

# The Teaching Toolbox: Teaching Basics for New GTAs



New GTA Orientation

Make Up Session

Michelle Rodems, Ph.D.



- **Getting to Know You**
- **Planning Your Course**
- **Preparation for Class**
- **Front Matter & Syllabi**
- **Using Class Time Well**
- **The First Day of Class**
- **Assessing Student Learning**
- **Teaching Strategies**
- **Classroom Environment**
- **Inclusive Teaching**
- **Technology**
- **Potential Student Problems**
- **Next Steps**

Getting to Know  
You...



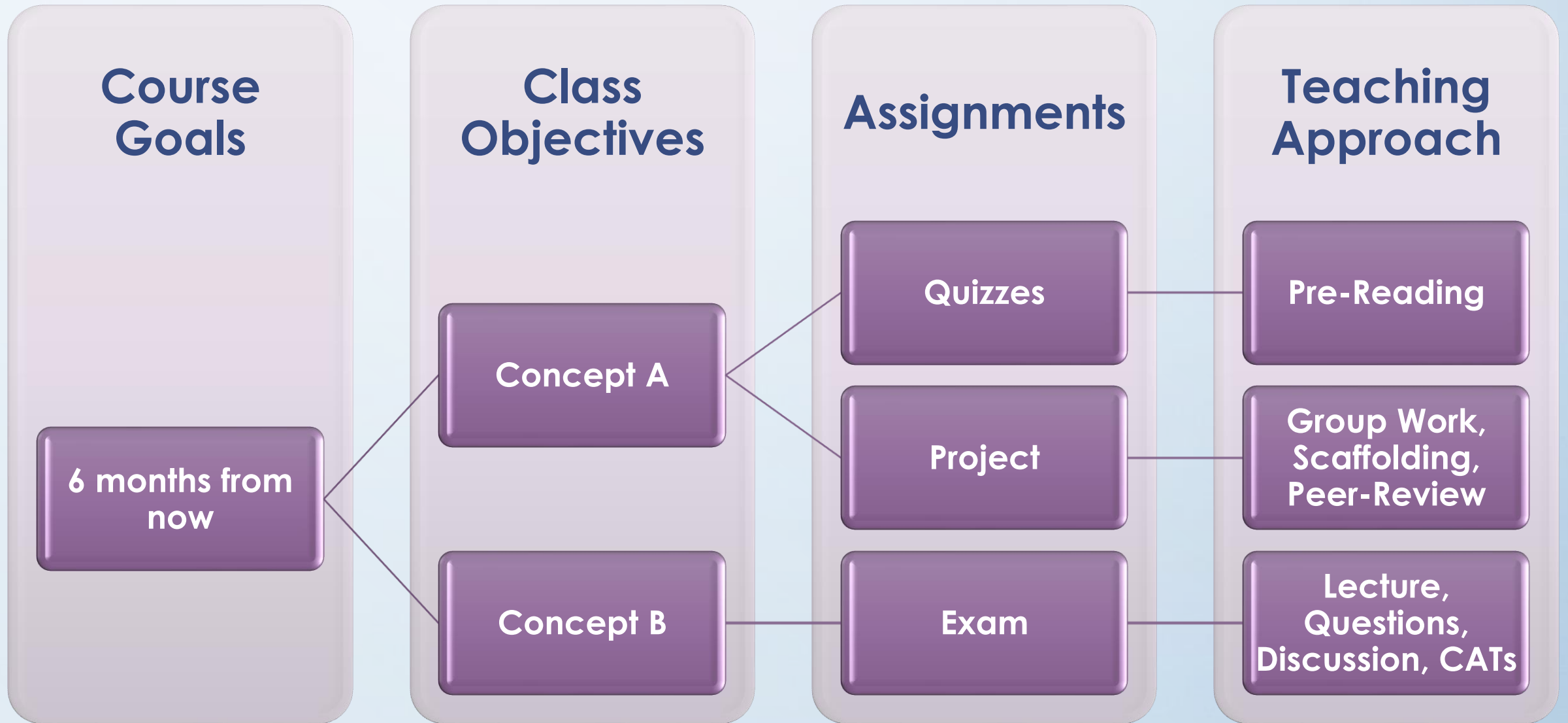


# Planning Your Course

# Backward Design & Alignment

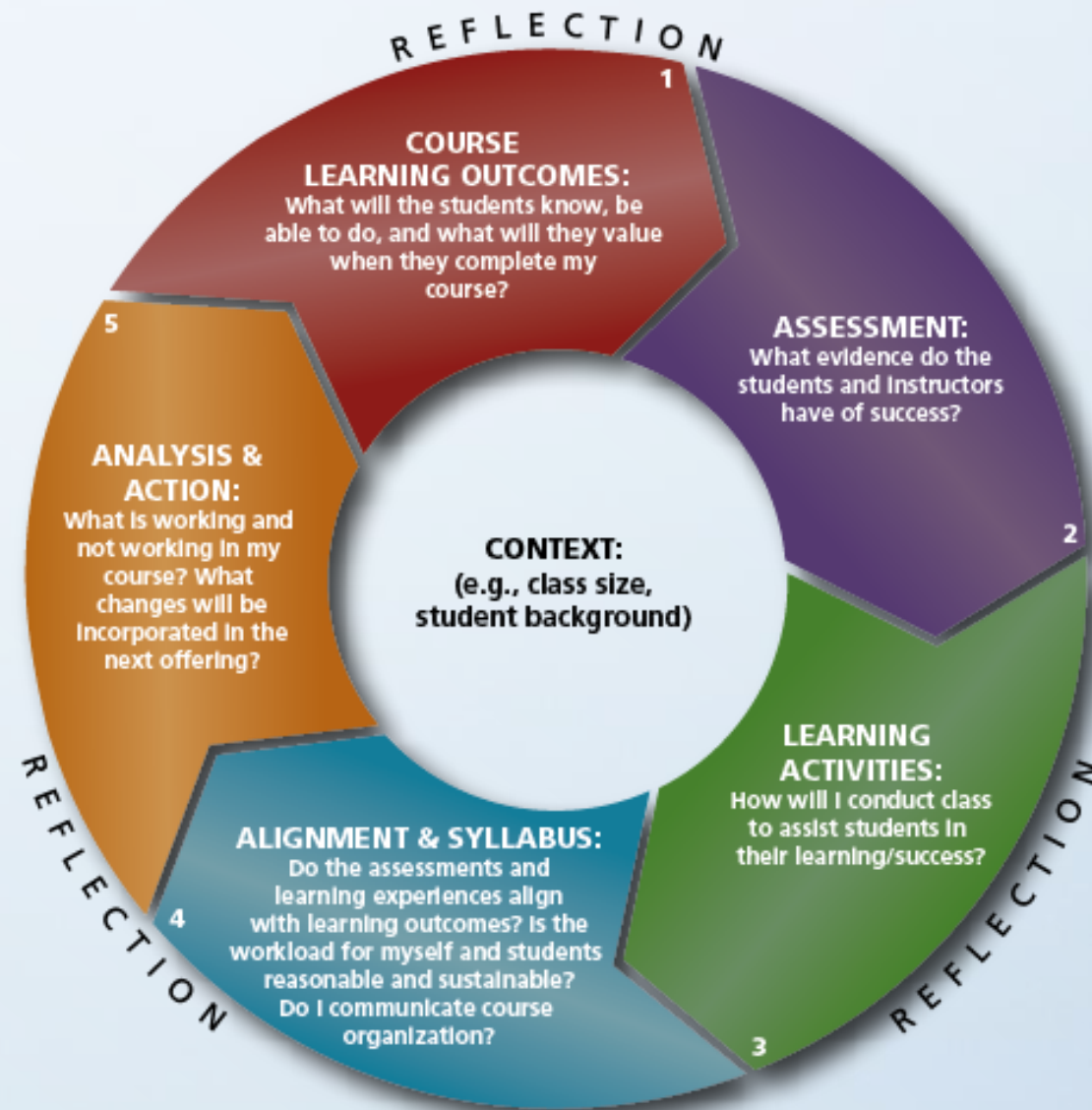
<https://www.youtube.com/watch?v=ZTv2HR2ckto>

# Structuring Your Course



# COURSE DESIGN CYCLE

Personal Instructional Strategy



# Learning Outcomes: Fundamental & Powerful Concepts

- 6 months from now . . .
  - 12 months from now . . .
  - 2 years from now . . .
  - 5 years from now . . .
- 
- What do you want students to remember about your course?



# Fundamental & Powerful Concepts

- explain or help us think about a huge body of questions, problems, information, and situations.
- are attached to a course theme
