Task 4

Kristy Brown, Ed.D.
kbrown15@augusta.edu
## Reminders/Next Steps

<table>
<thead>
<tr>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review <em>Making Good Choices</em> Addendum for Elementary Education: Literacy with Mathematics Task 4 with candidates.</td>
<td>Familiarize candidates and faculty with portfolio submission processes</td>
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<tr>
<td>Task 4 Webinar October 11</td>
<td>Webinar November 15</td>
<td>No webinar this month</td>
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<tr>
<td>Identify your district contacts for candidate reimbursement and mentor teacher stipends</td>
<td>Submit stipend forms to districts</td>
<td>Submit stipend/reimbursement forms to districts</td>
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<tr>
<td>Tell TEA what webinar you’d like to see next</td>
<td>Submit candidate information and stipend/reimbursement requests.</td>
<td>Submit candidate information and stipend/reimbursement requests.</td>
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<tr>
<td>Year 2 Application available 10/31</td>
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What if the teacher who is assigned to serve as the edTPA mentor teacher teaches reading but not math?
# 2019 edTPA Pilot Timeline: Webinars

<table>
<thead>
<tr>
<th>July 15</th>
<th>August 9</th>
<th>September 13</th>
<th>October 11</th>
<th>November 15</th>
<th>January 10</th>
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<tr>
<td><strong>Task I Deep Dive</strong></td>
<td><strong>Task II Deep Dive</strong></td>
<td><strong>Task III Deep Dive</strong></td>
<td><strong>Task IV Deep Dive</strong></td>
<td>TBD based on program needs</td>
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<td>• Task I requirements and resources</td>
<td>• Task II requirements and resources</td>
<td>• Task III requirements and resources</td>
<td>• Task IV requirements and resources</td>
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<td>• Task I sample timeline</td>
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<td>• Task III sample timeline</td>
<td>• Task IV sample timeline</td>
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<td>• Scoring student work sample</td>
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Task 4 - Assessing Students’ Mathematic Learning

• Analysis of student learning and “re-engagement”
• Three additional rubrics (16-18)
• Logistics
  • Same or different students/placement
  • Before or after Tasks 1-3 in Literacy
  • Submitted and scored with Tasks 1-3
Task 4: Analyzing Student Learning in Mathematics

• How will you analyze whole class evidence to identify patterns of learning?
• How will you use student work to analyze mathematical errors, confusions, and partial understandings?
• How will you re-engage students in learning to address identified areas of challenge or need?
• How do you use evidence of student learning to reflect on the effectiveness of your re-engagement lesson?
What Do Candidates Submit?

• Mathematics Context for Learning
• Elementary Mathematics Learning Segment Overview
• Mathematics Chosen Formative Assessment
• Evaluation Criteria
• Student Mathematics Work Samples
• Examples of Student Work from Re-engagement Lesson
• Mathematics Assessment Commentary
<table>
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<tr>
<th>Task</th>
<th>Date</th>
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<tr>
<td>edTPA Kick-Off</td>
<td>August 3rd 2019</td>
<td>8:30-12:00pm</td>
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<tr>
<td>Task 1 Bootcamp</td>
<td>August 19th</td>
<td>2:30-5:00 (Elementary and Middle) 5:00-7:30 (Secondary, P-12, and MAT)</td>
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<td>August 26th</td>
<td>2:30-5:00 (Elementary and Middle) 5:00-7:30 (Secondary, P-12, and MAT)</td>
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<td>Task 4</td>
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<td>ELEMENTARY ONLY 2:30-5:00 5:00-7:30 (MAT elementary candidates)</td>
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<td>Task 3</td>
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<td>Writing Days (Optional)</td>
<td>October 7, October 14, October 28</td>
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**Due to University Supervisor**

- **Task 2**
  - October 14th
  - October 21st
  - Submission Day
  - November 4th

- **Task 3**
  - October 21st
  - Submission Day
  - November 4th

- **Task 4** (Elementary)
  - October 7th

**Note:** Do not teach your learning segment before **September 23rd**.
Context for Learning

Elementary Education: Literacy with Mathematics Task 4
Task 4: Mathematics Context for Learning Information

**TASK 4: MATHEMATICS CONTEXT FOR LEARNING INFORMATION**

Respond to the prompts below (no more than 4 single-spaced pages, including prompts) by typing your responses within the brackets following each prompt. Do not delete or alter the prompts. Pages exceeding the maximum will not be scored.

