

# Beginning with the End: Constructing Effective Learning-Centered Outcomes

Research Enhancement  
**Building Infrastructure Leading to Diversity**

---

## REBUILDetroit



Primary Institution



Research Partner



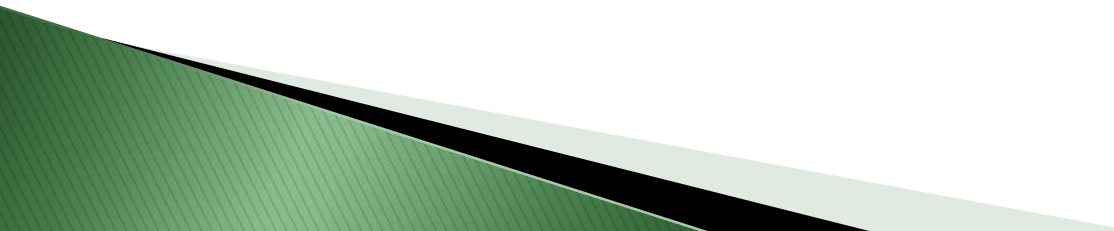
Pipeline Partner

Office for Teaching & Learning  
Wayne State University  
April 14, 2016

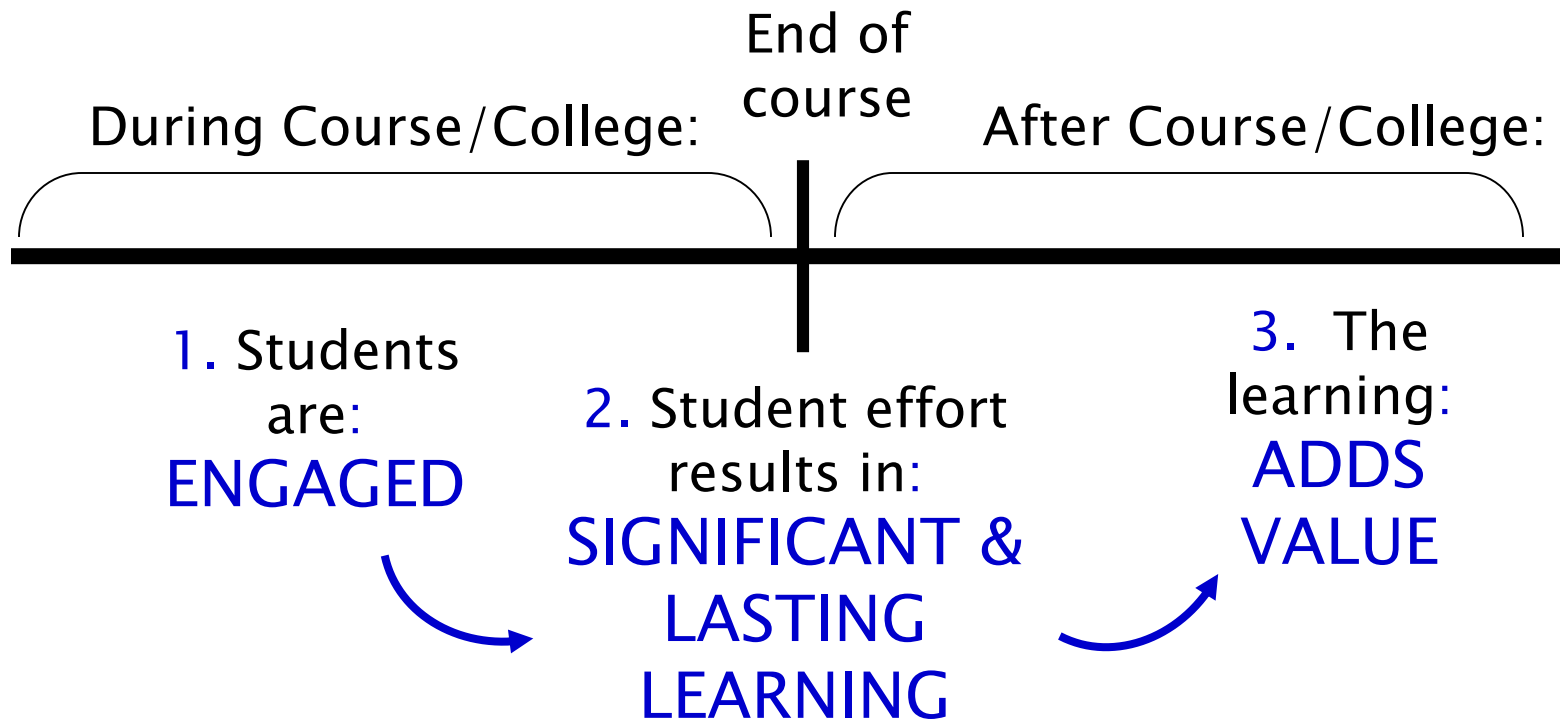
# Welcome and Introductions

- ▶ Please introduce yourself including:
  - Your name
  - Institution
  - Courses you teach
  - Experience with course design
- ▶ What do you hope to get from today's workshop?

