Welcome!

Marzano Instructional Framework Overview

Dr. Tina H. Boogren

Learning Outcomes:

- Participants will learn a model for ensuring quality teaching that balances the necessity of research-based data with the equally vital need to understand the strengths and weaknesses of individual students.
- Participants will learn the instructional framework that consists of 10 questions that represent a logical planning sequence for successful instructional design and implementation.
Boosting Retention

Average Retention Rate after 24 hours

- Lecture: 5%
- Reading: 10%
- Audio-visual: 20%
- Demonstration: 30%
- Discussion Groups: 50%
- Practice by doing: 75%
- Teach others/immediate use of learning: 90%

Adapted from David Sousa’s figure 3.8 in his text, How the Brain Learns

Student Achievement

Teacher Pedagogical Skill

Mentoring
Supporting Beginning Teachers

- Emotional
- Physical
- Instructional
- Institutional
An Instructional Framework

For learning to be increasingly purposeful, mentors need frameworks and language for describing the complexity of teaching.

Expertise:

What looks easy for the expert and so clumsy for the novice is the result of thousands of hours of experience and reflection.
“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”

—Alvin Toffler, American writer and futurist

Page 2

At the level of planning, The Art & Science of Teaching involves 10 “design questions” teachers ask of themselves as they plan a unit of instruction.

Pg. 4
1. Learning goals and feedback
2. Interacting with new knowledge
3. Practicing and deepening
4. Generating and testing hypotheses
5. Engaging students
6. Establishing rules and procedures
7. Adhering to rules and procedures
8. Developing teacher–student relationships
9. Maintaining high expectations

At the level of observing teaching, The Art & Science of Teaching sheds light on three fundamental segments of classroom instruction.
 Fundamental Segments of Classroom Lessons

- Segments that are **routine components** of every lesson
- **Content specific** lesson segments
- Segments that must be **enacted on the spot**

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The Art and Science of Teaching Pg. 3

- **SEGMENTS ENACTED ON THE SPOT**
  - Student Engagement
  - Routine Segments: Learning Goals and Feedback, Rules and Procedures
  - Content Specific Segments: Interacting with New Knowledge, Practicing and Deepening, Generating/Testing Hypotheses
  - Adherence to Rules and Procedures
  - Teacher/Student Relationships
  - High Expectations
The fundamental questions that any observer must ask are:

- What am I observing right now?
- How is it going? Based on what evidence?

Should observations try to calculate the presence or absence of specific “high yield” strategies?

Design Question 1:

What will I do to establish and communicate learning goals, track student progress, and celebrate success?
Action Step:

Make a distinction between learning goals and learning activities or assignments.

The objective is....

I have to complete this by......
Learning Goals

As a result of the activities we do this week...
You **will be able** to solve fractions with like denominators. (Procedural Knowledge)
You **will understand** the defining characteristics of whole numbers, decimals, and fractions with like denominators. (Declarative Knowledge)

Activities/Assignments

*Today’s Assignments*
- Worksheet Pg 24..
- Lab Activity 7...
- Reflection Journal Entry..
Activities assist students in reaching Learning Goals

<table>
<thead>
<tr>
<th>Subject</th>
<th>Learning Goal</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Studies</td>
<td>Students will understand the defining characteristics of the barter system.</td>
<td>• Read pages 102–105.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Complete questions 1–3 on page 105.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discuss with group what the US might be like if it were based</td>
</tr>
<tr>
<td></td>
<td></td>
<td>on the barter system as opposed to a monetary system.</td>
</tr>
</tbody>
</table>

Learning Goal or Activity?

- Students will successfully complete the exercises in the back of Chapter 3.
- Students will create a metaphor representing the food pyramid.
- Students will be able to determine subject/verb agreement in a variety of simple, compound, and complete sentences.
Learning Goal or Activity?

- Students will understand the defining characteristics of fables, fairy tales, and tall tales.
- Students will investigate the relationship between speed of air flow and lift provided by an airplane wing.

Student Goals

- When this unit is completed, I will better understand ____________.
- When this unit is completed I will be able to ____________.
You Did This...

On your handout, page 3:

By the end of the day today, I will better understand...

OR

By the end of the day today, I will be able to...

On this writing task, I will be working on, and would like to receive feedback on,

______________________________________

______________________________________

______________________________________

______________________________________

In my next writing assignment, I need to work on __________________________.
Have students flesh out the meaning of the scale in order to assess students using a formative approach.