About the School Where You Are Teaching

1. In what type of school do you teach? (Type an “X” next to the appropriate description; if “other” applies, provide a brief description.)
   - Elementary school: x
   - Middle school: 
   - High school: 
   - Other (please describe): 

2. Where is the school where you are teaching located? (Type an “X” next to the appropriate description.)
   - City: 
   - Suburb: x
   - Town: 
   - Rural: 

3. List any special features of your school or classroom setting (e.g., charter, co-teaching, themed magnet, classroom aide, bilingual, team taught with a special education teacher) that will affect your teaching in this learning segment.

   [One special feature that impacts the school as a whole and my classroom as well, is that the school hosts a number of special needs students from all over the county who are hearing impaired or severely disabled. My classroom floors are carpeted which keeps the noise level from resonating. During this learning segment, I will have assistance from a Special Education Paraprofessional who serves two particular students in my class that have IEPs.]

4. Describe any district, school, or cooperating teacher requirements or expectations that might affect your planning or delivery of instruction, such as required curricula, pacing plan, use of specific instructional strategies, or standardized tests.

   [The district requires that we use a specific pacing guide as well as the county curriculum materials to teach mathematics content. The pacing guide is paired alongside Illuminate and FASTidge standardized tests to assess student mastery of the standards. The Illuminate tests are used as pre and post tests that assess students on the standards covered within the specified mathematics unit. The county pacing plan did influence the curriculum chosen during this particular learning segment as I chose to teach a review unit since mathematics is not my assigned subject. The lead mathematics teacher informed me students were still struggling to use their basic math facts and had not had much experience with inquiry based mathematics.]

About the Class Featured in this Learning Segment

1. How much time is devoted each day to mathematics instruction in your classroom?
Learning Segment Overview

Central focus: The central focus is express and evaluate a real-world situation using numerical sentences. In order to express a situation students will learn a new game that has precise scoring rules. The students will use mathematical reasoning to determine mathematical procedures necessary for solving the problem. They will also practice creating their own scoring rules with their own game. The purpose for teaching this content is to instill problem solving and procedural fluency.

State-adopted content standards:
- MA.EE.OA.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
- MATH.6.EE.2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as 2 x (8 + 7). Recognize that 3 x (18 x 21) is the same as (3 x 18) x 21.
- MATH.5.NBT.5: Multiply multi-digit whole numbers using the standard algorithm (or other strategies demonstrating understanding of multiplication) up to a 3 digit by 2 digit factor.

Learning Objectives:

1. Once the introduction is made the students are expected to:
   a. Understand the literal meaning of the problem.
   b. Solve the problem using logic and reasoning.
   c. Express the problem in an algebraic equation.
   d. Solve the algebraic equation.

Instructional Strategies and Learning Tasks:

Lesson 1: Students will be able to write an expression that describes a situation or context.
- [Learning Objectives]
- [Instructional Strategies and Learning Tasks]
- [Formative and Summative Assessments]

Lesson 2: Students will be able to write an expression that describes a situation or context.
- [Learning Objectives]
- [Instructional Strategies and Learning Tasks]
- [Formative and Summative Assessments]

Lesson 3: Students will be able to write an expression that describes a situation or context.
- [Learning Objectives]
- [Instructional Strategies and Learning Tasks]
- [Formative and Summative Assessments]

Lesson 4 (Optional): Students will be able to write an expression that describes a situation or context.
- [Learning Objectives]
- [Instructional Strategies and Learning Tasks]
- [Formative and Summative Assessments]

Lesson 5 (Optional): Students will be able to write an expression that describes a situation or context.
- [Learning Objectives]
- [Instructional Strategies and Learning Tasks]
- [Formative and Summative Assessments]
Math Assessment: Order of Operations

Using the dart board provided and the scoring rules, write a numerical expression and then solve each of the following problems.

