ALIGNMENT
NARRATOR'S SCRIPT

CONTENTS

INTRODUCTION AND PURPOSE

The focus of this module is the first element of assessment design—alignment.

By the end of this module, you should be able to define alignment for the purpose of these modules and explain why it is important. You should also be able to explain how to "unpack" a standard to understand its content and use the assessment blueprint to document the skills embedded within it.

KEY CONCEPTS

Alignment

Let's get started.

For the purpose of this series of modules, alignment describes the degree to which the content of an assessment is aligned with the content of the standards you intend to measure and what you plan to teach in the classroom. We define "content" in these modules as the core concepts and procedures in a standard, assessment or assessment item.

This alignment of standards to assessments and instruction ensures that the assessment measures what you want students to know and be able to do.[1]

How to Unpack a Standard

To ensure alignment, you can study the content in the standard that students need to master and then address that content in your assessments and instructional plans. One way to study a standard is to unpack it into the skills embedded within it to fully understand what constitutes mastery of the standard.[2]

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[1] Kansas State Department of Education, "Assessment Literacy Project" and Ohio Department of Education, "Assessment Literacy: Identifying and Developing Valid and Reliable Assessments" (2013).
[2] Moody, Michael, and Jason Stricker, *Strategic Design for Student Achievement* (2008).

Some standards contain just one skill. Other standards address a range of skills.

For example, let's consider a third-grade Tennessee mathematics standard:

Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.[3]

We can unpack this standard into a single skill:

- *Interpret whole-number quotients of whole numbers.*

Now let's take a look at a fourth-grade Tennessee mathematics standard:

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies, including rounding.[4]

We can unpack this standard into *five* skills:

- *Solve a multistep word problem with whole numbers.*
- *Use the four operations.*
- *Interpret remainders.*
- *Use equations with a letter standing for the unknown quantity and*
- *Use mental computation and estimation strategies, including rounding.*

Unpacking the standards allows you to "call out" or identify all the skills that you will need to teach and measure. It is key to your ability to write or select assessments that are aligned with standards.

How to Design Aligned Assessment Items

Let's take a look at two assessment items and discuss the alignment of their content with the third-grade standard that we just described. The standard contains one skill: Interpret whole-number quotients of whole numbers.

Here is an item that is not well aligned with the content of the standard.

[3] Tennessee Department of Education, "Tennessee's State Mathematics Standards: Grade 3" (2010).
[4] Tennessee Department of Education, "Tennessee's State Mathematics Standards: Grade 4" (2010).

What is 12 ÷ 5?

This item *is not* well aligned with the standard's content because the standard states that students should be able to work with *whole-number quotients of whole numbers*, in other words, division problems in which the numbers in both the problem and the answer are all whole numbers. A problem that involves decimals (the answer to 12 ÷ 5 is either 2.4 or 2 with a remainder of 2) is beyond the scope of this standard.

Here is an item that *is* well aligned with the content of the standard.

What is 12 ÷ 3?

This item is well aligned with the content of the standard because it asks students to work with the whole-number quotient of whole numbers. (The answer is 4.)

In the module about rigor, we'll learn why the rigor of the item does not match the rigor of the standard. For now, we simply want you to see that the content of the standard, partitioning numbers into equal parts, aligns with an assessment item that asks students to partition 12 into 3 equal parts.

Let's practice with the fourth-grade standard we introduced earlier and another assessment item. The standard contains five skills:

- *Solve a multistep word problem with whole numbers.*
- *Use the four operations.*
- *Interpret remainders.*
- *Use equations with a letter standing for the unknown quantity and*
- *Use mental computation and estimation strategies, including rounding.*

How well is this assessment item aligned with the standard?

Peter made the statement shown below:

"The number 32 is a multiple of 8. That means all of the factors of 8 are also factors of 32."

Is Peter's statement correct? In the space below, use numbers and words to explain why or why not.[5]

As a quick reminder, a "factor" is a whole number that you can multiply with another whole number to get a third number.

"Multiples" are the result of multiplying a number by a whole number.

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[5] Louisiana Department of Education, "Mathematics Grade 4—Unit 1 (Sample)."

Pause this video if you want a few moments to think about your answer or discuss it with colleagues.

This item *could be better aligned* with the content in the standard. The standard refers to solving word problems posed with *the four operations* (addition, subtraction, multiplication and division), whereas this item relies on student understanding of *factors and multiples*.

You probably think that this is a close call—you could easily think that this item is well enough aligned with the standard. After all, factors and multiples require students to know about multiplying and dividing.

But to write well-designed assessments, you must strive for the most complete degree of alignment among the standards, what you teach in the classroom and the items you use to assess students.

To better assess this standard, we could write or select a different item, such as this one.

Mr. Torres sold a total of 30 boxes of sports cards at his store on Monday. These boxes contained only baseball cards and football cards.

Each box contained 25 sports cards.
He earned $3 for each sports card he sold.
He earned a total of $1,134 from the football cards he sold.

What amount of money did Mr. Torres earn from the baseball cards he sold? In the space below, use pictures, numbers and/or words to show how you got your answer.[6]

This item is well aligned with the content of the standard. The item requires students to solve a *multi-step word problem* with *whole numbers* using the *four operations*.