- are to be contrasted with individual bits of information, or with less general concepts.
- reflect the primary and essential thinking trait(s) you want students to achieve at the end of an assignment/course.

# Fundamental & Powerful Concepts

## Examples

- English: Unreliable narrator
- Finance: Conditions of uncertainty
- Public Health: Health equity
- Sociology: Ethnocentrism
- Social Work: Evidence-based practice

What is one fundamental and powerful concept from your discipline or the course you will/would like to teach?

Your Turn!





# Front Matter & Syllabi

# Paradigm Shift



## **Old Instructional Paradigm**

- Provide/deliver instruction
- Transfer knowledge
- Offer courses and programs
- Improve instruction
- Provide access for diverse students

## **New Instructional Paradigm**

- Produce learning
- Elicit students' discovery and construction of knowledge
- Create powerful learning environments
- Improve the quality of learning
- Achieve success for diverse students

# Learning-Centered Teaching

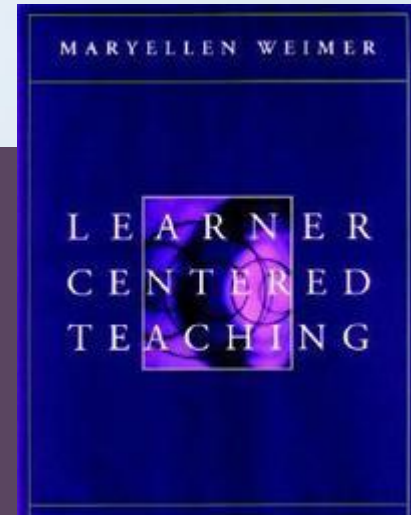
Learning-centered teaching is an approach to teaching that focuses on student learning, rather than on what the teacher is doing.



