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Overcoming Challenges of Standards Alignment

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Teachers' Beliefs About Instructional Materials' Alignment to Standards

According to the 2021 results of the RAND Corporation's *American Instructional Resources Surveys*, over 90% of the teachers surveyed consider standards alignment to be an important characteristic in their district-provided instructional materials (question 34). Yet, only between 36-41% of the surveyed teachers (depending on the content area) perceive that their district-purchased materials help their students master their state's math, English language arts, or science standards (question 35).

Are materials as poorly aligned as teachers perceive? [Learning List](#) has reviewed the alignment of over 3,300 widely used PreK-12 instructional materials. Our subject matter experts review the citations (e.g., lessons, activities, assessments) listed in each publisher's correlation for alignment to the _content, context,_ and _cognitive rigor_ of each standard. We find that core materials are generally aligned to most (though not all) of the standards. The alignment of supplemental materials is much more variable.

So, why do teachers perceive that their _core_ instructional materials are not aligned? Here are three reasons:

(1) **Publishers' vs teachers' definition of _alignment_**: Many publishers consider a citation to be aligned to a standard if the citation addresses the _concept_ of the standard or _any part_ of the standard. Educators have a much more granular definition of alignment. Educators consider a citation to be aligned to a standard only if it addresses the _content, context,_ and _cognitive rigor_ of the standard. Teachers lose faith in a material when the publisher's correlation (or search by standard feature) includes citations that educators consider not aligned or only partially aligned to the standards.

(2) **Construction of publishers' correlations**: Standards typically are compound and complex sentences that have multiple parts. Instructional materials, especially core materials often scaffold instruction of each standard across multiple chapters or even units. For example, the material may introduce the standard in one chapter, provide practice and reinforcement in another chapter, and assess mastery of the standard in a third chapter. Thus, the publishers' correlations often include many citations for each standard, only one or two of which intend(s) to address the standard in its entirety. Most teachers do not understand this about publishers' correlations and expect _each_ citation listed for a standard to be aligned to the standard _completely._ Teachers get disenchanted with a material when they use citations from the publisher's correlation and realize that they only partially address the standard.

(3) **Teachers' ability to evaluate alignment**: Understanding the concept of alignment is relatively easy; applying the concept is much more difficult. Having interviewed and trained hundreds of educators to review the alignment of materials, we have found that determining whether a material is aligned is a technical skill that few educators have the opportunity or time to hone. Thus, teachers' lack of understanding of how to review the alignment of a citation may cause them to think that the material is not well aligned.

> This white paper explores what *alignment* means and why it is so important to use standards-aligned instructional materials. We then illustrate common challenges in reviewing materials' alignment to standards and provide strategies for overcoming them.

The Three Cs of a Standard

For purposes of this paper, the word *citation* refers to either a stand-alone resource (e.g., worksheet, activity, lesson plan) or part of an instructional material.

To determine whether a citation is aligned to a standard, one must understand what the standard requires students to know and be able to do. Each standard contains three parts: *content, context,* and *cognitive rigor*. These are *the three Cs of a standard*.

Content

The standard's **content** describes *what* students are required to learn/ know by the end of the course. The content of the standard is typically stated in the noun(s) of the standard. For example:

> **Domain:** Reading Standards for Literature
>
> **Cluster:** Range of Reading and Level of Text Complexity
>
> **Standard:** <u>RL.8.10</u>. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band independently and proficiently.

The **content** of this standard, or *what* students are required to learn is *literature, including stories, dramas, and poems*.

Context

The **context** of the standard typically modifies/clarifies the content or the cognitive rigor of the standard. The context of the standard may describe *where*, *when*, or *how* the learning should take place. The context of the standard will often relate to the overarching category or topic of the standard as articulated in the

- ☐ Domain or Cluster of the standard (for Common Core standards)

- ☐ Knowledge and Skills Statement (for Texas Essential Knowledge and Skills (TEKS))

- ☐ CCC DCI, SEP of the Performance Expectation (for Next Generation Science Standards).

For example:

> **Domain:** Reading Standards for Literature
>
> **Cluster:** Range of Reading and Level of Text Complexity
>
> **Standard:** <u>RL.8.10</u>. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band independently and proficiently.