# Learning Outcomes

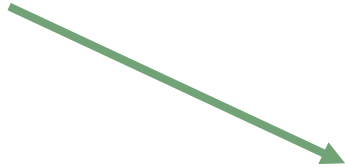
- ▶ Discuss characteristics of Backward Course Design
  - ▶ Employ a framework for classifying levels of learning outcomes (Bloom's Taxonomy)
  - ▶ Construct course learning outcomes for three key attributes
  - ▶ Revise course learning outcomes through peer review
- 

# What makes a high quality learning experience?

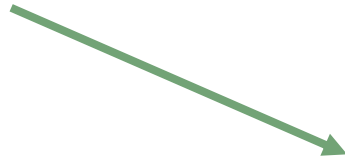


# Common Approach to Course Design

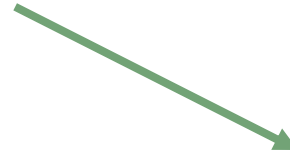
Choose Text



Identify Chapters to Cover



Prepare Lectures



Create Exams

# Backward Course Design

## Identify the Desired Results

*What should students know, be able to do, and value as a result of taking your course?*



## Determine Acceptable Evidence

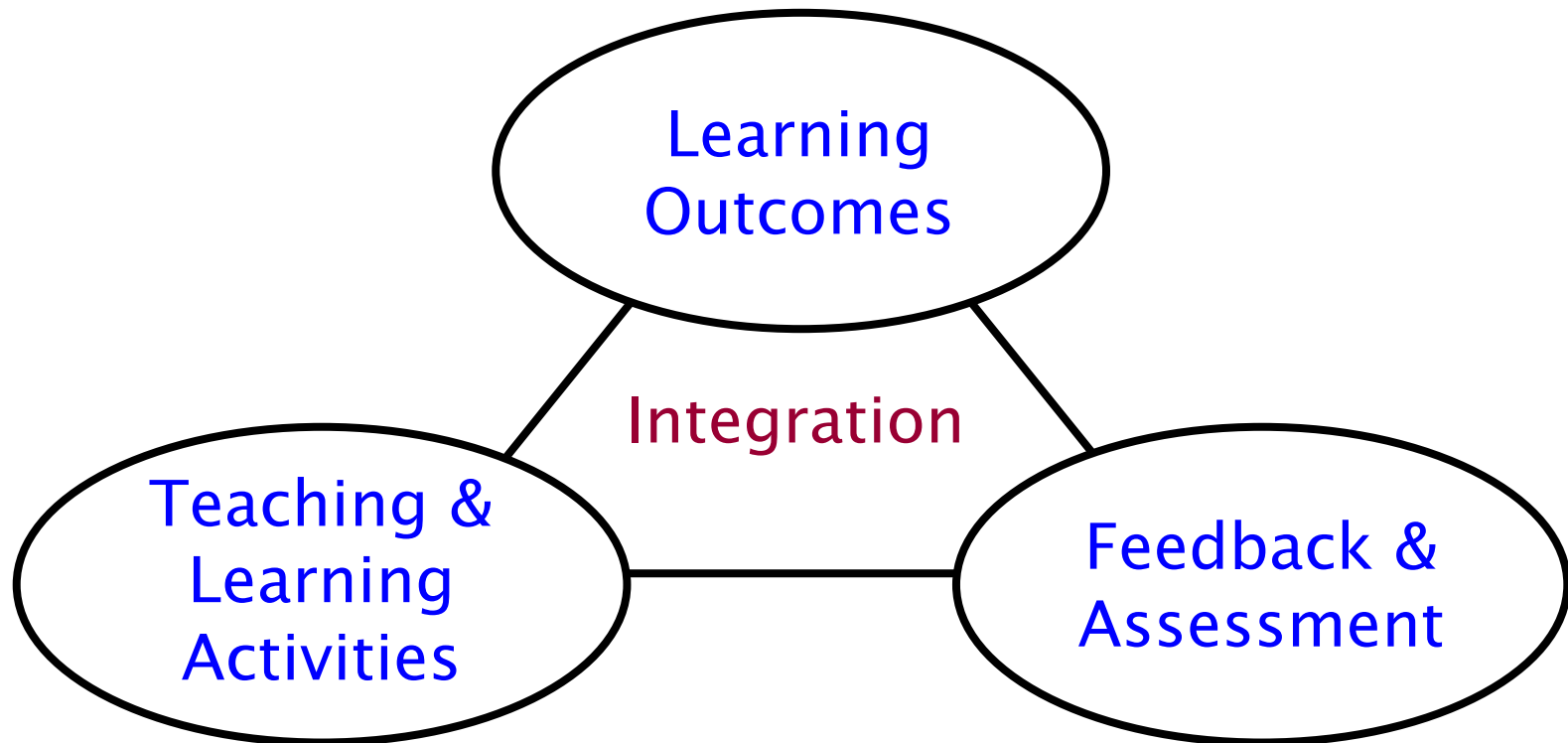
*How will you know if students have achieved the desired results?*