# Weimers' 5 Components

## Learning-Centered Teaching

1. Function of content
2. Balance of Power
3. Role of the teacher
4. Responsibility for learning
5. Processes and purposes of evaluation



# Function of Content: Syllabus

- ✓ Course description is not about what we'll "cover" but describes the concepts and thinking skills students will engage in...
- ✓ Explains the rationale and disciplinary perspective
- ✓ Skills & outcomes are clearly articulated & "mastery" is made explicit w/ connections to assignments, texts



# Balance of Power

- Students are encouraged to express alternative opinions when appropriate
- Assignments are open-ended (topic, deadline, grade weight) & students are encouraged to bring in additional material
- Policies are negotiated and adhered to, and revisited as necessary



# Balance of Power: Syllabus

- ✓ What to do about conflict or uncertainty
- ✓ Process for students to propose changes to syllabus or assignments
- ✓ Explicit discussion about climate and “hot topics”
- ✓ Communicate expectations *and* rationale

# Role of Teacher

- Designs activities in which students interact with the material, the teacher, and each other
- Articulates measurable, realistic learning goals
- Utilizes multiple teaching techniques appropriate to student goals
- Inspires and encourages student ownership of learning

# Role of Teacher: Syllabus

- ✓ Office hours & beyond: **how** I will be available to you.....
- ✓ **Why** I chose this structure/these texts...
- ✓ What you can expect from me & **why**...

***Bottom line: I care about your learning***

# Responsibility for Learning

- Responsibility for learning is shared between students and teacher (from deadlines to assignment design)
- Students assess their own learning
- Students become proficient with skills or knowledge, and they can make connections to other learning contexts



# Responsibility for Learning: Syllabus

- ✓ Student expectations for success
- ✓ Student expectations when problems arise

Plagiarism policy

University-wide resources

Check it out: <http://louisville.edu/delphi/syllabus>



- ✓ “How to Succeed in This Course”

<http://www.cs.utexas.edu/~eberlein/cs313k/howToSucceed.html>

# Process & Purposes of Evaluation & Assessment

- Peer assessment and self-assessment is fostered
- Students are encouraged to justify their answers
- Students and teachers agree on feedback time-frame
- Assessment is authentic (what professionals in the field do)



# Process & Purposes of Evaluation and Assessment: Syllabus

- ✓ Be explicit with students about how they can get feedback, rather than just grades
- ✓ Explicit learning outcomes & grading policies & **why they are what they are**
- ✓ Consistent explanation of how quizzes, tests and assignments function to support learning



# Your Checklist

## Learning-Centered Syllabus

- ✓ Communicate clear goals & outcomes for **students** *in context*
- ✓ Articulate student responsibilities
- ✓ Define instructor's role & responsibilities
- ✓ Address standards and expectations
- ✓ Establish communication channels
- ✓ Include support materials & resources

Review your (or a) syllabus. What's still needed? How could you be more learning-centered?

Your Turn!





# Assessing Student Learning

**How Do You Know If You're  
Getting There?**

**How Do You Know If You've Met  
Them?**

# Assessing Student Learning

**Create**

**Evaluate**

**Analyze**

**Apply**

**Understand**

**Remember**

# Bloom's Taxonomy

## LEVEL I - REMEMBERING

### APPROPRIATE VERBS:

define, describe, find, highlight, identify, label, list, locate, match, name, observe, recall, recognize, relate, retell, select, state

### QUESTION TYPES:

- » List the ...
- » How would you describe ...?
- » How would you explain ...?
- » When did \_\_\_\_ happen?
- » How would you show...?
- » Select the ...
- » Which one ...?
- » Who was ...?
- » Why did ...?

## LEVEL II - UNDERSTANDING

### APPROPRIATE VERBS:

cite, classify, compare, contrast, demonstrate, discuss, explain, extend, infer, illustrate, interpret, outline, paraphrase, predict, relate, summarize

### QUESTION TYPES:

- » Explain what is happening ...
- » How would you classify ...?
- » How would you summarize...?
- » Which is the best answer?
- » Which statements support?
- » What is meant ...?
- » How would you compare ...?
- » How would you contrast ...?

## LEVEL III - APPLYING

### APPROPRIATE VERBS:

apply, build, calculate, categorize, classify, choose, develop, edit, interview, model, organize, plan, represent, translate, utilize

### QUESTION TYPES:

- » What examples can you find to ...?
- » How would you organize ...?
- » How would you apply what you have learned to develop ...?
- » What other way would you plan to ...?
- » What questions would you ask in an interview with ...?
- » What elements would you choose to change ...?
- » How would you classify ...?
- » What would result if ...?