The **context** of this standard is described in the Domain and Cluster and *articulated* in the standard itself. The Domain states what type of standard this is: a reading standard. The Cluster articulates the topic of this standard (i.e.,

what the standard is about): the range of reading and text complexity. The part of the standard that reflects the topic is the context of the standard, *at the high end of grades 6-8 text complexity band*.

Cognitive Rigor

Cognitive rigor is the performance expectation of the standard, or *what* the standard requires students *to be able to do*. The cognitive rigor is typically articulated in the verb(s) of the standard. For example:

> **Domain:** Reading Standards for Literature
>
> **Cluster:** Range of Reading and Level of Text Complexity
>
> **Standard:** RL.8.10. By the end of the year, **read** and **comprehend** literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band **independently and proficiently**.

The **cognitive rigor** of this standard or what it requires students to be able to do is *to read independently and proficiently* and *to comprehend*.

A citation must address *all three Cs* of the standard in order to be aligned to that standard. This may be more difficult than it sounds because standards are often both compound and complex sentences that contain several nouns, several verbs, and several modifiers. For example:

> **Domain:** Reading Standards for Literature
>
> **Cluster:** Craft and Structure
>
> **Standard**: L.4.6. **Compare and contrast** the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

The **content** of the standard (i.e., *what* students are required to learn) is the difference between first-person and third-person point-of-view. If a citation only addresses *first-person narration*, it would not be aligned to the standard.

The **context** of this standard (i.e., *where* students are required to learn narration in the first- and third-person points-of-view) is literature (i.e., stories). If a citation does not relate to the *narration of a story*, it would <u>not</u> be aligned to this standard.

The **cognitive rigor** of this standard (i.e., what students are required *to do*) is to compare and contrast. If a citation only requires students *to compare* first and third-person points-of-view in the narration of a story, it would <u>not</u> be aligned to the standard.

Identifying the content, context and cognitive rigor of a standard *precisely* can be difficult. Whether a phrase is part of the content or the context of the standard is not critical. Educators should, however, be able to articulate what the standard requires students to know and be able to do and in what context. Dissecting the three Cs of a standard is a tool for developing that understanding.

Why Alignment Matters

State standards establish the minimum expectations for what students are expected to know, understand, and be able to do by the end of each subject or course. State assessments test students' mastery of those standards. In order for a material to help prepare students to master the standards, the material must be aligned to the state standards.
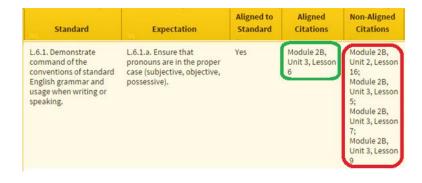
> If teachers use citations that are not aligned to the standards they are teaching, their students will not learn all of the content and skills the standards require them to learn, and their learning gaps will be evident in their performance on the state assessments.

As a teacher explained, "If you don't give students materials that teach them what they need to know, it is unlikely (or less likely) that they will learn it. It doesn't take a rocket scientist to see that cause-and-effect relationship."

As discussed in our previous white paper, *Navigating to Successful Student Outcomes with Standards-Aligned Instruction*, core materials should be used as the primary resource for the course. Therefore, when purchasing core materials,

districts should ensure that the material is aligned to as many of the state standards for the course as possible.

While some supplemental materials address all state standards, many others are designed to address a subset of the standards or to provide skills practice. When purchasing supplemental materials, districts should make sure that the material is aligned to all of the standards to which it claims to be aligned and/or will be used to teach.

Even if a material is aligned to 100% of the standards (meaning that there is at least one citation aligned to the three Cs for every state standard), it is still likely that some of the citations listed in

Standard	Expectation	Aligned to Standard	Aligned Citations	Non-Aligned Citations
L.6.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	L.6.1.a. Ensure that pronouns are in the proper case (subjective, objective, possessive).	Yes	Module 2B, Unit 3, Lesson 6	Module 2B, Unit 2, Lesson 16; Module 2B, Unit 3, Lesson 5; Module 2B, Unit 3, Lesson 7; Module 2B, Unit 3, Lesson 9

the publisher's correlation or in the material's search-by-standard function are not aligned. As explained in the introduction to this paper, this is because some publishers have a more generous definition of alignment than teachers do. Other publishers intentionally scaffold instruction across multiple chapters or units of the material.