1. Jayla lands her bean bags in the gray area of 7, the outside ring of 10, the inner circle of 8, and the gray area of 5. What would her final score be?

2. Emma lands her bean bags in the outside ring of 9, the outside ring of 10, the gray area of 10, and the inner ring of 7. What would her final score be?

3. Alex lands his bean bags in the gray area of 2, the bullseye, the inner ring of 6, and the gray area of 4. What would his final score be?
Student Work Samples

- Focus Student 1
- Focus Student 2
- Focus Student 3
Re-engagement Work Samples

- Focus Student 1
- Focus Student 2
- Focus Student 3
**Task 4: Commentary**

### TASK 4: MATHEMATICS ASSESSMENT COMMENTARY

1. **Analyzing Student Learning—Whole Class**
   a. Identify the specific learning objectives measured by the formative assessment you chose for analysis.

### Chart:

<table>
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<tr>
<th>Making sense of problems</th>
<th>Model 6 scenarios</th>
<th>Precision</th>
<th>Use parentheses</th>
<th>Addition</th>
<th>Multiplication</th>
<th>Exponents</th>
<th>Total out of 38 points</th>
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* indicates focus student

This chart above shows the patterns of learning for the whole class. The focus students are indicated with an asterisk. The students were given 7 criteria, 5 of which were worth 6 points, and 1 of which was worth 2 points.

The first criteria scored was the student’s ability to make sense of problems and preserve in solving them. In order for students to score all 6 possible points, they were expected to write a numeric expression for all 6 problems according to the rules of the game. Out of a class of 17 students, 15 students successfully wrote all 6 expressions that complemented the rules outlined by the game. The chart shows that 2 students made sense of one problem but struggled with the other 5.

The second criteria assessed was the student’s ability to model mathematics. In order for a student to score all 6 points, they were expected to construct equations and expressions that were representative of the score earned in the game of Beanbag Dartboard. Out of a class of 17 students, 13 students were successful in modeling with mathematics.

The third criteria assessed was the student’s attention to precision. The equations should be written with precise scenarios that explain how the score is determined. The student should have clearly written each change in value that corresponds to the situation being told and then calculate the precise answer. The chart shows that only 2 students were unsuccessful.

The fourth criteria assessed by the lesson was the student’s use of parentheses to evaluate expressions. Since the learning objective relates to the order in which operations are performed, this criteria is important to know the way in which students group values and manipulate the score. All 17 students used parentheses correctly to calculate their numeric expressions.

The next two criteria pinpoint the students strengths in addition and multiplication. Only one student showed difficulty with multiplication, as evidenced in the chart, the most likely correlates to their lack of precision.

In the championship round of the assessment, students were to multiply a number by itself. The last criteria measures the students ability to write and use exponents. In the class of 17 students, only 4 students wrote exponents on their papers. The use of exponents was not explicit in the directions, so the students who correctly multiplied the number by itself were indicated in the chart using the phrase “multiplication.” This process was used by 7 of the students.

Overall, the students could have scored a total of 38 points. Out of the class of 17, 13 of the students scored at 84% or above, 1 student scored 70%, and 3 students scored a 57% or below.