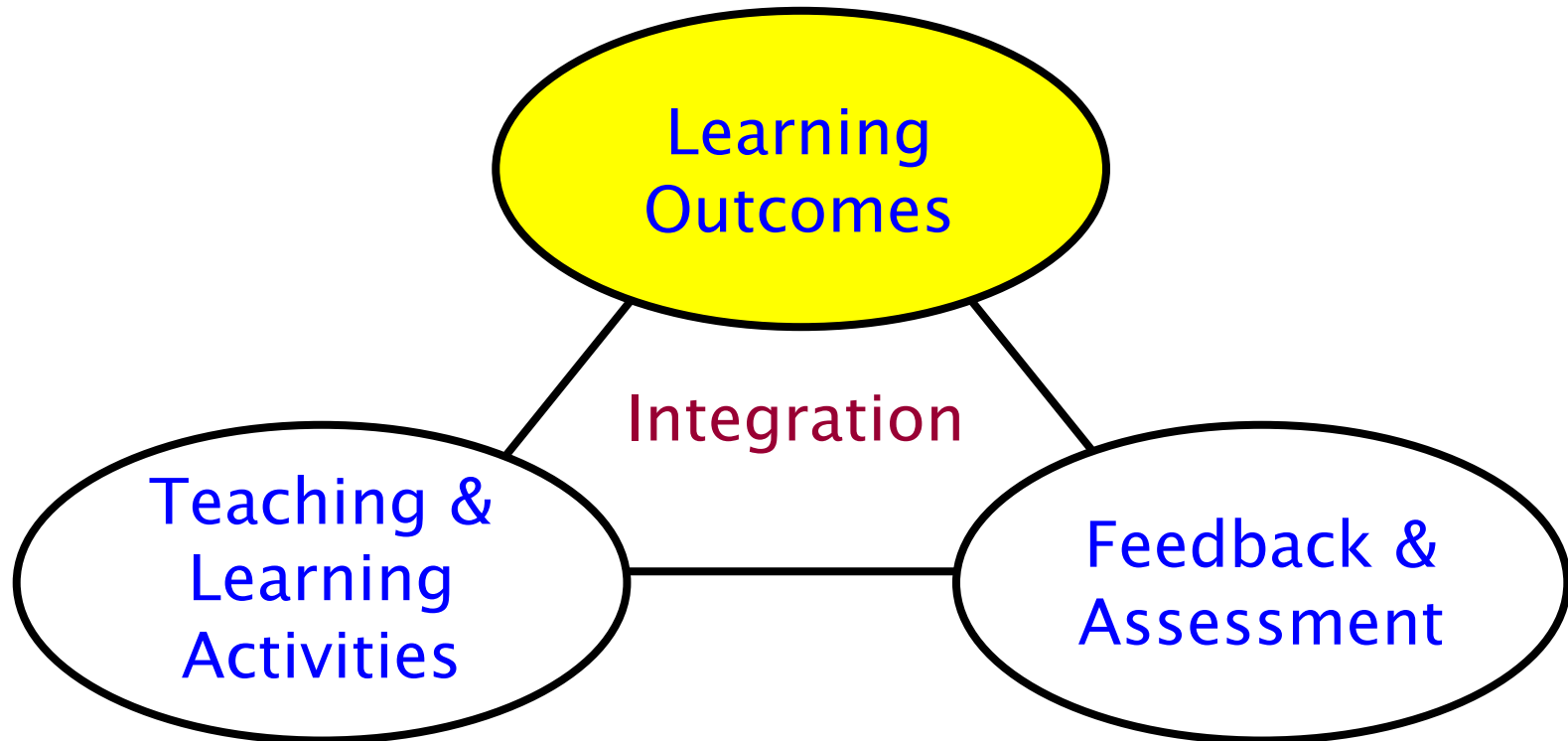
## Plan Learning Experiences

*What will students do to achieve the results?*

# Criteria of “GOOD” Course Design



# Criteria of “GOOD” Course Design



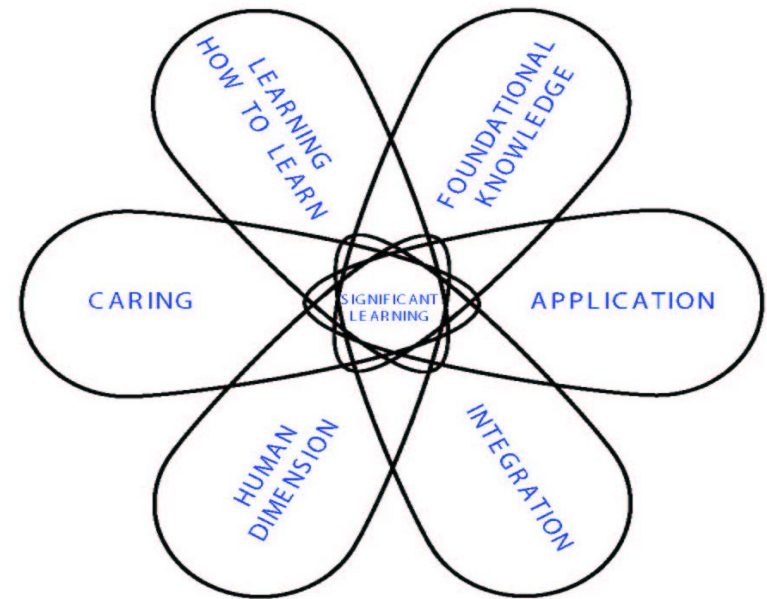


# Faculty Dreams

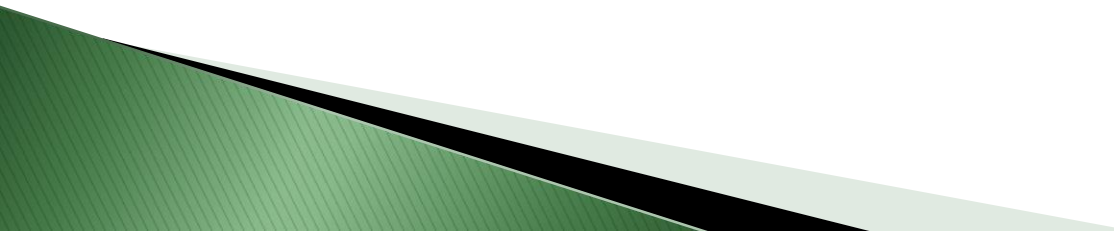
- ▶ Think about your ideal course. This could be a one you've taught before or one you're considering teaching in the future. **If you had students who could and would learn anything and everything you wanted them to learn:**
  - ▶ What is the course? Briefly describe it.