Thus, even if the district determines that a material is aligned to all of the state's standards, it is still critical for teachers to check the alignment of the individual citations they intend to use in their lessons. If teachers use citations that are not aligned to the standards they are teaching, their students will not learn all of the content and skills the standards require them to learn, and their learning gaps will be evident in their performance on the state assessments.

Challenges to Reviewing the Alignment of a Material

In section one, above, we introduced the *three Cs of a standard*. In order to be aligned to a standard, a citation must address the *content*, *context,* and *cognitive rigor* of the standard. With practice, identifying the three Cs of the standards becomes relatively easy. The real challenge is determining whether a citation is aligned to the standard.

Learning List reviewers have reviewed hundreds of thousands of citations for alignment to multiple states' standards and national standards. Here are some alignment challenges our reviewers commonly encounter and strategies for overcoming them.

Content Challenges

Content Challenge #1: The citation does not address all of the standard's content.

Many standards are written as compound and complex sentences. Such standards contain several nouns. For example:

Domain: Geometry

Cluster: Reason with shapes and their attributes

Standard: 3.G.1. Understand that **shapes in different categories** (e.g., rhombuses, rectangles, and others) **may share attributes** (e.g., having four sides), and that the **shared attributes can define a larger category** (e.g., quadrilaterals). Recognize **rhombuses, rectangles, and squares as examples of quadrilaterals**, and draw **examples of quadrilaterals that do not belong to any of these subcategories**.

The **content** of this standard is: *shapes in different categories may share attributes*; *shapes' shared attributes can define a larger category; rhombuses, rectangles, and squares are examples of quadrilaterals; examples of other quadrilaterals*.

Alignment Strategy: Unless the publisher's citations are defined broadly to include a page range or multiple pages, it is unlikely that a single citation will cover all of the content in this standard. When you encounter a standard with multiple pieces of content (or verbs, for that matter), if there is not a single citation that addresses all of the standard's content or verbs, determine whether (1) multiple citations each address a different part of the standard's content, and (2) in the aggregate, those citations address all of the standard's content. Be sure to note which citations must be bundled together in order to align to the standard's content completely.

Content Challenge #2: The citation does not go as far as the standard requires.

Domain: Number and Operations in Base Ten

Cluster: Extend the counting sequence

Standard: 1.NBT.1. Count **to 120**, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

The content of the standard is *numbers to 120*.

Alignment Strategy: If a citation does not extend counting, reading, or writing numbers *to 120, (i.e*., it only requires students to count or write numbers up to 100 or even to 119), the citation would <u>not</u> be aligned to this standard. Document the citation's gap so that teachers know that they need to supplement the material, either with their directions or another activity, in order to achieve alignment to the standard.

Context Challenges

Occasionally, the ***context*** of a standard may not be explicitly stated in the standard itself; rather, it may be stated in the overarching theme or topic of the standard. In such cases, it can be easy to miss.

Context Challenge #1: The citation addresses the content of the standard but not in the correct context.

> **Domain**: Informational Text
>
> **Cluster:** Key Ideas and Details
>
> **Standard**: RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

The context of the standard is *informational text*, as articulated in the Domain. There is no reference to context in the language of the standard.

Alignment strategy: If a citation addresses the main ideas and key details, and summarizes a story, drama, or poem, the citation would <u>not</u> be aligned to this standard. In other words, if the citation uses any type of text *other than an informational text*, the citation would <u>not</u> be aligned to this standard. To find citations that may be aligned to this standard, identify where the material specifically addresses informational texts.

Here is another example of the same challenge for science.

> **Topic**: Space Systems
>
> **Performance Expectation**: MS-ESS1-1. Earth's Place in the Universe. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
>
> *The SEP, DCI, and CCCs contribute to the context but are not included in this example for the sake of simplicity.

The context of this performance expectation is *earth's place in the universe*.

Alignment strategy: A citation that simply requires students to build a model of the earth-sun-moon would not align to this standard. To be aligned, the citation must require or lead students to build an earth-sun-moon model *that shows earth's place in the universe*.