- Using examples from the summary chart, discuss the patterns of learning across the whole class relative to:
  - Conceptual understanding
  - Procedural fluency
  - Mathematical reasoning/problem-solving skills
Conceptual Understanding

• Recognize, label, and generate examples of concepts.
• Use and interrelate models, diagrams, manipulatives, and varied representations of concepts.
• Identify and apply principles.
• Know and apply facts and definitions.
• Compare, contrast, and integrate related concepts and principles.
• Recognize, interpret, and apply the signs, symbols, and terms used to represent concepts.
Procedural Fluency

• Apply procedures accurately, efficiently and flexibility to:
  – Transfer procedures to different problems and contexts
  – Build or modify procedures from other procedures
  – Recognize when one strategy or procedures is more appropriate than another.
Mathematical Reasoning

• “The capacity to think logically about the relationships among concepts and situations. Such reasoning is correct and valid, stems from careful consideration of alternatives, and includes knowledge of how to justify the conclusions...One uses it to navigate through the many facts, procedures, concepts, and solution methods and to see that they all fit together in some way, that they make sense.”
B. Analysis of Student Work
- Have you designed and chosen an assessment that can be completed by all students in your class and that is aligned to the standards and learning objectives?
- Does the chosen assessment provide opportunities for students to demonstrate: (1) conceptual understanding, (2) procedural fluency, (3) mathematical reasoning/problem-solving skills?
- Have you defined Evaluation Criteria for the assessment that will be used to analyze learning of all the students in the class? Is it aligned with and measure the outcome of your learning segment (central focus) AND address: (1) conceptual understanding, (2) procedural fluency, (3) mathematical reasoning/problem-solving skills?
- Have you created a narrative or graphic that summarized student learning across the 3 areas of focus?
- Does your Evaluation Criteria clearly indicate the features or qualities that will be assessed in your students’ work (e.g. accuracy of responses, specific skills needed to solve problems, clarity of students’ explanations of how they solved the problems; and student’s understanding of a specific mathematical concept)?
- Have you conducted two different analyses of student learning: (1) whole class and (2) deeper analysis of the struggles of three focus learners?
- Have you identified and provided evidence of a specific mathematical focus area where students struggled (e.g. mathematical errors, confusions, partial understandings) and explained how their struggle was related to mathematical understanding?
- Have you described and provided specific examples of both quantitative (number of similar correct responses or errors) and qualitative (understandings and/or misunderstandings, partial understandings, and/or attempts at applying a strategy) patterns of learning?

C. Re-engagement
- Have you designed and described a re-engagement lesson addressing the common student struggle identified in your analysis of the three original student work samples?
- Does the re-engagement lesson give the three focus students opportunities to demonstrate their growth?

After teaching the re-engagement lesson, have you provided evidence of the three students’ mathematical understanding in the area in which they were previously struggling?
- How effective was your re-engagement lesson based upon whether or not there was a change in learning?
- Using specific examples from the three focus students’ original work in comparison to their re-engagement work, what evidence have you provided for what they now know?

*Carla Tanguay developed questions from Making Good Choices: A Support Guide for edTPA Candidates October 2013 (v2) and used exact wording and phrasing in the majority of this document. Credit is given to SCALE: Stanford Center for Assessment, Learning, & Equity.
# Rubric 16: Analyzing Whole Class Understandings

How does the candidate analyze whole class evidence to identify patterns of student learning?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
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</thead>
<tbody>
<tr>
<td>The evaluation criteria, learning objectives, summary, and/or analysis are not aligned with each other.</td>
<td>Candidate identifies what students did right OR wrong related to • conceptual understanding, • procedural fluency, OR • mathematical reasoning/problem solving.</td>
<td>Candidate identifies what students did right AND wrong related to • conceptual understanding AND • procedural fluency or mathematical reasoning/problem solving.</td>
<td>Candidate identifies and explicitly connects patterns of learning to • conceptual understanding AND • procedural fluency or mathematical reasoning/problem solving.</td>
<td>Level 4 plus: Candidate describes the relationship between or among patterns of learning.</td>
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<tr>
<td>There are significant content inaccuracies that affect analysis.</td>
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Unpacking Rubric Levels

Level 3

Evidence that demonstrates performance at Level 3:

- The narrative or graphic summary highlights the differences in mathematical performance for the whole class.