  - ▶ In your "Dream of Dreams," what is it that you would really like them to learn?

# In a course with **significant learning**, students will:

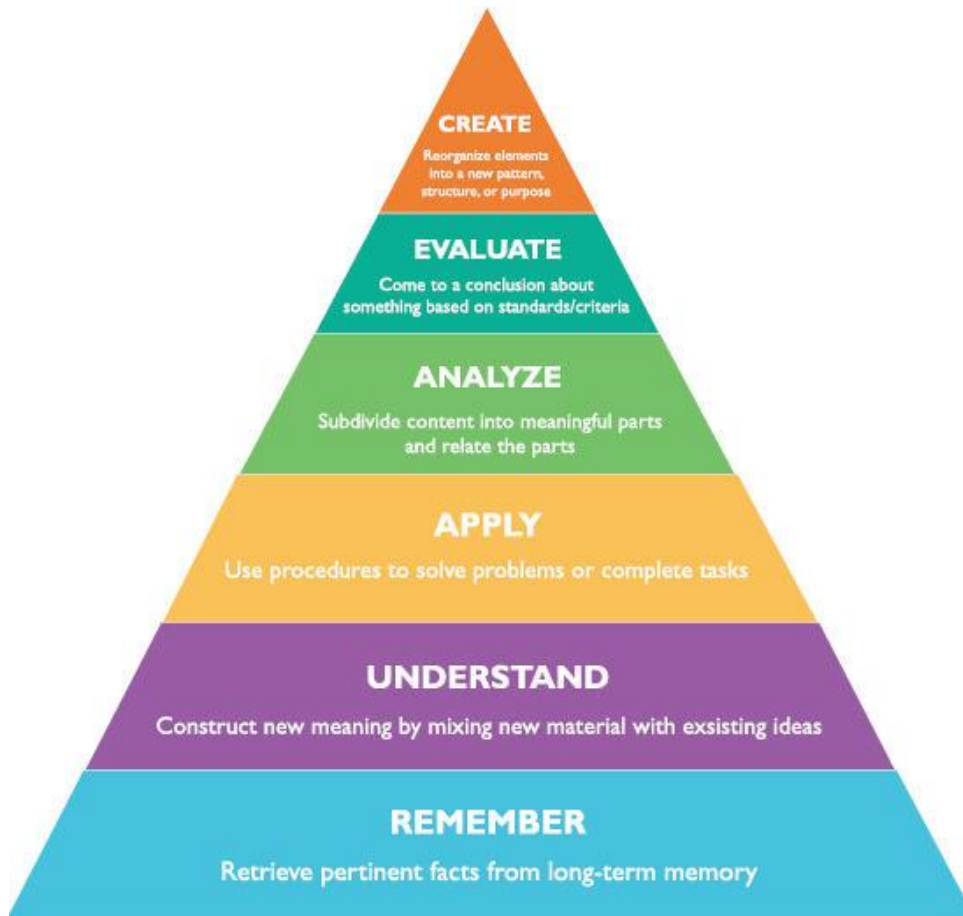
1. **Understand and remember** the key concepts, terms, relationship, etc.
2. Know how to **use** the content.
3. Be able to **relate** this subject to other subjects.
4. Understand the **personal and social** implications of knowing about this subject.
5. **Value** this subject and further learning about it.
6. Know how to **keep on learning** about this subject, after the course is over.



