The Disclaimer 😊

Have you ever made something, and the recipe didn’t taste right?
Things start off with a “fireside chat” story...
...then you must “teach back” to someone...
...then the group plays a game (dice, cards)...
...then you are asked to “share something”...
...then the class has a dance celebration...

Sitting in some of these classes isn’t always that fun...

Engaging your brain a bit more helps make these concepts memorable!

Rote Learning vs. Meaningful Learning

Some ingredients work very well with one another!
The Learning Question

“What is important for students to learn in the limited school and classroom time available?”

“What is worth learning?”

The Instruction Question

The Assessment Question

The Alignment Question

Choice #1: “Facts” – the building blocks

The basic elements that students must know if they are going to be acquainted with a topic or discipline, solve problems within it, and communicate with others about it.

What “Facts” could look like:
- Knowledge of the units of empirical measurement
- Knowledge of the major nutrition terms
- Knowledge of the major facts about regional food sources
- Knowledge of practical facts relevant to storing food safely

Choice #2: Sharing the “Facts”

You could create slides, read from them, lecture for a while or tell a story to students…

…but what if instead you gave students source material for a “Game Show” activity?

Make sure to have the source material handy for these “Building Blocks”
“How does one select or design assessment instruments and procedures that provide accurate information about how well students are learning?”

“How can I tell if my teaching is working?”

Choice #3 - checking a student's ability to “Remember”

#1 Recognize: Give your students multiple choice test with items like:

“How many food groups are recognized by MyPlate from USDA?
 a. four  b. five  c. six  d. seven  e. ten

#2 Recall: Give your students fill-in-the-blank test with items like:

“Complete this statement: The MyPlate Daily Checklist is based off of ___ calories per day”

https://www.myplate.gov/eat-healthy/what-is-myplate

Engaging your brain to “Remember” these “Facts” is one of those combos!

Recognizing or Recalling

Remember to start here:

“What is worth learning?”

Classifications and categories as well as the relationships between them that students use to understand how things are organized, connected, and function.

What “Concepts” could look like:

- Knowledge of the various food groups
- Knowledge of the types of food popular with particular cultures
- Knowledge of the principles involved in cooking proteins
- Knowledge of the structural organization of a well-balanced meal
Next thing to think about:

“How will I share this?”

Choice #2: Sharing the “Concepts”

You COULD ask students to watch a video that explains the differences in some concepts…but what if INSTEAD you asked students to sort a stack of cards into the correct category?

Consider what prerequisite knowledge they would need – aka the “Facts”!

Then you need to ask:

“How can I tell if my teaching is working?”

Choice #3: Checking a student’s ability to “Understand”

#1 Exemplify: Ask students a question to provide an example:

“Share an example of a vegetable and state why it is a vegetable.”

#2 Classify: Give students an instance and ask them to produce its related concept or principle:

“For each picture of food, state which food group it is in and three attributes which make it part of that food group.”

Understanding the Concepts

Exemplifying or Classifying

Engaging your brain to “Understand” these “Concepts” is one of those combos!
“What is worth learning?”

Students often come to us looking for how to accomplish something, ways to inquire about something, and the criteria for determining which process or steps to use.

What “Procedures” could look like:
- Knowledge of the skills used to prepare a grilled cheese sandwich
- Knowledge of the methods used to create an egg-based dish
- Knowledge of the techniques used to prepare the evening meal
- Knowledge of the criteria for determining the best way to prepare a steak

“How will I share this?”

Handing students a “recipe” to follow DOES NOT mean they can cook! …but what if INSTEAD you asked students to perform the steps themselves after a demo?

You COULD ask students to watch you demonstrate how to perform a sequence of steps...

“How can I tell if my teaching is working?”

#1 Execute: Give students a familiar task to perform using a well-known procedure they have used before:

A student is given the formula to calculate the nutritional information by serving and must provide a set of answers for a meal made from scratch

#2 Implement: Give students an unfamiliar task to perform where they must select the appropriate procedure to use and then solve the problem:

Present students with a problem in which they must choose the most nutritious meals to support weight loss for a middle-aged adult
Engaging your brain to “Apply” these “Procedures” is one of those combos!

Let’s start to draft up a recipe 😊

Your Recipe: Part 1

1:00

Locate the “First Question” on the back of your worksheet
Write a few words about the knowledge you would share with your students
Next quickly review the types of knowledge (Factual, Conceptual, Procedural)
Circle which type of knowledge is closest to your first response!

Your Recipe: Part 2

1:00

Locate the “Second Question” on the back of your worksheet
Write a few words describing the activity to teach your “Part 1” knowledge
Next, quickly review the Cognitive Processes listed next to your response
Circle which Cognitive Process might be engaged with your activity!

Your Recipe: Part 3

1:00

Locate the “Third Question” on the back of your worksheet
Write a few words describing how you would check to see if students “got it”
Next, quickly review the assessment examples next to your response
Circle which question or activity would help you get feedback on your teaching

It starts with your first ingredient: Your “Objective”
What Objectives Are

Statements that describe something that a student will be able to do following the completion of a unit of instruction. They often state these desired behaviors using nouns and verbs.

“By the end of the school year, students will be able to...”

Instructors must differentiate Objectives from Instructional Activities and Assessment Tasks. How they are explicitly stated helps us determine one from another!

- Objectives – the ‘ends’: intended results, outcomes, and changes
- Activities – the ‘means’: reading a textbook, listening to a lecture, etc.
- Assessments – the tasks and activities used to get feedback on learning

A Taxonomy for Learning, Teaching, and Assessing – Anderson and Krathwohl (2001)

A very common mistake...

Instructors need to avoid misinterpreting an objective as something that THEY THEMSELVES would perform or accomplish during the course – it’s not about you 😊

Objectives are focused on the LEARNER and NOT on the INSTRUCTOR!

To avoid this, you must ask yourself one more question:

“How does one ensure that the objectives, instructional activities, and assessments are consistent with one another? ”

“Do the choices I made all line up?”

It can be easy to choose the wrong combination of ingredients!
A two-dimensional framework that illustrates the intersection of four types of Knowledge with six increasing levels of Cognitive Processes: Used to analyze design choices - Revised in 2001

<table>
<thead>
<tr>
<th>Activities</th>
<th>Assessments</th>
</tr>
</thead>
</table>

An example of Classification

Objectives contain a “Noun” and “Verb”. The verb generally describes the intended Cognitive Processes. The noun generally describes the Knowledge that students are expected to acquire.

Objective: “The student will learn to apply the reduce-reuse-recycle approach to conservation”

This objective is placed in the cell at the intersection of Apply and Procedural Knowledge

Some intersections are “combinations” that are common

Common Intersections include:
- Remember Factual Knowledge
- Understand Conceptual Knowledge
- Apply Procedural Knowledge

Looking at your worksheet, do your choices line up?

Visualizing your choices helps you identify the “combinations” that work!!

A Taxonomy for Learning, Teaching, and Assessing – Anderson and Krathwohl (2001)
Five Conditions for planning your Objectives

1. They should relate directly to YOUR students in YOUR classroom
2. They should be attainable by all students or a specified portion / percentage
3. They should be meaningful in terms of content: worth the student’s time
4. They should be specific enough to guide lesson plans and assessments
5. They should be able to be understood by other educators / administrators

A Taxonomy for Learning, Teaching, and Assessing – Anderson and Krathwohl (2001)

It’s great to experiment, but it’s helpful to rely on combos that work!

Thank you!! – Bonus Takeaway

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For a summary of the information in this presentation go to this link:
https://www.sparkplugagility.com/f/Cooking

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