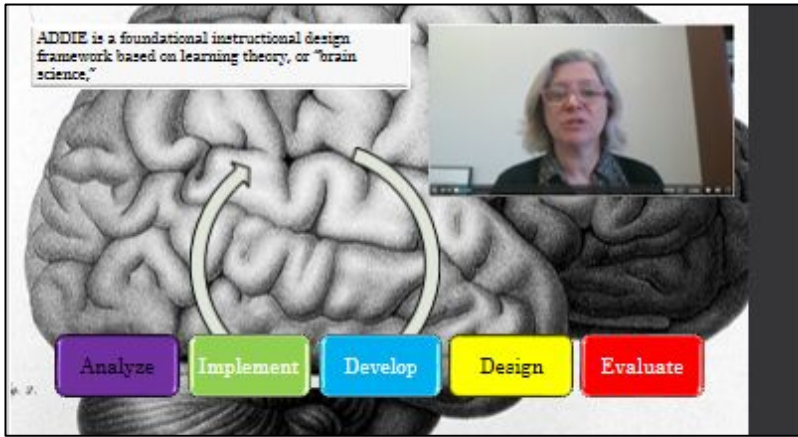
**Reflect
Pair & Share**

What is one 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)

```
graph TD; Analyze --> Design; Design --> Develop; Develop --> Implement; Implement --> Evaluate; Evaluate --> Analyze;
```

6. Elicit performance



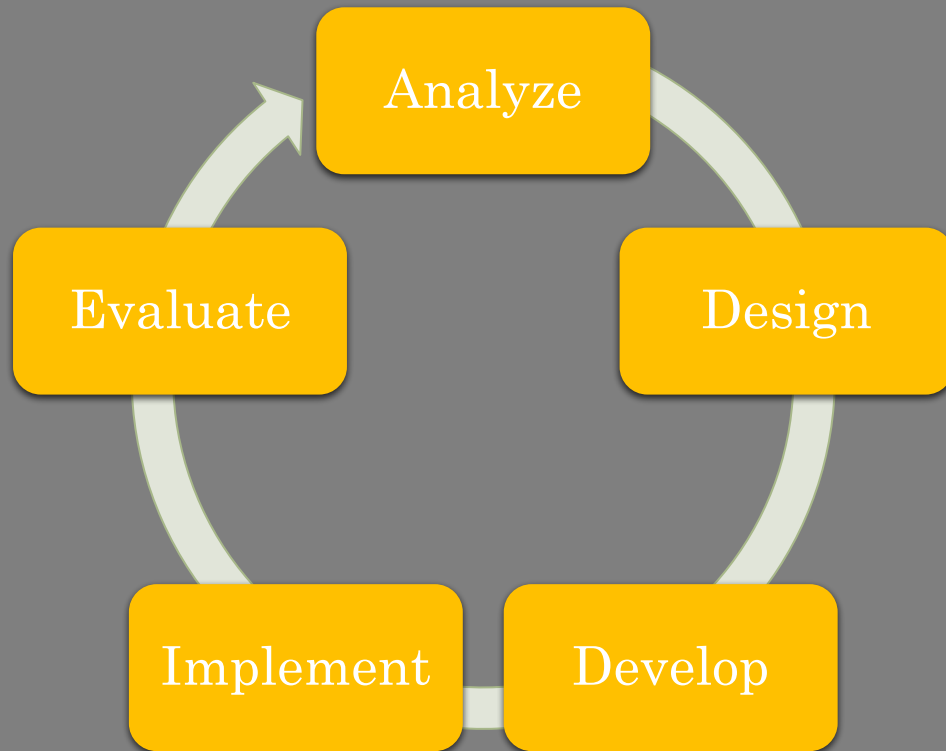
7. Provide feedback
8. Assess performance



9. Enhance retention and transfer to the job

Gagné's 9 Events

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- Tools (within context of the 5 steps):
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Questions & Observations

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