- Aligned with the evaluative criteria, the candidate identifies what students did right AND wrong within the whole class related to conceptual understanding AND procedural fluency or mathematical reasoning/problem solving.

- The identified differences in the analysis are aligned with the narrative or graphic summary.

- For example, "As a whole class, the students know how to find the area and perimeter of a shape with the exception of a few individuals. The students were able to accurately calculate the perimeter by adding the sides or calculate the area by multiplying the lengths and widths of the rectangles. The main error that caused some students to miss points was in labeling their answer with the correct units. Some students made errors in multiplying, regrouping, or adding. A few individuals were not able to differentiate between solving for area or perimeter."
Evidence that demonstrates performance above 3:

- Patterns of learning are identified and are specifically related to conceptual understanding AND procedural fluency, OR mathematical reasoning/problem solving.
- Examples from the summary of student learning are referenced in order to support analysis.

What distinguishes a Level 4 from a Level 3: At Level 4,

- The analysis identifies the direct relationship between the patterns of learning to students’ understanding of conceptual understanding AND procedural fluency or reasoning/problem solving.
- The analysis goes beyond a listing of whole class strengths and errors, to an explanation of patterns of learning in relation to conceptual understanding AND procedural fluency or reasoning/problem solving. Specific evidence from the summary is used to demonstrate the whole class patterns.

For example: "As a whole class, the students have a solid understanding of how to find the area and perimeter of a shape with the exception of a few individuals. The students were able to identify which measures to use for either area or perimeter from the provided shape and were able to accurately calculate the perimeter by adding the sides or calculate the area by multiplying the lengths and widths of the rectangles. The main error that caused some students to miss points was in labeling their answer with the correct units (plane or square) that were specific to the problem they were solving. Some students made errors in multiplying, regrouping, or adding. A few individuals were not able to differentiate between solving for area or perimeter. This could be seen in their choice of which measures to pick when calculating perimeter or area and also in their choice of which calculation to use to find the perimeter or area of the figure."
1. Analyzing Student Learning—Whole Class
   a. Identify the specific learning objectives measured by the formative assessment you chose for analysis.
   
   [The specific learning objective measured by this formative assessment are the student’s ability to write an expression that describes a situation or context.]
   
   b. Provide a graphic (chart or table) or narrative that summarizes student learning for the whole class. Be sure to summarize student learning for all evaluation criteria submitted in Mathematics Assessment Task 4, Part D.

<table>
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<th>model 6 scenarios (7 points)</th>
<th>precision (6 points)</th>
<th>use parentheses (6 points)</th>
<th>addition (6 points)</th>
<th>multiplication (6 points)</th>
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<td>16</td>
<td>6</td>
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<td>multiplication</td>
<td>36</td>
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<tr>
<td>17</td>
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<td>6</td>
<td>6</td>
<td>multiplication</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>

* indicates focus student
Using the summary chart, the patterns for student learning across the whole class indicate that students had a strong conceptual understanding of the “Beanbag Dartboard” game. This can be seen in the high percentage of students (94%) who were able to make sense of the problems given and persevere in solving them. In order to make sense of the problems, the numeric expressions written by the student had to correctly match the scoring rules of the game. The rules required students to pay close attention to which ring the bean bag landed in and then apply the score. The second criteria measured the students use of models to represent the game being played, 76% of students scored either 5 or 6 points out of a possible 6 points. This required students to have a deeper conceptual understanding as they constructed equations and expressions that represented score earned.

In regards to procedural fluency, the chart measured students ability to apply procedures accurately, efficiently, and flexibly as the championship round had them apply new rules to the same game. This shift in scoring challenged the students ability to apply the same procedure but using exponents or multiplying the number by itself. The grading criteria relevant to procedural fluency would be seen in the students use of exponents as well as their ability to model appropriately with mathematics. Most of the students (11) were able to either use exponents or the same rules of multiplication to find the answers in the championship round. There were 6 students who struggled to transfer their knowledge into the new scoring context, indicating a weakness in procedural fluency.