## LEVEL IV - ANALYZING

### APPROPRIATE VERBS:

analyze, appraise, arrange, categorize, discover, dissect, distinguish, divide, examine, investigate, order, prioritize, research, separate, simplify, survey

### QUESTION TYPES:

- » What inference can you make ...?
- » What conclusions can you draw ...?
- » How would you categorize...?
- » What evidence can you find...?
- » What is the relationship between ....?
- » Can you make a distinction between ....?
- » How would you prioritize ...?
- » Why is it better that ...?

## LEVEL V - EVALUATING

### APPROPRIATE VERBS:

appraise, assess, compile, convert, critique, deduct, defend, disprove, dispute, estimate, evaluate, hypothesize, improve, influence, justify, predict, prioritize, recommend, revise, transform

### QUESTION TYPES:

- » How would you justify...?
- » How would you prioritize ...?
- » What information would you use to support the view ...?
- » Why is it better that ....?

## LEVEL VI - CREATING

### APPROPRIATE VERBS:

adapt, improve, design, invent, propose, change, develop, solve, combine, elaborate, compile, estimate, modify, compose, create, formulate

### QUESTION TYPES:

- » How could you modify the ...?
- » How would you adapt \_\_\_\_ to create different ...?
- » What way would you design ...?
- » What could be combined to improve ...?
- » Suppose you could ... what would you do ...?
- » Can you construct a model that would change ...?

# Assessing Student Learning

## **Summative**

- “Assessment *of* learning”
- Occurs after instruction
- Measures level of success or proficiency achieved
- Generally results in grade

## **Formative**

- “Assessment *for* learning”
- Occurs during instruction
- Gathers feedback to guide improvement
- Generally low-stakes

# Assessing Student Learning

## Grading is not the Most Important Function

- Focus on the learning outcome
- Testing as opportunity to understand students' intellectual progress
- Decide what to assess
- Aim for validity and reliability
- Use a variety of testing formats
- Types of tests
- Create good questions – Bloom's Taxonomy



Funnycatpix.com



# Classroom Assessment Techniques

## CATs

### Classroom Assessment

is an approach designed to help teachers find out what students are learning in the classroom and how well they are learning it.

Thinking about CATs . . .

Review the list of CATs and select one you might like to try (if you've used them before, look for a new one!)

Your Turn!





# Teaching Strategies

# Teaching Strategies

- Active Learning
- Lecturing
- Questions
- Discussions
- Group Work
- Office Hours
- Getting Students to Read

# Brainstorming

When you hear the term

**ACTIVE LEARNING**

what thoughts or ideas come  
to mind?

# Teaching Example #1

<http://www.youtube.com/watch?v=EQKcxnFUMxk>



# Teaching Example #2

<http://www.youtube.com/watch?v=pPhCmvpPorU>

# What is Active Learning?

- The opportunity for students to take a more interactive relationship with the subject matter of a course
- Encouraging students to generate rather than simply receive knowledge
- Teachers as facilitators rather than “dictators” of student learning: guide on the side, not sage on the stage!

# Benefits of Active Learning

- It is an exceptionally effective teaching technique:
  - Students learn more material\*
  - Retain information longer\*
  - Enjoy their classes more\*
- It saves time:
  - Students learn in the classroom—with the help of the instructor and other students—rather than on their own

\*Compared with traditional lecturing

# Active Learning Examples

- Lectures
- Discussion
- Groups
- Activities and assignments
- Case Studies
- Simulations
- Writing
- Technologies
- CATs
- Relatable examples
- Getting to know students

# Active Learning During Lectures

Instructor talks & students listen with minimal interruptions	Instructor talks with periodic pauses for structured activities
Student concentration can be observed dropping after 10-15 minutes	As student concentration begins to wane, a short structured in-class activity is assigned
Instructor's questions are largely rhetorical	Instructor's questions require responses
Students' responses to an instructor's questions are commonly made by students raising their hands	Students' responses to an instructor's questions are commonly made by using a clicker or an IF-AT Answer Sheet
Student-to-student talk is discouraged	Student-to-student talk is encouraged
Students listen and take notes independently	Students often work with partners or in groups
Student comprehension during the lecture is not monitored explicitly	Student comprehension during the lecture is assessed directly
Opportunities to correct misunderstandings are not provided routinely during the lecture	Opportunities to correct misunderstandings are periodically provided within the lecture

# Active Learning During Lecture

- Pauses
- Good questions
- Reviews of visuals
- Think-Pair-Share/Other CATs
- Digital media/technology integration
- Debates
- Case studies
- Authentic problems
- Writing
- Demonstrations

# Asking Good Questions

General Strategies (CRLT, 2009)

- Start with open-ended questions
- Ask questions with multiple answers
- Utilize follow-up questions
- Know which type of questions do what
- Relate the material to students' lives
- Ask about the content, not the participant
- Use small groups
- Pause after asking a question
- Decentralize

