

Planning for student thinking with Active Learning

Faculty Center for Teaching and Learning

September Workshop Series

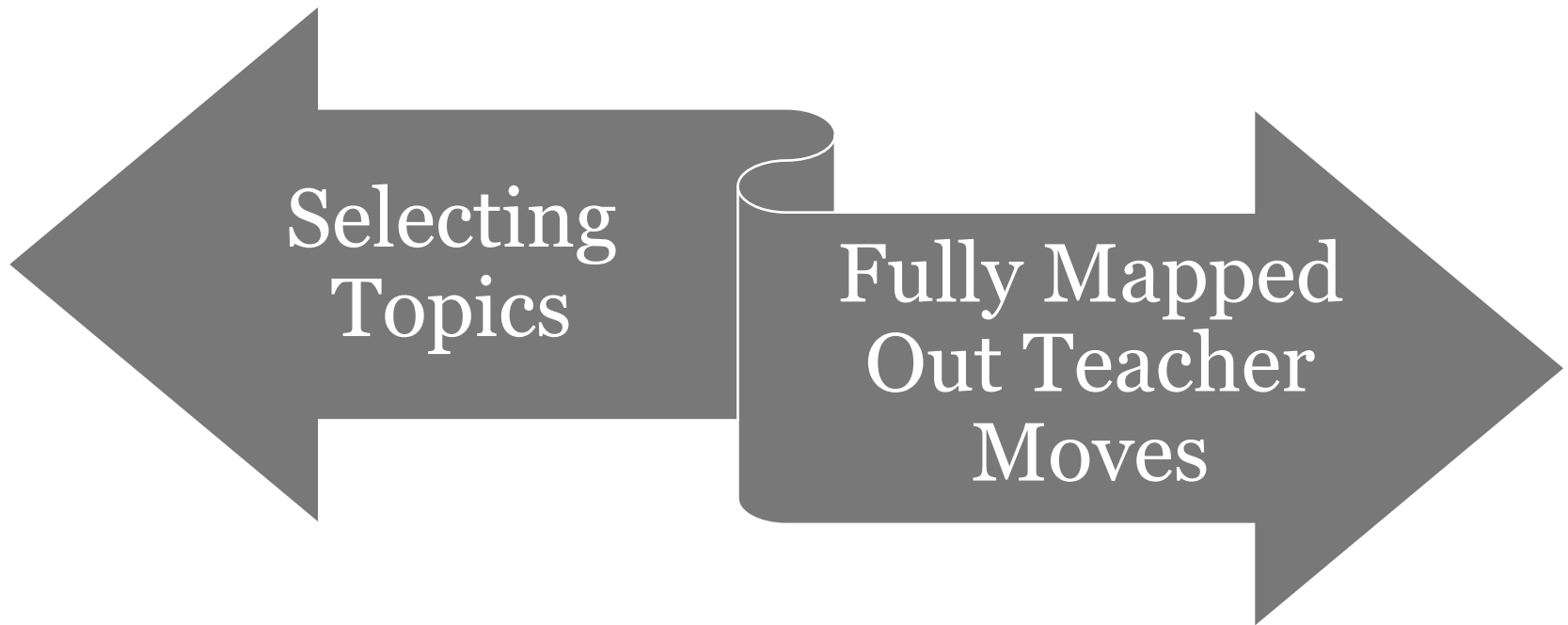
September 20, 2022

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.