The students mathematical reasoning and problem-solving skills are also measured by their use of models to represent scenarios indicated by the word problems in this assessment. For a student to score all 6 points, they had to use parentheses to show how they manipulated each number listed outside the rings of the dartboard. This number would be multiplied by another number indicated by which area of the ring it landed in: the gray area, the outer ring, or the inner ring. The inner ring tripled the outside number, and the outer ring doubled it. Out of the class of 17 students, 13 of them showed strong mathematical reasoning when finding their total scores by modeling correctly and using parentheses. This also correlated with their proper multiplication and addition, also listed in the chart for success criteria.
### Rubric 17: Analyzing Individual Student Work Samples

**How does the candidate use student work to analyze mathematical errors, confusions, and partial understandings?**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The analysis is not supported by student work samples.</td>
<td>Candidate selects student work samples that are loosely connected to identified student struggles (errors, confusions, or partial understandings).</td>
<td>Candidate uses evidence from the 3 focus student work samples to identify the specific student struggles (errors, confusions, or partial understandings).</td>
<td>Candidate uses evidence from the 3 focus student work samples to explain the student struggles (errors, confusions, or partial understandings) in relation to the related mathematical concepts.</td>
<td>Level 4 plus: Analysis includes explicit connections between the identified area of struggle and underlying mathematical understandings and misconceptions.</td>
</tr>
</tbody>
</table>
Level 3

Evidence that demonstrates performance at Level 3:

- For each of the three focus students, the candidate uses examples from all the student work samples to identify the specific student struggle(s) (e.g., mathematical errors, confusions, and/or partial understandings).

- Analysis focuses on the underlying mathematical understanding(s) as related to the identified specific struggle(s) and aligns with the student work samples.

- The identified struggle(s) is/are clearly identified in terms of them being a mathematical error, confusion, and/or partial understanding.

- For example, "The lesson specifically focused on helping students adding three one-digit numbers efficiently by making ten and adding the third number. You can see in Student 1's worksheet that just added the numbers in order. Students 2 and 3's worksheets show that they circled random numbers before adding the three numbers. Sometimes they circled numbers that added to ten, by most times they did not. When the three one-digit numbers were included in the context of a word problem, you can see in all three students' work samples that they were not able to pull out all three of the numbers to add."
Evidence that demonstrates performance above 3:

- Evidence/examples from all three student work samples support the identified student struggle(s) (e.g., mathematical errors, confusions, and/or partial understandings).
- Analysis connects the identified student struggle(s) to specific understandings of mathematical concepts.

What distinguishes a Level 4 from a Level 3: At Level 4,

- Analysis directly connects the identified student struggle(s) to the underlying mathematical concept(s).

For example, "The lesson specifically focused on helping students adding three one-digit numbers efficiently by making ten and adding the third number. When asked to add three 3-digit numbers listed in a column, the three focus students struggled to find two numbers that made 10 and then add the third number. This shows students' lack of understanding of the associative property. Rather than circling the numbers that added to ten, they added the three numbers in order. When the three one-digit numbers were included in the context of a word problem, some of the students were not able to pull out all three of the numbers and just added the first two numbers. This shows only a partial understanding of being able to read and interpret a word problem and may be connected to students previously only solving word problems with two addends."
The basis for the targeted learning objective/goal for the students.

[ The three students I chose struggled with the correct model to represent the situation presented in each problem. When looking at the work sample for Student 1, the first problem was written correctly and all multiplication and addition was solved correctly. This problem was worked on by the teacher at the start of the assessment to be used as a guideline for the rest of the problems. Student 1 did not transfer any of this knowledge into the problems that followed. For example, the student wrote \((4 \times 9) + (10 \times 10) + 7\). This numeric expression is somewhat linked to the problem, but shows that the student did not know how to find the correct multiplier for each number landed on in the scenario. The student should have multiplied the 9 by 2 \((2 \times 9)\) and the 10 by 2 \((2 \times 10)\), then the 10 by 1 \((1 \times 10)\) and the 7 by 3 \((3 \times 7)\) then added the bullseye worth an additional 20 points to calculate Emma’s score.