# Asking Good Questions

## Opening Discussions (CRLT, 2009)

- Self-presentation
- Frame the discussion
- Clarify your discussion goals
- Offer a shared point of departure
- Model behaviors for the students



# Asking Good Questions

## Closing Discussions (CRLT, 2009)

- Return to the discussion goals
- Summarize important points
- Ask students a closing question
- Assign reading or homework
- Make yourself available

# Discussion Suggestions

- Get to know your students
- Be prepared
- Begin the discussion
- Facilitate the discussion
- Ask questions
- Deal with conflicts
- Provide summaries
- Reflect on what took place during the discussion
- Ask divergent questions
- Avoid looking ONLY at the student talking
- Students should be prepared
- Students should participate
- Students should explain with clarity
- Ask for examples and illustrations
- Allow for pauses and silences
- Be sensitive to feelings and emotional reactions
- Encourage and recognize students' contributions
- Control excessive talkers

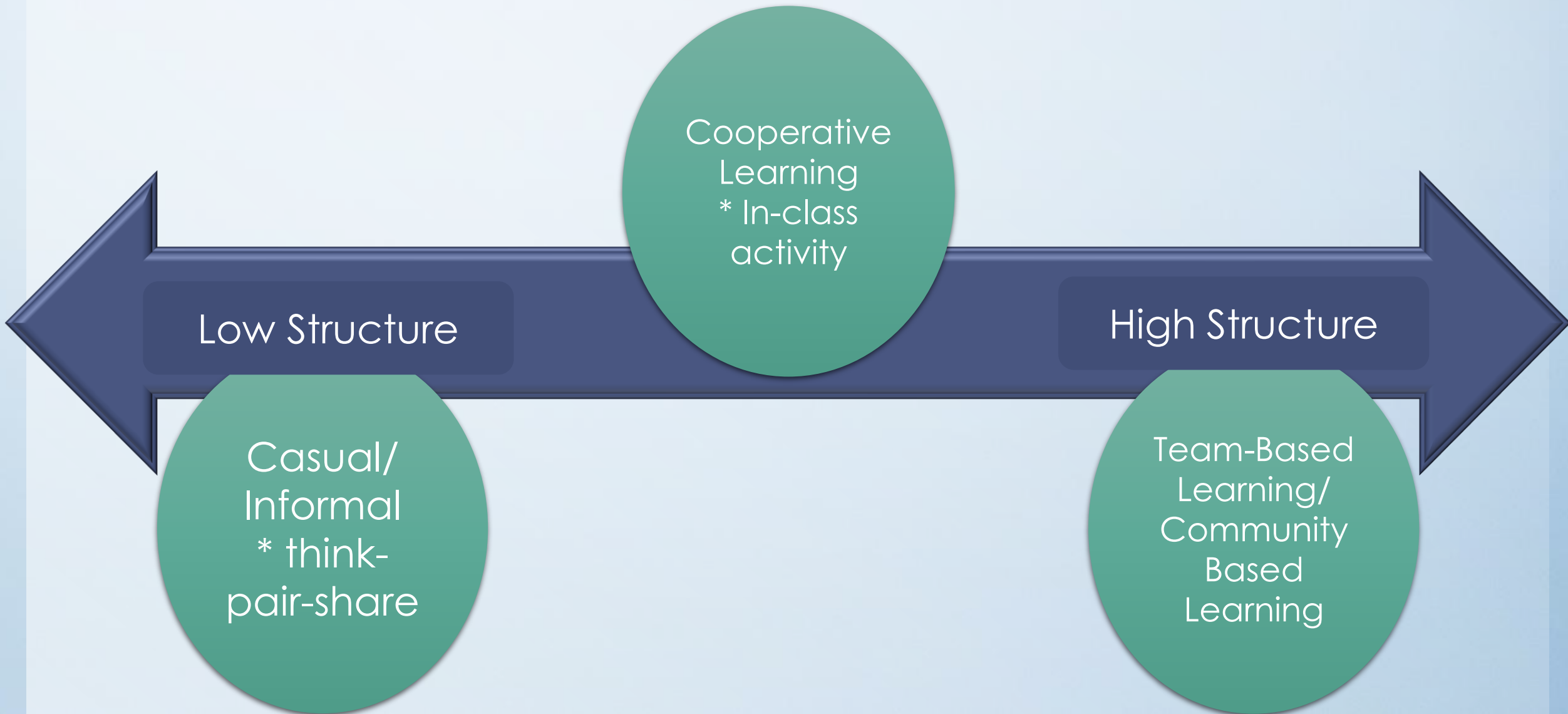
# Group Work

“[There is a] prevailing assumption that student participants either already possess the necessary skills to work effectively together, or that these skills are developed by the simple imperative to work together”  
(Prichard, Stratford, & Bizo, 2006, p. 256).

# Group Work Tips

1. Establish expectations
2. Instruction on effective team practices
3. Dealing with problem team members
4. Evaluate progress
5. Peer rating
6. Think through assignments

# Group Work Continuum



Low Structure

Casual/  
Informal  
\* think-  
pair-share

Cooperative  
Learning  
\* In-class  
activity

High Structure

Team-Based  
Learning/  
Community  
Based  
Learning

Think through one group work assignment/activity you might give – short or long. How will you prepare students? What do YOU need to do to make sure the activity is successful?

