

# Planning for student thinking with Active Learning

Faculty Center for Teaching and Learning

September Workshop Series

September 20, 2022

# **Poll:** What are your current planning practices?

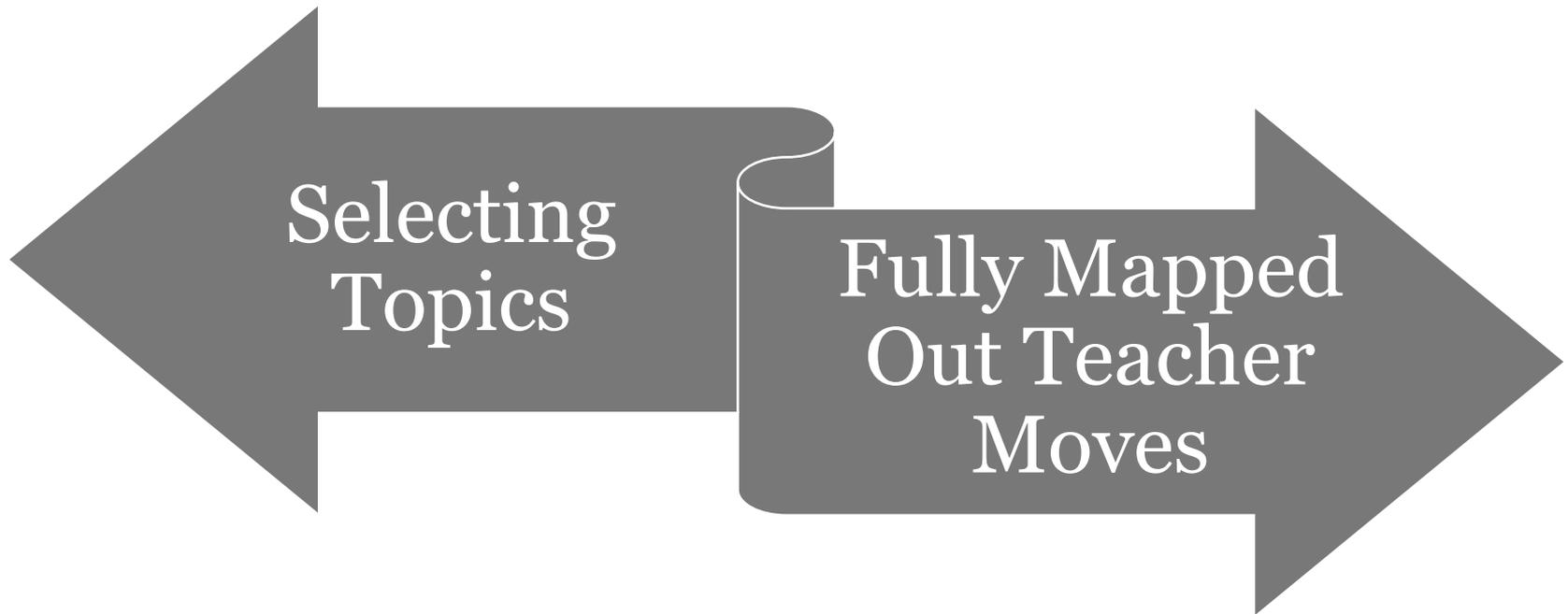
---

1. I don't really plan
2. I plan a general outline of how the day's topics will flow
3. I think through the flow of the class and what questions to ask students
4. I plan a decent amount to bring in activities
5. I plan a lot! I think through almost everything to deal with each class

# What is Planning?

---

Actions and thinking that take place in preparation of implementation in the classroom.