# Your Turn

- ▶ Based on your dream course, write three learning outcomes.
  - ▶ **Peer Review:** Turn to a neighbor and describe your dream course and learning outcomes.
- 

# Bloom's Taxonomy



## ANALYZE

Breakdown	Find
Calculate	Infer
Categorize	Inspect
Change	Inventory
Characterize	Limit
Combine	Model
Compare	Outline
Correlate	Prioritize
Criticize	Question
Debate	Research
Deduce	Separate
Diagram	Solve
Differentiate	Subdivide
Examine	Survey
Experiment	Test
Figure	

## EVALUATE

Appraise	Justify
Argue	Measure
Assess	Predict
Attach	Prioritize
Choose	Prove
Conclude	Qualify
Contrast	Rank
Critique	Rate
Decide	Recommend
Defend	Reframe
Discriminate	Revise
Estimate	Score
Evaluate	Summarize
Explain	Support
Interpret	Value
Judge	

## CREATE

Adapt	Invent
Assemble	Manage
Categorize	Organize
Collect	Perform
Comply	Plan
Compose	Prepare
Construct	Produce
Create	Propose
Design	Rearrange
Develop	Reconstruct
Devise	Reinforce
Formulate	Setup
Generate	Structure
Incorporate	Synthesize
Integrate	Verify

## REMEMBER

Arrange	Order
Copy	Outline
Count	Quote
Define	Read
Draw	Recall
Duplicate	Recite
Enumerate	Recognize
Find	Record
Identify	Repeat
Label	Reproduce
List	State
Locate	Tell
Match	Underline
Memorize	View
Name	Write

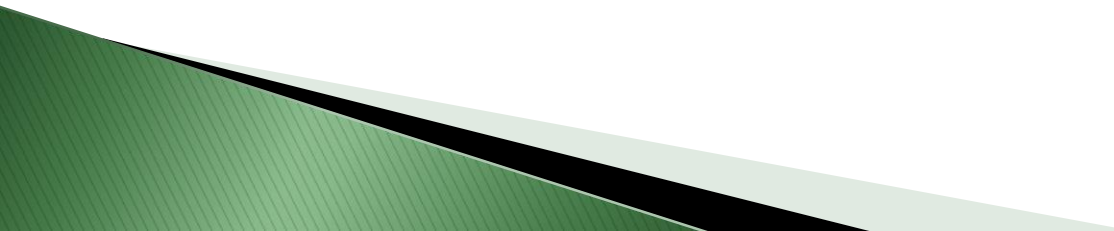
## UNDERSTAND

Cite	Organize
Classify	Paraphrase
Conclude	Relate
Convert	Reorganize
Demonstrate	Report
Describe	Restate
Discuss	Review
Distinguish	Rewrite
Express	Select
Extend	Sequence
Generalize	Summarize
Give example(s)	Trace
Illustrate	Transform
Indicate	Translate