Your Turn!





# Classroom Environment

# Your Teacherly Ethos





# Your Teacherly Ethos

Think about your favorite teachers and learning experiences . . .

What about the teachers or experiences did you admire?

# Your Teacherly Ethos

How do you see yourself as a teacher?

What image do you want to project to your students?

What do you want your students to say about you at the end of the term?

What do you do to create that image?

# “Authority” in a Student-Centered Classroom

“What qualifies you to be our teacher?”

“You’re so young. Did you just graduate from college?”

“Are you a real professor?”

“What makes you think you know more about writing (or biology, or math) than we do?”

# Sources of Authority

More than age and an advanced degree give you authority:

**Knowledge**: You do have advanced training in your field, and you can help students master much of the content and many of the skills they need to succeed

**Honesty**: You don't know everything and won't pretend to know what you don't. You have skills to find answers.

# More Sources of Authority

## **Professionalism:**

- Adequately prepare for every class and set student-centered goals for each class. Never “wing it.”
- Begin and end class on time. Arriving late and letting class out early send a signal that class time is not valuable and can be wasted.

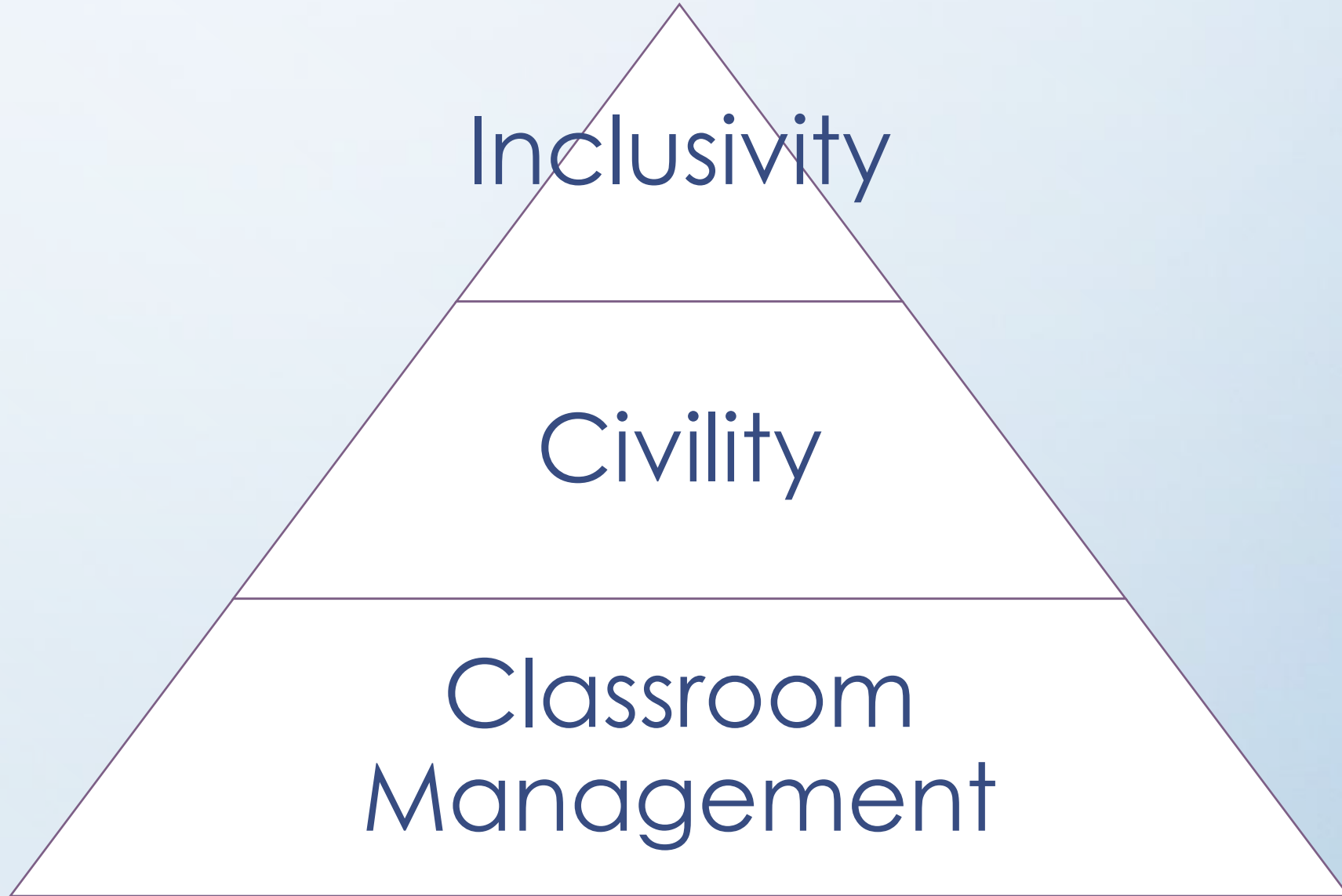
# Reflection & Evaluation

- Formative Evaluation
- Mid-Semester Feedback Sessions
- Course Evaluations
- Your Teaching PRACTICE



# Inclusive Teaching

# The Classroom Environment





# The Classroom Environment



Classroom  
Management

Civility

Inclusivity

# Inclusivity

- the course content;
- your prior assumptions and awareness of potential multicultural issues in classroom situations;
- your planning of class sessions, including the ways students are grouped for learning;
- your knowledge about the diverse backgrounds of your students; and
- your decisions, comments, and behaviors during the process of teaching.

