

# High-Impact Teaching Strategies (HITS) for Foundational Learning

## Knowledge Progressions and Connections: Literacy



### INTRODUCTION

High-impact teaching strategies (HITS), also referred to as high-leverage practices, are core pedagogical practices that help students understand content while also supporting their social-emotional development.<sup>1</sup> These teaching practices can demonstrably impact student learning outcomes in both literacy and numeracy.<sup>2</sup>

This mini-guide, one in a series, sheds light on how teachers can apply the high-impact teaching strategy of knowledge progressions and connections in their literacy lessons.

### HOW TO USE THIS GUIDE

This guide is meant for those who support teacher professional development at the school level. Depending on the local context and approach to professional development, this role can be played by coaches, community of practice leaders, teacher-facilitators, lead teachers, trainers, and Ministry of Education staff working with teachers. As part of a wider professional development approach, this guide can be a tool to target teachers' use of proven strategies to improve student learning in literacy and numeracy.

Teacher professional development has various modalities, ranging from pre-service courses to one-on-one coaching and mentoring to teacher-led communities of practice. This guide is intended to support professional discussions across a variety of contexts: in-school coaching, communities of practice, and pre- or in-service training. Teachers and coaches can use the guide as part of an individualized professional development plan; teacher-facilitators can use it to drive discussion on high-impact strategies as part of a community of practice; and pre-service designers can incorporate it into their curriculum for teacher training. Finally, this mini-guide reflects the incremental progression that teachers follow in their professional growth.

This mini-guide for Knowledge Progression and Connections in Literacy, along with the others in the series, reflects the strategy domains and the HITS presented in the following table.

Finally, when adapting the content and use of this mini-guide to the local educational context, it can be integrated into a structured pedagogy program already in place. The mini-guide can be linked directly to the curriculum and teaching and learning materials, and supported through the existing professional development model.

<sup>1</sup> Ball & Forzani (2010).

<sup>2</sup> Ambrose et al. (2010); Danielson (2022); Rosenshine (2012).

HIGH-IMPACT TEACHING STRATEGIES (HITS)			
Strategy domains	Tier 1: Basic strategies	Tier 2: Developing strategies <i>(built upon Tier 1 strategies)</i>	Tier 3: Advanced strategies <i>(built upon Tier 1 and 2 strategies)</i>
<b>Learning Environment</b>	Teacher establishes clear <b>rules and routines</b> to support learning and create a positive learning environment.	Teacher uses and supports <b>positive interactions</b> in the classroom (teacher-student and student-student).	Teacher organizes students to work in <b>pairs and small groups</b> to enhance collaboration, to build teamwork, and to promote a sense of belonging.
<b>Student Engagement in Learning</b>	Teacher gives all students, including pairs/small groups, <b>regular time for the practice of new skills</b> .*	Teacher uses <b>questioning</b> to build and deepen student understanding of new content.	Teacher plans for the strategic use of <b>partner and small-group work</b> for collaborative learning activities.**
<b>Knowledge Progression and Connections</b>	Teacher plans with and states the <b>lesson objective</b> and links new content to <b>students' background</b> (prior knowledge).	Teacher provides a <b>daily review</b> and links content to <b>previous learning</b> .	Teacher purposefully <b>sequences</b> lesson objectives and <b>adjusts the teaching sequence</b> as needed.
<b>Assessment-Informed Instruction</b>	Teacher routinely <b>monitors learning</b> by checking for understanding during instruction and giving actionable feedback to students.	Teacher <b>modifies content and instructional strategies</b> based on evidence of learning collected through formative assessment.	Teacher provides <b>differentiated instruction and remediation</b> to address learning gaps.
<b>Instructional Approach</b>	<b>Numeracy</b>	Teacher <b>provides explicit models and explanations</b> of math concepts and skills, followed by <b>student practice</b> of modeled skills.	Teacher provides <b>opportunities for students to explore</b> concepts and then <b>draws on their ideas when modeling and explaining</b> concepts and their application.
	<b>Literacy</b>	Teacher provides <b>explicit models and explanations</b> of new skills and concepts, followed by <b>student practice</b> of modeled skills.	Teacher gives students <b>opportunities to apply skills in meaningful ways</b> .

