Planning Significant Learning Activities

Goal

By the end of this session, you will have:

- ✓ A clear understanding of the planning process
- ✓ Seen examples of the planning process
- ✓ Developed a detailed outline of one class period for your chosen course
- ✓ Planned significant learning activities as part of that lesson
- ✓ Developed pre-class activities

Planning process

- ✓ Divide basic and advanced learning outcomes (TS 4)
- ✓ Develop outline of lesson plan (TS 3)
- ✓ Plan detailed in-class activities (TS 5)
- ✓ Adjust lesson plan as needed (timing, etc.)
- ✓ Plan the pre-class activities (TS 6)

Example – Quadratic Formula (QF)

Basic LOs

1. State the quadratic formula.
2. Use the quadratic formula to find the roots of a second-degree polynomial.

Advanced LOs

3. State the conditions under which a second-degree polynomial will have two real roots, one repeated (real) root, or two complex roots.
4. Apply the quadratic formula to solve a real-world problem.

Make a Lesson Outline

- Identify the **type of activities** that you plan to do during the class period
  - ✧**Opening minutes**: Assess pre-class prep (e.g., entry ticket or clicker questions), ask compelling question, respond to submissions
  - ✧**Main Activities** to support advanced LOs
  - ✧**Closing minutes**: Summarize, reflect (e.g., one-minute paper, muddiest point, what was learned)

Example – Initial QF Lesson Outline

Class time 60 minutes

LO 3: State conditions for 0, 1 or 2 solutions

LO 4: Applications of quadratic formula

Short Description of Activity	**Purpose (or LO with which it is associated)**	**Estimated time**
Allow for questions; comments about the quiz answers (if needed)	Accountability for individual space activities; compelling question as guide for what is to come	10
LO 3: Think-Pair Share with guided questions		15
LO 4: Work on multiple applications in different groups		30
Muddiest point	Summarize, synthesize, solicit questions	5

Lesson Outline – You try it! (5 mins)

Based on the LOs of **YOUR** course:

- Think about activities for the three parts of class, using the active learning techniques you have identified in your workshop preparation or in the Active Learning session
- Note what needs to happen in the pre-class activities to support in-class activities
- Assign **times** to the in-class activities without planning them out in detail.

Share (5 mins)

Share your activities with the workshop participants

- **Opening minutes**:

- **Main Activities:**

- **Closing minutes**

Main Activities – You try it! (40 mins total)

- Use **25 minutes** to develop a detailed description of two activities of **YOUR** class. Use the activity planning worksheets to do so.
- Find a partner, ideally in a closely related discipline. Exchange your activity worksheets. Use **5 - 10 minutes** to give **written feedback** on your partner's activity worksheets (and vice versa).
- Use **the remainder of the time** to discuss the most important issues you found in each other's activities.

Written Feedback & Share (15 mins)

Give each other feedback on the following:

- ✓Are the class activities aligned with the stated LOs?
- ✓Are there parts of the activities that seem to be
  - Too simple (would better fit in pre-class)?
  - Too advanced (would better be done after class)?
  - Redundant in a non-productive way?
- ✓**Can activities be completed in the allotted time**?
- ✓Are all the necessary pieces in place (prep materials, etc.)?

Be constructive and respectful!

Next Steps

In-class activities

- Based on the feedback, you may have to adjust your outline
- Some of the activities may have to be completed after class because you are running out of time (it **ALWAYS takes longer** than you think it will)
- Maybe you need to rethink/modify your activities

Pre-class Activities

- Basic LOs
- Support in-class activities

Example – QF Pre-class Activities

Basic LOs

1. State the quadratic formula.
2. Use the quadratic formula to find the roots of a second-degree polynomial.

What are relevant pre-class activities?

✓ Make sure there is meaningful connection between pre-class and in-class activities

Guided Practice Document

The guided practice document for pre-class activities should have the following components:

- Overview/background
- LOs divided into basic and advanced objectives
- Resources for learning the basic LOs (multiple ways to achieve learning)
- Exercises to practice
- Assessment

Example – QF Guided Practice

- Overview/background
- LOs divided into basic and advanced objectives
- Resources for learning the basic LOs (multiple ways to achieve learning)
- Exercises to practice
- Assessment

Pre-class Activities – Your try! (10 mins)

For **YOUR** chosen course,

- Identify the pre-class activities
- Check whether they are aligned with the basic LOs
- Check whether they properly support the in-class activities
- Identify how you would assess whether students have mastered the basic LOs before coming to/at the beginning of class
- Start to write the guided practice document

Now It's YOUR Time to