<http://www.crlt.umich.edu/gsis/f6>

# 21<sup>st</sup> Century Learners and Learning Environment



# 21<sup>st</sup> Century Learning Environment

- Cognitive Psychology and Neuroscience
- Economically Unreliable
- Technologically Flexible/ Immediately Accessible
- Globalization



# 21<sup>st</sup> Century Learning Environment

## Cognitive Psychology and Neuroscience

- Learning Science and MRIs
- Plasticity
- Learning and Memory
- Social Learning
- Emotion
- Attention
- Movement

# 21<sup>st</sup> Century Learning Environment

## Economically Unreliable

- 1<sup>st</sup> Generation unlikely to do better than parents
- Working
- Student loans
- Supporting families
- Unclear career paths
- Safety and Privacy

# 21<sup>st</sup> Century Learning Environment

Technologically Flexible/ Immediately Accessible

- “Virtual flood”
- Immediate gratification
- Connected and open learning
- Water hose
- Authentic learning
- Customization and uniqueness
- Snackable information

# 21<sup>st</sup> Century Learning Environment

## Globalization

- Most diverse and most positive about diversity
- Perspective/lens taking
- Habits of mind: attention, persistence, resiliency
- Expectations



# Think-Pair-Share

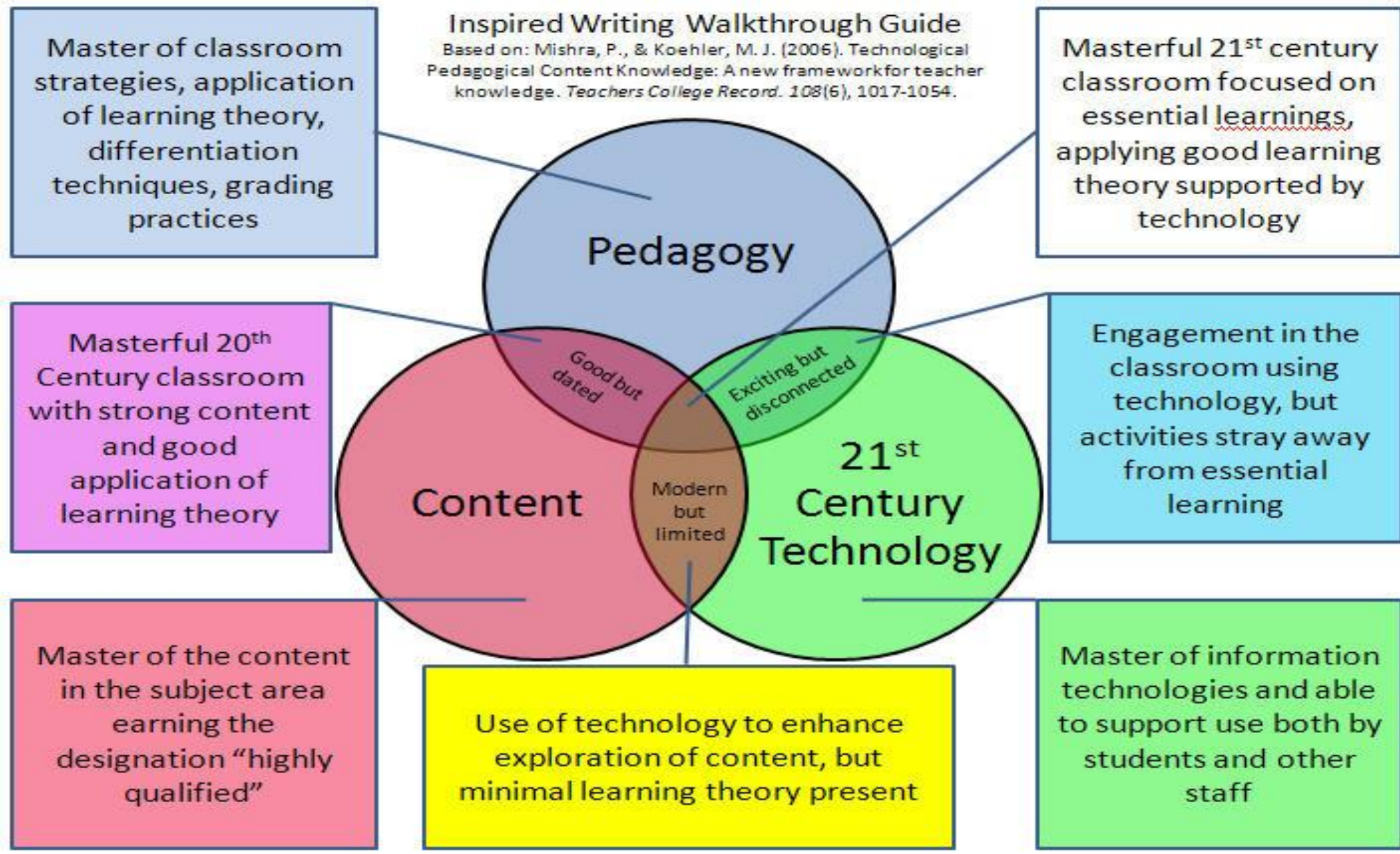
- For 2 Minutes: Reflect – How have you seen or not seen these with your students (or yourselves)
- For 5 Minutes: Discuss in a small group – Listen and share with others about their reflections
- Share with the big group – what resonates from our discussion?