This item does not cover every skill in the standard, and that's fine. When you design an assessment or an assessment item, you may plan to measure some skills in a standard or standards and not others. You know as a teacher that you may not teach all of the skills at once and, therefore, you may design an assessment to see how your students are doing on some skills before moving on to the other skills in a standard. Or perhaps you've taught all of the skills in a standard but spread measurement of those skills across multiple items on an assessment. If the latter were the case for this example, you would need to include additional items in your assessment that allow students to demonstrate the other three skills: the students' ability to "interpret remainders," "use equations with a letter standing for the unknown quantity," and "use mental computation and estimation strategies, including rounding."

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[6] Oregon Department of Education, "Grade 4 Mathematics Sample ER Item Claim 2."

How to Use the Assessment Blueprint

Let's use the assessment blueprint and assessment blueprint example to apply what we've learned and unpack and then document the skills within a standard.[7]

Imagine that you are a fifth-grade teacher planning a unit focused on reading and writing about informational texts. You expect the unit to last approximately four weeks.[8]

At the end of the unit, you plan to use a summative assessment to measure how well your students have mastered the relevant standards.

Steps 2 and 3 of the assessment blueprint ask you to identify the standards and skills you plan to teach in the classroom and include in your assessment.

Let's say that you determine that this English language arts unit and the assessment will focus on four reading informational text standards and one writing standard.

For example, one of the reading standards is "Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text" and the writing standard is "Write opinion pieces on topics or texts, supporting a point of view with reasons and information."

Step 3 of the assessment blueprint asks you to unpack and paraphrase each standard to identify which skills you plan to assess. Let's use the assessment blueprint to unpack the five standards into six skills.

The first reading standard asks students to "Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text." You may assess this standard as a single skill, which you can paraphrase as "quote accurately from the text (explicitly and when making inferences)."

On the other hand, you may assess separately the two skills in the first writing standard, "Write opinion pieces on topics or texts" and "support a point of view with reasons and information."

Take a minute to think about which skills within the standards you might address and how you might paraphrase them in the assessment blueprint.

Pause this video if you want a few moments to think about your answer or discuss it with colleagues.

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[7] Adapted from Ohio Department of Education, "Assessment Literacy: Identifying and Developing Valid and Reliable Assessments" (2013).

[8] Ohio Department of Education, "Ohio's New Learning Standards: English Language Standards" (2010); Student Achievement Partners, "Mini-Assessment for *Who Was Marco Polo?* by Joan Holub and *The Adventures of Marco Polo* by Russell Freedman" (2014).

You may have identified six skills:

- *Quote accurately from the text (explicitly and when making inferences).*
- *Identify main ideas and how key details support them.*
- *Determine the meaning of new vocabulary words.*
- *Explain how the author uses evidence to support his or her claims.*
- *Write an opinion piece on texts and*
- *Support your point of view with evidence.*

Steps 2 and 3 of the blueprint should help you unpack standards to align the content of your assessment items with *all* of the content of your standards. We address steps 4 and 5 of the assessment blueprint in the module about rigor.

CHECK FOR UNDERSTANDING

We have addressed the key concepts in this module, so let's review our goals.

At the outset of this module, we set goals that you would be able to define alignment for the purpose of these modules and explain why it is important. You should also be able to explain how to "unpack" a standard to understand its content and use the assessment blueprint to document the skills embedded within it.

To determine whether we have achieved our goals, let's check your understanding with two assessment items.

Here's the first item:

Why is alignment critical to a well-designed assessment? What might happen if an assessment item is not aligned in terms of content?

Pause this video if you want a few moments to think about your answer or discuss it with colleagues.

A sample answer to the first item would be: Alignment is critical to a well-designed assessment because it ensures that an assessment measures what teachers intend it to measure. If the content in an assessment is different from the content in the standards and skills a teacher intends to measure, she may unintentionally measure her students' ability to do something else. For example, if a teacher were to write an assessment item to measure her students' ability to add fractions, she could unintentionally measure her students' advanced reading ability if she uses vocabulary that is well above grade level.

Here's the second item:

Consider whether the assessment item is aligned with the content in this writing standard from Hawaii:

Create an organizational structure that lists reasons and provide reasons that support the opinion.[9]

Here is the item:

Read the paragraph and complete the task that follows it.

Children should choose their own bedtime. There are things to do, and most have homework. Some people need more sleep, but children like talking to friends. The time to go to bed should be children's decision when they are tired they go to bed earlier. There are activities to go to, so children learn to be responsible.

Rewrite the paragraph by organizing it correctly and adding ideas that support the opinion that is given.

Pause this video if you want a few moments to think about your answer or discuss it with colleagues.

A sample answer to the second item would be: The item is well aligned to the standard. The standard includes two skills: *Create an organizational structure that lists reasons* and *provide reasons that support the opinion.* The item asks students to reorganize the paragraph, which measures mastery of the first skill. It also asks students to add ideas that support the opinion that is given, which measures mastery of the second skill.

Good work! Thank you for completing the module on alignment. Please view additional modules to continue your learning.

[9] Hawaii Department of Education, "Language Arts Grade 3 Common Core Standards."

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