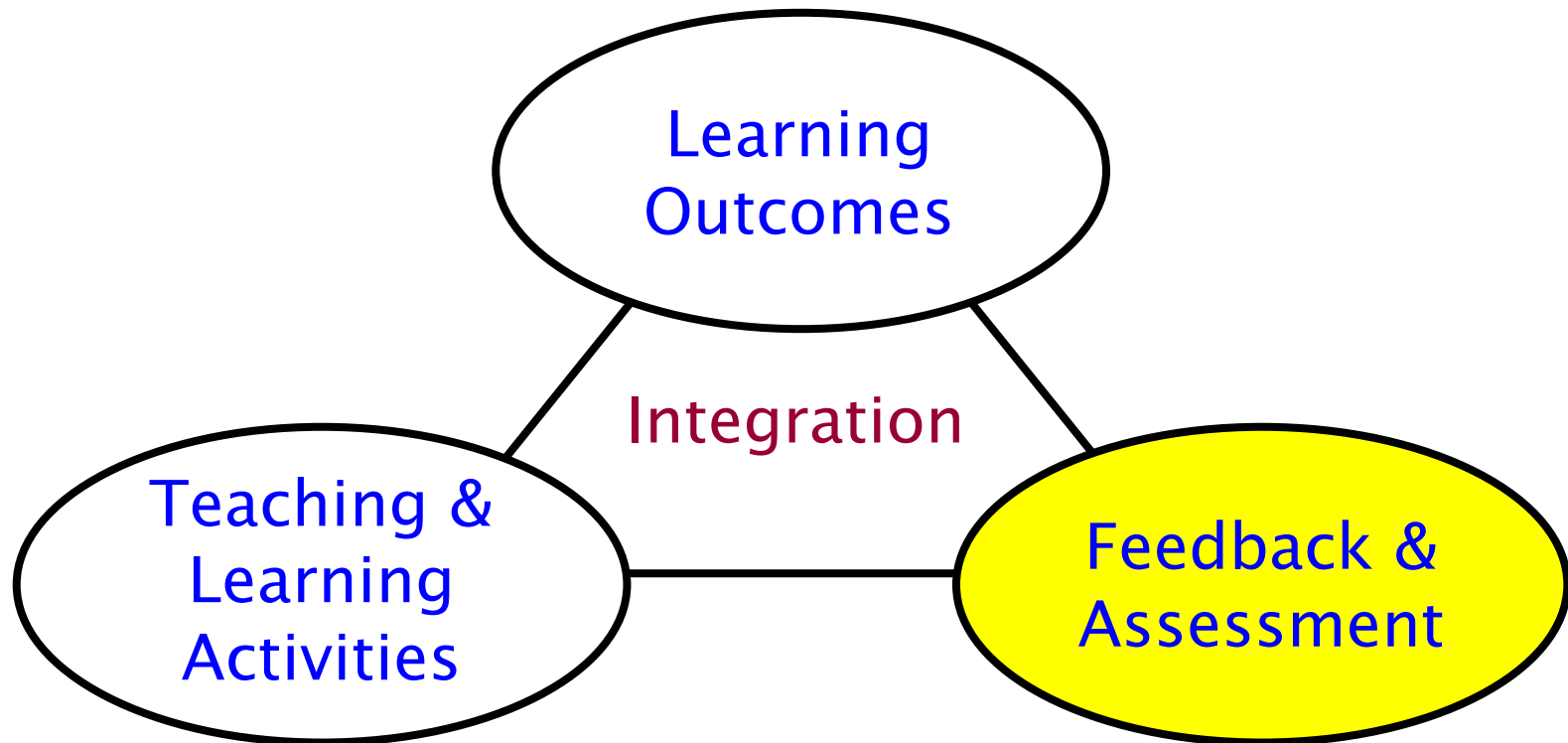
## APPLY

Calculate	Interview
Change	Manipulate
Chart	Modify
Complete	Operate
Compute	Practice
Determine	Predict
Develop	Produce
Diagnose	Role-play
Discover	Schedule
Dramatize	Select
Employ	Show
Establish	Sketch
Estimate	Transfer
Illustrate	Use
Instruct	

# Your Turn

- ▶ Modify your learning outcomes to incorporate Bloom's language.
  - ▶ **Peer Review:** Describe how you modified the language of your outcomes and discuss the implications of using Bloom's verbs.
- 

# Criteria of “GOOD” Course Design



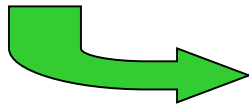
# Assessing Learning

- ▶ How do you assess student learning?

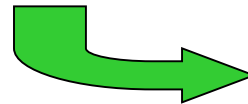
# Educative Assessment

- ▶ Assessments that are designed to enhance the quality of student learning.

Forward-Looking  
Assessment Task



Criteria and  
Standards



Self-Assessment



Feedback



# Forward Looking Assessment

- ▶ Questions or projects that require students to **imagine a situation they might realistically face** in the future and figure out what to do about it.

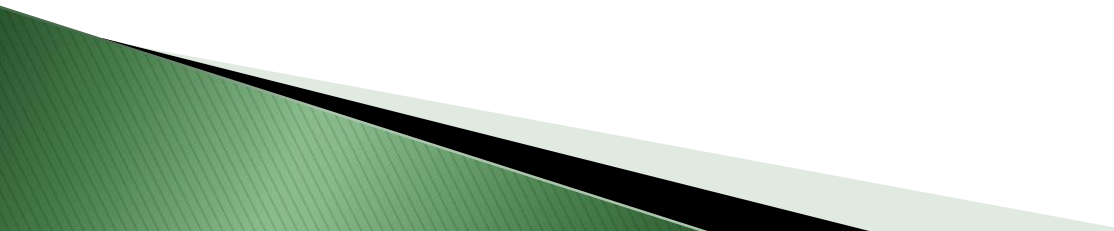
## Backward Looking Assessment

Based on the article you read, name the five most important considerations for prevention and control of norovirus.