Technology

## Inspired Writing Walkthrough Guide

Based on: Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. *Teachers College Record*. 108(6), 1017-1054.



# Possible Areas of Integration

- Course Logistics
- Communication
- Delivering Content
- Assignments
- Relationship Building
- Assessment
- Your Professional Development

# Questions to Consider

- What are the outcomes you are hoping to achieve?
- In what part of the process would utilizing technology help you?  
How and why?
- What technologies are you prepared to use? What technologies are your students prepared to use?
- How much time and support do you have?
- How is it going? What do I need to do differently?

# Tips and Suggestions

- Desktop/Laptop
- Mobile Devices
- Cross-platform programs



# Potential Student Problems

# Civility

- Your syllabus should have clearly stated policies on grading, course requirements, absences, and deadlines, acceptable behavior, and you should adhere to those policies.
- Announce office hours and keep them faithfully; make sure students have the opportunity to air grievances outside of class.
- Plan an ice-breaker, since students who know others are less likely to be disruptive.
- Learn your students' names, since this helps students take responsibility for their own actions.
- Don't take it personally, but address it.



# Classroom Management

1. Clearly state expectations and consequences of the failure to meet expectations in your syllabus
2. Present yourself as THE classroom authority (But NOT the know-it-all); be respectful of students and show care for their success.
3. Present yourself as a professional (NOT a peer)
4. Avoid contradicting yourself or appearing indecisive, but do not pretend to know what you don't. Students can smell fakery.
5. You have options for responding to behavior

# Students in Distress

1. Get to Know Your Students
2. Pay Attention
3. Look for Key Indicators
4. ASK
5. REFER

**Time to Practice: Consider this case.**  
You are assigned to teach an evolutionary biology class. Your mentor has warned you that while the class generally tends to go well, it's typical to have a few students who are very resistant to the information, because they have been raised to believe that evolution is a theory among many and not something on which to base an entire course.

How would you best prepare to deal with this situation?

Take 3 minutes to think/write

Take 5 minutes to share in a group

# Your Turn!





# Using Class Time Well

<b>Course:</b>		<b>Date:</b>
<b>Unit/Topic:</b>		
<b>Learning Objectives:</b>		<b>Assessment(s):</b>
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>		
<b>Bloom's Taxonomy Level of Learning</b>		<b>Background:</b> [Homework due, class preparation]
<input type="checkbox"/> Remembering <input type="checkbox"/> Understanding <input type="checkbox"/> Applying <input type="checkbox"/> Analyzing <input type="checkbox"/> Evaluating <input type="checkbox"/> Creating		
<b>Needed Materials:</b>		
<b>Bridge In:</b>		
<b>Lesson Outline:</b>	<b>Instructor Activity:</b>	<b>Student Activity:</b>
<b>Reminders for Student:</b>		
<b>Reflections:</b>		

# Tips to Plan Your Time Well

1. Chunk material into pieces
2. Figure out the tricky (or interesting) segments
3. Timing
4. Visuals
5. 1 or 2 purposes/goals per class
6. Map it Out
7. Give extra time



# The First Day of Class

# The First Day of Class

1. Orchestrate positive first impressions
2. Introduce yourself effectively
3. Clarify learning objectives and expectations
4. Help students learn about each other
5. Set the tone for the course
6. Collect baseline data on students' knowledge and motivation
7. Whet students' appetite for course content
8. Inform students of course requirements

From

<https://www.cmu.edu/teaching/design/teach/firstday.htm>

!



Think about the first day of class you will teach. Draft an outline of a lesson plan for that day.

# Your Turn!



Wrap-Up





Individually:  
What are your next steps  
to prepare?

Group:  
What are 10 takeaways  
from the session?

# Thank You!

- \* Materials will be available online within a few weeks
- \* [michelle.rodems@Louisville.edu](mailto:michelle.rodems@Louisville.edu)

\*\* Don't forget to access resources at <http://louisville.edu/graduate/gta>