Student 2 and 3 also wrote a proper numeric expression for number 1 which tells me they followed the teacher example to start their work. All three students calculated the multiplication and addition properly in all their problems which tells me that multiplying is not the issue. Student 2 used various multipliers in their expressions that are not coherent with the word problem which indicates there may be a lack of conceptual understanding or a reading process issue. For example, Student 2 wrote in question 2, \((1 \times 9)\) and \((5 \times 5)\) when representing a beanbag landing in the outside ring of 9 and another landing in the gray area of 10. This student should have multiplied the 9 by 2 and the 10 by 1. Later on, the student wrote for question 2 of the championship round, \((10 \times 8) + (10 \times 9) + (10 \times 6)\) to represent a beanbag landing in the outside ring of 8, the gray area of 8, the gray area of 9, and the gray are of 6. The student may have confused the multiplier for the championship round to be 10 for the gray areas, but they still left off a fourth bean bag thrown in the outside ring of 8. The student correctly added these equations together to find the sum as 23,000. Which shows they, too, have a basic understanding of multiplication and addition.

Student 3 was unique in that all of their total points are correctly added. This student did not, however, use numeric expressions to represent the situations presented in the problems for. Numbers 3 or 5 or any of the championship round. This student showed similar struggles in the writing portion of my lessons, shown in Task 3 Assessment Commentary which leads me to believe he has difficulty with the reading and writing process as a way to communicate ideas. The student is very confident in math and proved he was able to calculate the correct products and sums in problems 1 through 4, but was unable to transfer the procedural fluency into the championship round when the point values changed. As an example, the student correctly totaled question 3 by adding the bullseye for 20 points, the single value of 2, the multiple of 6 times 3, and single value of 4 to reach the sum of 44 points. Student 3 needs most support when expressing a complete idea in a numerical or written expression.
## Rubric 18: Using Evidence to Reflect on Teaching

**How does the candidate examine the re-engagement lesson to further student learning?**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate states whether or not the re-engagement strategy was effective without providing evidence from student work samples. <strong>OR</strong> What the candidate cites as evidence of student learning does not align with the student work samples. <strong>OR</strong> Targeted learning objective/goal is not aligned with the identified area of struggle.</td>
<td>Candidate states whether or not the re-engagement strategy was effective and provides superficial evidence from student work samples.</td>
<td>Candidate uses evidence of student learning from the 3 student work samples to describe whether or not the re-engagement strategy was effective.</td>
<td>Candidate uses specific evidence of student learning from the 3 student work samples to evaluate whether or not the re-engagement strategy was effective.</td>
<td>Level 4 plus: Candidate analyzes the change in student mathematical understanding or misconceptions using evidence from the re-engagement lesson.</td>
</tr>
</tbody>
</table>
Level 3

Evidence that demonstrates performance at Level 3:

- Candidate describes how evidence in the three student work samples reveals whether or not the re-engagement strategy was effective.
- Candidate provides examples of what students did during the re-engagement lesson to show whether the re-engagement lesson was effective or not.
- For example: "As you can see from student work, the re-engagement lesson was effective for the most part. The students were able to use angle models as a tool in calculating what the missing angle was. In work samples one, two, and three, the students correctly identified the missing angles in most of the triangles. For Student 1 and Student 2 you can see in their work samples that they were able to find the missing angle when either two interior or exterior angles were provided. For Student 3, you can see that the student could find the missing angle when interior angles were provided, but could not only find the missing angle when exterior angles were provided for known angles."
Evidence that demonstrates performance above 3:

- Specific examples of student learning are used to explain whether or not the re-engagement lesson was effective.
- Explanation of the effectiveness of re-engagement strategy aligns with the student work samples.