<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I know it just the way my teacher taught it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I know it even better than my teacher taught it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I know it just the way my teacher taught it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I know some of the simpler stuff but can't do the harder parts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rating</td>
<td>Statement</td>
<td></td>
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<tr>
<td>--------</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
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<td>I know it just the way my teacher taught it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I know some of the simpler stuff but can't do the harder parts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>With some help, I can do it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Even with help, I can't do it.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How much did you learn?

4. I know it even better than my teacher taught it.
3. I know it just the way my teacher taught it.
2. I know some of the simpler stuff but can't do the harder parts.
1. With some help, I can do it.

Proficiency scales in student-friendly terms—ELL classroom
My Learning Bucket for:

1. My bucket is empty or just beginning. I have a lot to do and a lot to learn to fill my bucket.

2. My bucket is filling up with learning, but I still have a ways to go to reach the top. I need more practice and more hard work.

3. My bucket is full. I have learned what I set out to learn.

4. My learning has lifted me to a new level of understanding.

I get it and I can teach a friend!
I get it!

I am not sure if I get it.
I don’t get it.

I don’t get it at all!
Action Step:

Have students chart their progress on each learning goal.
Action Step:

Recognize and celebrate GROWTH.

Celebrating Success

- How do you celebrate achievement in your classroom?

- How do you celebrate growth in your classroom?
Design Question 6:

What will I do to establish or maintain classroom rules and procedures?

Handout, page 6
Routines and Procedures....

What to do if I’ve Missed Class

1. E-mail your teacher before class. Meredith.Lawrence@RoundRock
2. If you can’t e-mail before class, e-mail right after class.
4. Ask classmates or information about what happened and ask that they share notes.
   a. Ask three friends before you ask your teacher.
   b. Ask friends on Facebook or another online social network.
5. Come by before school or after school prior to the next class.
   a. Ask for a WOW pass.

You will take any test or quiz, even if you missed the previous class.

Our Classroom Norms

Teacher will:
- Be creative and allow creativity
- Have engaging texts
- Allow choice in class
- Allow student directed discussion/collaboration
- Accept multiple interpretations
- Have fun
- Help students connect and understand
- Show Respect
- Offer tutorials
- Be specific in feedback
- Motivate us
- Meet us at our level
- Accept mistakes
- Prepare us for the exam and college
- Be involved and have school spirit
- Words follow actions
- Present information in different ways
- Meaningful assignments
- Enthusiastic and supportive

Students will:
- Stay focused
- Produce Quality Work
- Show Respect
- Be Diligent
- Participate
- Don’t press up against the door before bell rings
- Trust
- Be honest
- Be on time
- Turn in work on time
- Try hard
- Aim high – for a 4 or 5
- Be kind to each other in class
- Agree on the path
- Buy in and believe
- Commit
- Forgive mistakes and try harder
- Words follow actions
- Complete assignments
- Don’t complain or whine
- Be enthusiastic and supportive
What to say instead of “I Don’t Know”

- May I please have some more information?
- May I consult an expert? (use the text/notes or ask additional questions)
- May I have some more time to think?
- May I ask a friend for help?
- Would you please repeat the question?
- May I poll the class?
- Where could I find information about that?
- May I have a clue or fifty-fifty?
Design Question 2:

What will I do to help students effectively interact with new knowledge?

Let’s Try It!

Put on your ‘student hat’ so you can experience some of the strategies associated with this design question.

Scratch paper: Handout, pg. 15
Today’s Vocabulary Word

Peripatetic

First Rating:

<table>
<thead>
<tr>
<th>Level 1:</th>
<th>I'm very uncertain about the term. I really don't understand what it means.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2:</td>
<td>I'm a little uncertain about what the term means, but I have a general idea.</td>
</tr>
<tr>
<td>Level 3:</td>
<td>I have a good sense of the meaning of the word when I see it or hear it.</td>
</tr>
<tr>
<td>Level 4:</td>
<td>I can define it and explain its meaning to someone else.</td>
</tr>
</tbody>
</table>
Peripatetic

PERIPATETIC

- Elbow partner discussion:
  - What do you THINK it means?
Peripatetic (noun, adjective)

Synonyms:
- itinerant, traveler, wayfarer,
- wandering, roaming, migrant, mobile,
- roving, nomadic, vagrant, vagabond

Peripatetic

A and B Partners:

How did the video represent the word ‘peripatetic’?
Peripatetic

- Write your own description, explanation, or example for *peripatetic*.
- Construct a nonlinguistic representation (a picture, symbol, or graphic) for *peripatetic*.