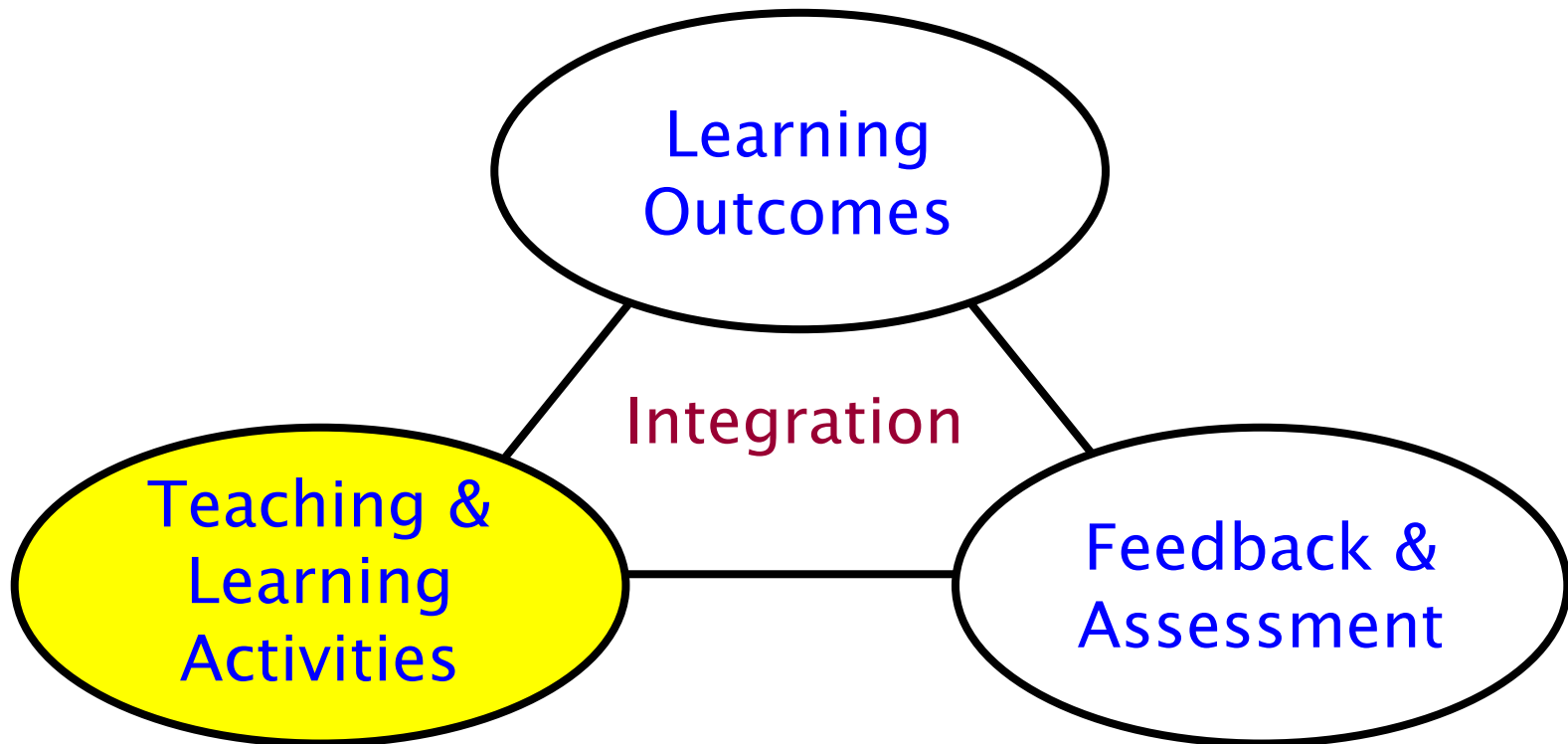
## Forward Looking Assessment

You have been contacted by a major cruise line concerned about the recent norovirus outbreaks. They've asked you to outline a plan for strategies to prevent and control the virus. Justify your recommendations with evidence.

# Your Turn

- ▶ Write a forward-looking assessment for one of your outcomes.
  - ▶ **Peer Review:** Turn to a neighbor and describe your forward looking assessment. Then discuss strategies or ideas to enhance it.
- 