Context Challenge #2: The citation addresses the cognitive rigor of the standard but not in the correct context.

Standard: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:

Expectation: (D) edit drafts using standard English conventions, including:
  i. complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
  ii. consistent, appropriate use of verb tenses and active and passive voice;
  iii. prepositions and prepositional phrases and their influence on subject-verb agreement;
  iv. pronoun-antecedent agreement;
  v. correct capitalization;
  vi. punctuation, including commas in nonrestrictive phrases and clauses, semicolons, colons, and parentheses; and
  vii. correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too

The **context** of this standard is *composition* and *the writing process*.

Alignment strategy: Citations that require students to identify or even practice subject-verb agreement, verb tense and/or voice, capitalization, prepositions, etc., outside of the writing process would <u>not</u> be aligned to this standard. For a citation to align to the context of this standard, the skill practice must be provided *while students are required to compose texts.*

Cognitive Rigor Challenges

Here are two challenges our reviewers often encounter when reviewing a citation for alignment to the **cognitive rigor** of a standard.

Cognitive Rigor Challenge #1: Instead of requiring students to do what the standard requires, the citation does the work of the standard for students.

Topic: Forces and interactions

Performance Expectation: 3-PS2-1 Motion and Stability: **Plan** and **conduct** an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

The **cognitive rigor** of this standard is *to plan and conduct*.

Alignment strategy: A citation that provides a plan for students to follow as they conduct an investigation would <u>not</u> be aligned to this standard. In order to align to the cognitive rigor of this standard, a citation (or group of citations) must require or include the opportunity for students *to plan <u>and</u> to conduct* an investigation.

Cognitive Rigor Challenge #2: The citation provides information instead of requiring students *to do* what the standard requires.

Standard: History. The student understands the effects of reform and third-party movements in the early 20th century. The student is expected to:

Expectation: (B) **evaluate the impact** of muckrakers and reform leaders such as Upton Sinclair, Susan B. Anthony, Jane Addams, Ida B. Wells, and W. E. B. DuBois on American society.

The **cognitive rigor** of this standard is to *evaluate the impact*.

Alignment strategy: If a citation provides information about the reform leaders listed in this standard, the citation would <u>not</u> be aligned to the standard. In order to align to the cognitive rigor of this standard, the citation must include questions, activities, projects, etc. that require students *to evaluate the impact* of those reform leaders.

Cognitive Rigor Challenge #3: A mismatch exists between the task in the citation and the verb in the standard.

Domain: Language Standards

Cluster: Conventions of Standard English

Standard: L.5.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Expectation: **Explain the function of** conjunctions, prepositions, and interjections in general and their function in particular sentences.

The **cognitive rigor** of this standard is to *explain the function of*.

Alignment strategy: A citation that asks simply students *to identify* conjunctions, prepositions, and interjections would <u>not</u> be aligned to this standard. In order to align to the cognitive rigor of the standard, the citation must also require students to *explain the function of* the identified conjunctions, prepositions, and interjections.

The examples provided illustrate common challenges Learning List reviewers have encountered when reviewing the alignment of materials to both state-specific and national standards. Each set of standards poses unique alignment challenges. Furthermore, while each of these examples illustrates a single alignment challenge, many times, a citation fails to align to the standard for more than one reason.

Conclusion

To progress academically, students must learn the content and skills their state standards require in the correct context. Teachers lose faith in a material when they repeatedly encounter citations that fail to align to the three Cs of the standard, and districts lose millions of dollars when abandoned materials gather dust on closet or warehouse shelves. We hope that the information in this white paper helps educators review the alignment of instructional materials and publishers develop correlations that communicate the alignment of their material to the three Cs of the standards.

About Learning List

Learning List offers a suite of curriculum support services, including a subscription-based instructional materials review service. Subscribers get access to all published reviews and the ability to submit additional materials for review a*t no additional cost*. Over the last decade, Learning List has reviewed thousands of PreK-12 instructional materials by almost 200 publishers. Each material is reviewed for alignment to state or national standards, instructional quality, and technology compatibility. Other services

include a selection facilitation service, customized curriculum alignment services, and online professional development courses.