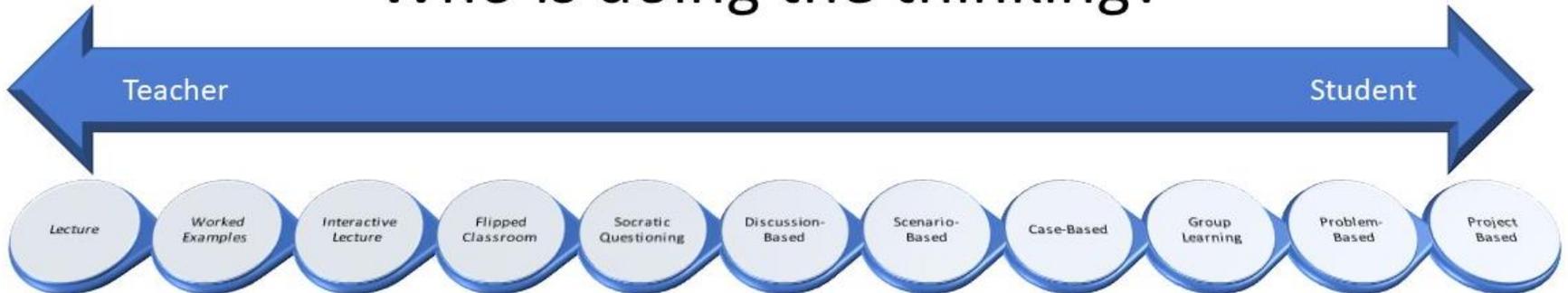
Smith, Bill, Hughes (2008)

# **Poll:** Which types of learning experience require more planning?

---

1. Teacher directed (lecture, examples, etc.)
2. Student directed (project or problem based)
3. It depends

Who is doing the thinking?



# But it takes time!

---

“Lesson planning requires a substantial investment of time and energy, without a doubt. Nevertheless, skillful instructors in higher education can benefit from planning their teaching activities beyond the general weekly level, determining the specific activities that will occur in each class period.” (Mackh, 2018)

# Why should we plan?

---

- Planning allows us to make **INTENTIONAL** decisions about what we want students to engage in.
- Planning reduces “on-the-fly” moves.
- Planning allows to think through logistic and management problems.
- Teaching strategies that promote student sense-making, like many active learning techniques, rarely if ever happen without planning

Mackh, (2018); Smith, Bill, Hughes, (2008); Kang et al., (2016)

# If what we do in the classroom matters...

---

- Stopping at just planning the topics and doing active learning on-the-fly is not likely to increase student learning or understanding.
- Thinking through how what we **select** for students to do and how we will **respond** to them will become essential.

# Let's look at this more closely

---

The two dimensions to think through in  
planning

Selecting

Anticipating

# Selecting the activity or strategy to use

---

What type of thinking will students do?

What situational factors will need to be considered?

What do you want the activity to look like?

# How students will think

---

Recalling information  
Applying previously known  
equations or steps  
Re-stating facts

Compare two things  
Apply a previously learned  
concept  
Write an explanation

Synthesizing information  
from multiple areas  
Creating new/novel ways  
to approach a problem  
Constructing arguments to  
justify a point

# Outside Factors

---

Time

Class Size

Class Modality

# What will the activity look like?

---

- There are hundreds of active learning techniques! ([Interactive Techniques \(Kevin Yee\) \(ucf.edu\)](#))
- The need to scaffold student thinking will impact what an activity looks like.
  - Do you need to ask questions to guide student thinking?
  - Should the process be broken down so students are not overwhelmed?

# Let's look at this more closely

---

The two dimensions to think through in  
planning

Selecting

Anticipating

# How will you respond to student thinking?

---

Think about common misconceptions around the topic or questions

What do these misconceptions mean? Definition problem? Conceptual problem?

How might you respond to students?

# Compile possible ways of thinking

---

- Amount of time needed for this is variable
  - Based on the task you have students do
  - Based on your familiarity with the topic
  - How long you have been teaching
- Try to think of any and all solutions, answers, or ways of thinking

# Categorizing Approaches

---

- What do these responses represent?
  - Definition problems?
  - Conceptual?
  - Partial understanding?
  - Conflation of two ideas?
- Misunderstanding of the question/directions?

This is the harder part, since it asks us to think about what a response means. But it keeps us from thinking that students “don’t know” or “can’t do”

# Responding to thinking

---

- How you choose to respond will always be a mostly in-the moment.
  - Evaluate
  - Call for other opinions
  - Ask follow-up questions
    - Can you rephrase what you said?
    - I think I heard ...
    - I am confused about...
- Review material
- Ask students to ask follow-up questions

# Activity

---

- Thinking through two different small group discussion activities we can give students.
  - When might each of these be a “good fit” for a class?
  - What are the possible student responses to these and what might they mean for student thinking?
- Think through some of your own activities.
  - What questions or student responses might you get?
  - How might you follow-up to understand more or push student thinking?

# Questions?

Thank you!

Please remember to leave your name tag on the table when you leave.