What distinguishes Level 4 from Level 3: At Level 4,

- The candidate provides specific examples from student work that are used to evaluate whether the re-engagement lesson was effective or not.
- The examples of student work are specifically related to the strategies/activities in the re-engagement lesson.

  For example: "As you can see from student work, the re-engagement lesson was effective for the most part. The students were able to use angle models as a tool in calculating what the missing angle was. In work samples one, two, and three, the students correctly identified the missing angles in most of the triangles. For Student 1 and Student 2, you can see in their work samples that they were able to find the missing angle when either two interior or exterior angles were provided. Their use of the angle models to measure both interior and exterior angles was effective. You can see in Problems 3 and 4 that the two students were able to use the exterior angle given to calculate the missing interior angle. For Student 3, you can see that the student could find the missing angle when interior angles were provided (Problems 1 and 2), but could not only find the missing angle when exterior angles were provided for known angles (Problems 3 and 4). When there was only an exterior angle given, the student struggled to subtract the exterior angle from 180° to find the interior angle."
b. Describe the re-engagement lesson you designed to develop each focus student’s mathematical knowledge in relation to the targeted learning objective/goal. Your description should include:

- targeted learning objective/goal from prompt 3a
- state-adopted academic content standards that were the basis of the analysis
- strategies and learning tasks to re-engage students (including what you and the students will be doing)
- representations and other instructional resources/materials used to re-engage students in learning
- assessments for monitoring student learning during the lesson (e.g., pair share, use of individual whiteboards, quick quiz)

[The re-engagement lesson I have planned to develop struggling learners is rooted in math standard MGSE5.OA.1 which asks students to explore and evaluate numeric expressions with mixed operations. This standard suggests that student work with real-world contexts that would require the use of grouping symbols such as parentheses. I will implement strategies in a small group that will make use of a color-coded dartboard to differentiate the distinct values of each ring. The students will be working with the same numbers since they were kept simple to start. I will give the students a similar assignment, but alter the placement of the bean bags. I will model the written expression on the board indicating each parentheses calculates the value for one bean bag being scored. This process should repeat 4 times since we have thrown 4 bean bags. I will still use manipulatives like the ones used in the first lesson so I am not reteaching an entirely new game or process. I still want these students to be able to make sense of problems and persevere in solving them. The new scenarios will be written on a new assessment worksheet to monitor student learning.]
During the re-engagement lesson, I believe that the small group interactions worked well with the students. I was able to pay closer attention to their distinct work and clarify any misunderstandings. I used the same manipulatives, but gave the students a color-coded dartboard for them to work from. I also marked each ring as the inner or outer ring as well as asking the students to fill in the multiplier for each ring. This groundwork made the actual assessment a lot smoother for the group and each one of them were successful after the second re-engagement. As you can see, each of the students was able to model the correct numeric expression that transfers the written word problem into a math sentence. For example, Student 1 was able to re-label the dartboard for each ring and each number. This helped him write the precise equation that would represent each beanbag landing on the dartboard. Student 3 was also much happier working and helping others in the small group and was able to help lead the group through understanding the mathematical procedures and repetition of numerical expressions.

c. If a video or audio work sample occurs in a group context (e.g., discussion), provide the name of the clip and clearly describe how the scorer can identify the focus student(s) (e.g., position, physical description) whose work is portrayed.

[NA]
Questions?

Kristy Brown, Ed.D.
kbrown15@augusta.edu
Reminders and Resources

Reminders

Year 2 Application available 10/31
Submit candidate information and stipend/reimbursement requests.

Have you considered becoming an official edTPA scorer?

http://scoreedtpa.pearson.com/become-an-edtpa-scorer.html

Resources

Supporting Teacher Candidates handout
Supporting Teacher Candidates postcard
Support Guide for EC-12 School Partners