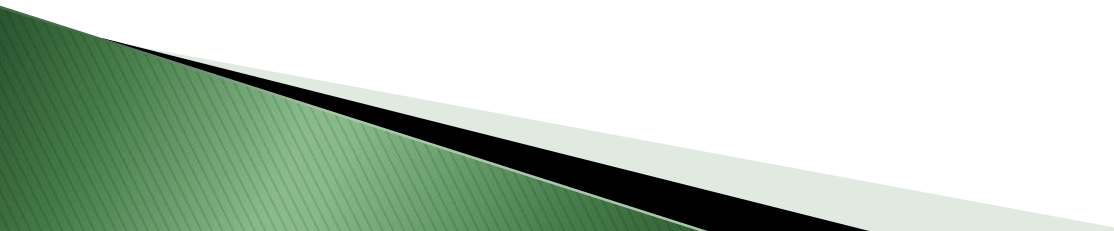
# Criteria of “GOOD” Course Design



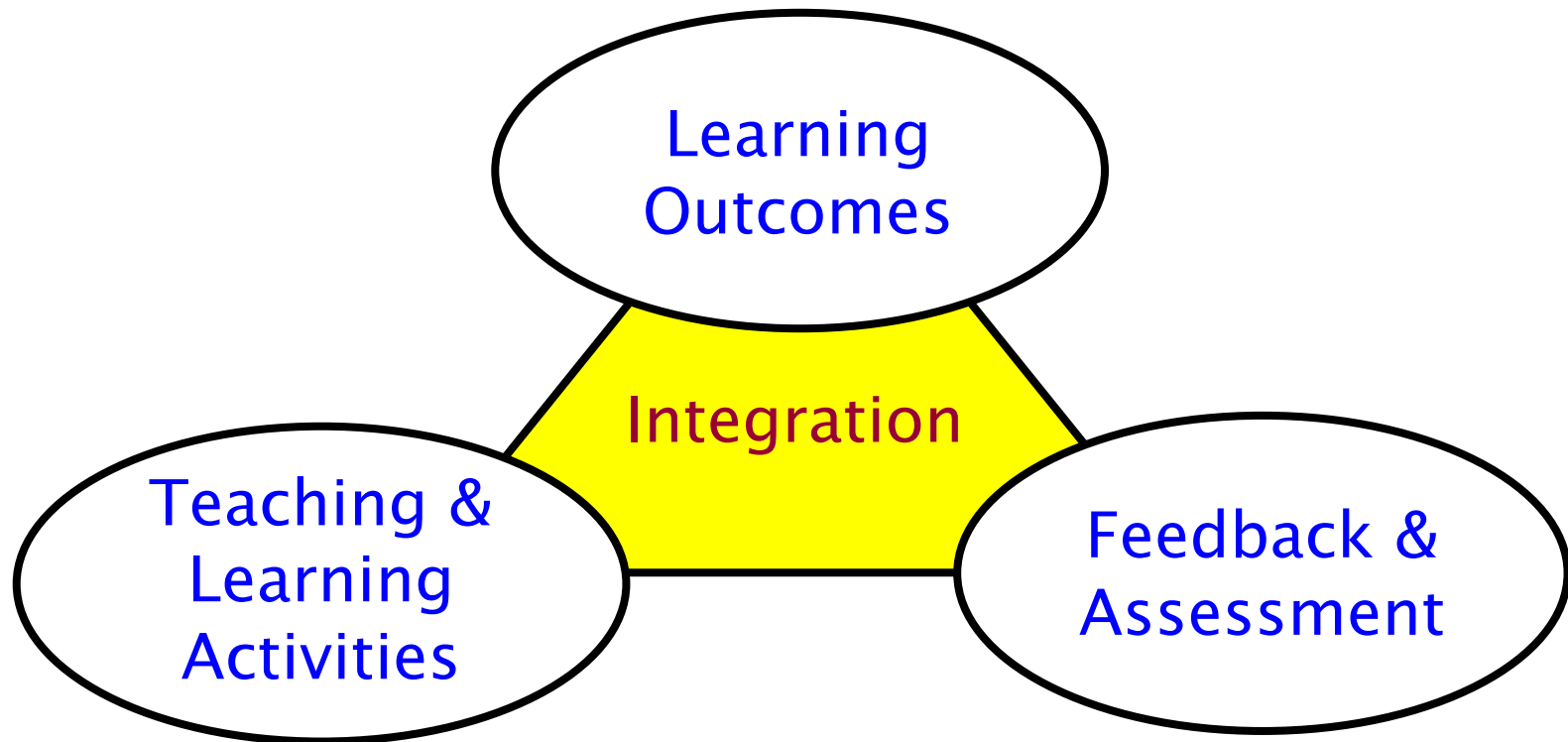
# Pedagogies that Enhance Active Learning

- ▶ Small group discussion & peer instruction
- ▶ Clickers
- ▶ One-minute papers
- ▶ Demonstrations
- ▶ Case studies
- ▶ Concept mapping
- ▶ Tutorial worksheets
- ▶ Problem-based learning
- ▶ Analytical challenge before lecture (JITT)
- ▶ Computer simulations and games
- ▶ Group tests (Pyramid)
- ▶ Problem sets in groups
- ▶ Random calling
- ▶ Writing with peer review

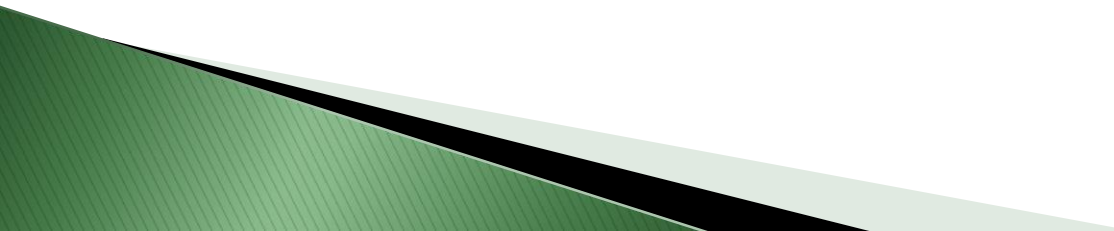
# Your Turn

- ▶ Choose an active learning pedagogy that aligns with your assessment and learning outcome.
  - ▶ Turn to a neighbor and describe the instructional activity Then discuss why you chose it.
- 

# Criteria of “GOOD” Course Design



# Learning Outcomes

- ▶ Discuss characteristics of Backward Course Design
  - ▶ Employ a framework for classifying levels of learning outcomes (Bloom's Taxonomy)
  - ▶ Construct course learning outcomes for three key attributes
  - ▶ Revise course learning outcomes through peer review
- 



**Office for  
Teaching & Learning**

[otl.wayne.edu](http://otl.wayne.edu)