Elbow Partner

- Compare your descriptions of the term.
- Describe your pictures to one another.
- Identify areas of disagreement or confusion.
## Second Rating:

<table>
<thead>
<tr>
<th>Level 4:</th>
<th>I can define it and explain its meaning to someone else.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3:</td>
<td>I have a good sense of the meaning of the word when I see it or hear it.</td>
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<td>Level 1:</td>
<td>I'm very uncertain about the term. I really don't understand what it means.</td>
</tr>
</tbody>
</table>

## Exit Slip Reflection

- With whom will you share today’s learning?
- What did you do well today?
Design Question 3

What will I do to help students practice and deepen their understanding of new knowledge?
Practicing and Deepening

Solo Thinking:

What are your most effective strategies to help students practice and deepen their understanding of new knowledge?

Table Family Sharing:

Handout, page 8

Plug your strategies into the action steps.

(Use pages 120–133 of your book as a resource.)
Action Step: Examining Similarities & Differences

- Comparing
- Classifying
- Creating metaphors
- Creating analogies

Identifying Similarities and Differences

- The basic thought processes found in identifying similarities and differences is found to be basic to human thought.

- Learning is dependent on prior learning; therefore it is basic to ask, “How is this different from what I already know?”
Identifying Similarities and Differences

Effective tools include:

- Venn diagrams
- Comparison matrix
- Classifying activities
- Concept maps
- Graphic organizers
- T charts
- Pro and con grids
- Metaphors and analogies

Engagement Strategy: Tap Into Students’ Interests

Compare what’s being studied to something that is important to your students.
Design Question 4:

What will I do to help students generate and test hypotheses about new knowledge?

Handout, page 9

Key Words/Phrases

- Effective Support
- Experimental-Inquiry
- Problem-Solving
- Decision-Making
- Investigations
- Student-Designed
- Cooperative Learning
Brainstorm...

- What are possible ‘What If?’ questions for your content area/grade level?

- How do you currently push students to work on cognitively complex tasks?

Action Step 5

Engage students in investigation tasks that require them to generate and test hypotheses.
Invention Convention

Overview

Students should be given opportunities to solve problems, think creatively, experiment, and work with data throughout the school year.
Invention Convention

Step 1: Learning About Inventors
Step 2: Finding an Idea
Step 3: Research and Planning
Step 4: Developing, Testing, and Displaying
Step 5: Attending the Invention Convention

Design Question 5:

What will I do to engage students?
Research on The Use of Games to Improve Student Learning

Student growth in classrooms that used games ranged from a 13 percentile gain to an 18 percentile gain.

This is significant.

Games and Inconsequential (Just for Fun) Competition

- Games should always have an academic focus.
- Regroup students so that all students experience winning and losing.
- Points are tallied but not used to increase or decrease scores or grades.
“Amazingly, the part of the brain that processes movement is the same part of the brain that processes learning.”
—Jensen, Teaching With the Brain in Mind

“The real reason we feel so good when we get our blood pumping is that it makes the brain function at its best.... This benefit of physical activity is far more important than what it does for the body.”
—Ratey, Spark (2008)
Slap Count

- Slap Count:
  - Partners or triads
  - Can ‘slap’ 1, 2, or 3 times
  - Goal: to be the last one to ‘slap’ on the final number
  - Can mix it up with even numbers, factors, etc.

Unusual Information

Did you know?

- Thirty-one percent of employees skip lunch entirely.
- The 1912 Olympics was the last Olympics that gave out gold medals that were made entirely out of gold.
- Take your height and divide by eight. That is how tall your head is.
A few more...

- The first product to have a bar code was Wrigley's gum.
- Three percent of pet owners give Valentine's Day gifts to their pets.
- Venus is the only planet that rotates clockwise.

Design Question 7:

What will I do to recognize and acknowledge adherence and lack of adherence to classroom rules and procedures?
Design Question 8:

What will I do to establish and maintain effective relationships with students?

Every Kid Deserves a Champion!

- Rita Pierson (TED Talk)
Design Question 9:

What will I do to communicate **high expectations** for all students?

Top four sources of expectations about new students:

- Cumulative folder (previous info about students)
- Social class
- Physical attractiveness
- Race
● It is difficult, if not impossible, for a person to change his or her thinking about students.

● Yet it is entirely possible to change behavior toward students so that all students receive the same behavior in terms of affective tone and quality interactions.

Working with ALL students:

● Identify which students are LE
● Identify differential treatment of LE students
● Use verbal and nonverbal messages
● Ask questions
● Stay with them
Consciously and Systematically

- Engage in the following behaviors:
  - Make eye contact frequently
  - Smile at appropriate times
  - Make appropriate contact (hand on shoulder)
  - Maintain proximity (interest)
  - Engage in playful dialogue

"I am fairly certain that given a cape and a nice tiara, I could save the world."

—Leigh Standley
Thank You!

Evaluations
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