Notes:

\*Tier 1: Teacher groups students to engage all children in the learning activity, especially when materials are being shared.

\*\*Tier 3: Teacher purposefully groups students to engage all children through homogenous or heterogenous grouping. Homogenous grouping can be used with students working at a similar, medium level to learn at a higher level together. Heterogeneous grouping is used to provide peer support to students who may be struggling with new content and skills.

Recognizing that professional development is most effective when it is focused and incremental, this guide proposes a tiered approach to mastering a collection of strategies, as shown in the table. Professional development activities that support teachers, especially those working in low- and middle-income countries, in mastering the specific strategies listed under Tier 1 are likely to result in improved instruction and learning outcomes. As teachers master the basic strategies of Tier 1 and move toward the more “advanced” Tiers 2 and 3 in each category, they will be empowered with a full set of strategies to reach and support more students. Over time (as measured in years, as opposed to weeks or months), a professional development program that follows a tiered approach can help teachers move toward more depth of instructional mastery (higher tiers) and significantly improve the quality of their teaching, which will ultimately help more students develop a deeper understanding and mastery of foundational literacy and numeracy skills and concepts.

It is important to note that not all teachers will start at Tier 1. Depending on the teacher’s level of experience and familiarity with implementing the strategies, she may start at Tier 2 or even Tier 3. Furthermore, a teacher starting at Tier 2 within the Learning Environment domain may start at Tier 1 in the Knowledge Progression domain; this type of variation and personalization is a key component of this guide and reflects each teacher’s individual journey within classroom practice. Each guide includes a decision tree that includes helpful questions about teacher practices and the learning environment to help you decide on how best to work with the teachers you support.

**DOMAIN:**

# Knowledge Progressions and Connections in Literacy

## WHY DOES IT MATTER?

The Knowledge Progressions and Connections domain addresses two related concepts: (1) how teachers sequence and structure their lessons to support learning in the classroom and (2) how teachers link students' experiences, prior knowledge, and learning when presenting new content.

The way that teachers structure and sequence lessons can have an immediate impact on student learning. Research shows that student achievement is maximized when teachers' lessons are structured to include a review, a summary of main points, a gradual increase in difficulty level, and a connection to previous lessons.<sup>3</sup> When teachers state objectives clearly, link them to a specific activity and assessment tasks, and adjust the teaching sequence when needed, students are more successful, are more accountable for their learning, and become more independent.

In addition, having a large body of background knowledge in a given subject makes it easier for students to solve new problems.<sup>4</sup> Effective teachers know that for learning to really "stick," they must make important linkages between new skills and students' prior knowledge, including life experiences and previously taught content. Effective teachers activate students' prior knowledge by reviewing and recalling previously learned content and linking new content to students' life experiences. This supports working memory and enhances learning. The research is clear about the importance of prior knowledge: if such knowledge is ignored, it can put "future learning in jeopardy."<sup>5</sup>

Read more about knowledge progression and connections [here](#).

## WHERE TO START?

As mentioned earlier, **not all teachers will start on the same tier of strategies for a given domain.** The decision tree below is designed to help meet the teacher where they are and support them to implement these strategies at their own pace. There are three different boxes for each domain with prompts to help guide decisions as to which strategy teachers – in individual coaching sessions, in communities of practice, or in pre- and in-service training – should try and how to determine when a teacher is ready to implement a new strategy from the next tier. The strategies are color coded: Tier 1 strategies are listed in green, Tier 2 in blue, and Tier 3 in purple. However, it is important to remember and to convey to teachers that the strategies are not meant to be a checklist; it takes time to implement new ideas, and teachers may have to work on a strategy over several days, weeks, or months before feeling confident in using them and before students start benefiting from them.

### Decision Tree

The decision tree below can help teachers identify which strategies to begin with and help those who support their professional development focus their support. Starting with Box 1, teachers can discuss the questions listed to check whether they already implement that strategy. As they proceed through the subsequent boxes in the decision tree, when they reach a strategy that is new to them or they believe needs improvement, teachers work on the strategy noted in that box. The section after the decision tree provides sample activities and approaches for each strategy. Additional strategies offered by teachers should be welcomed.

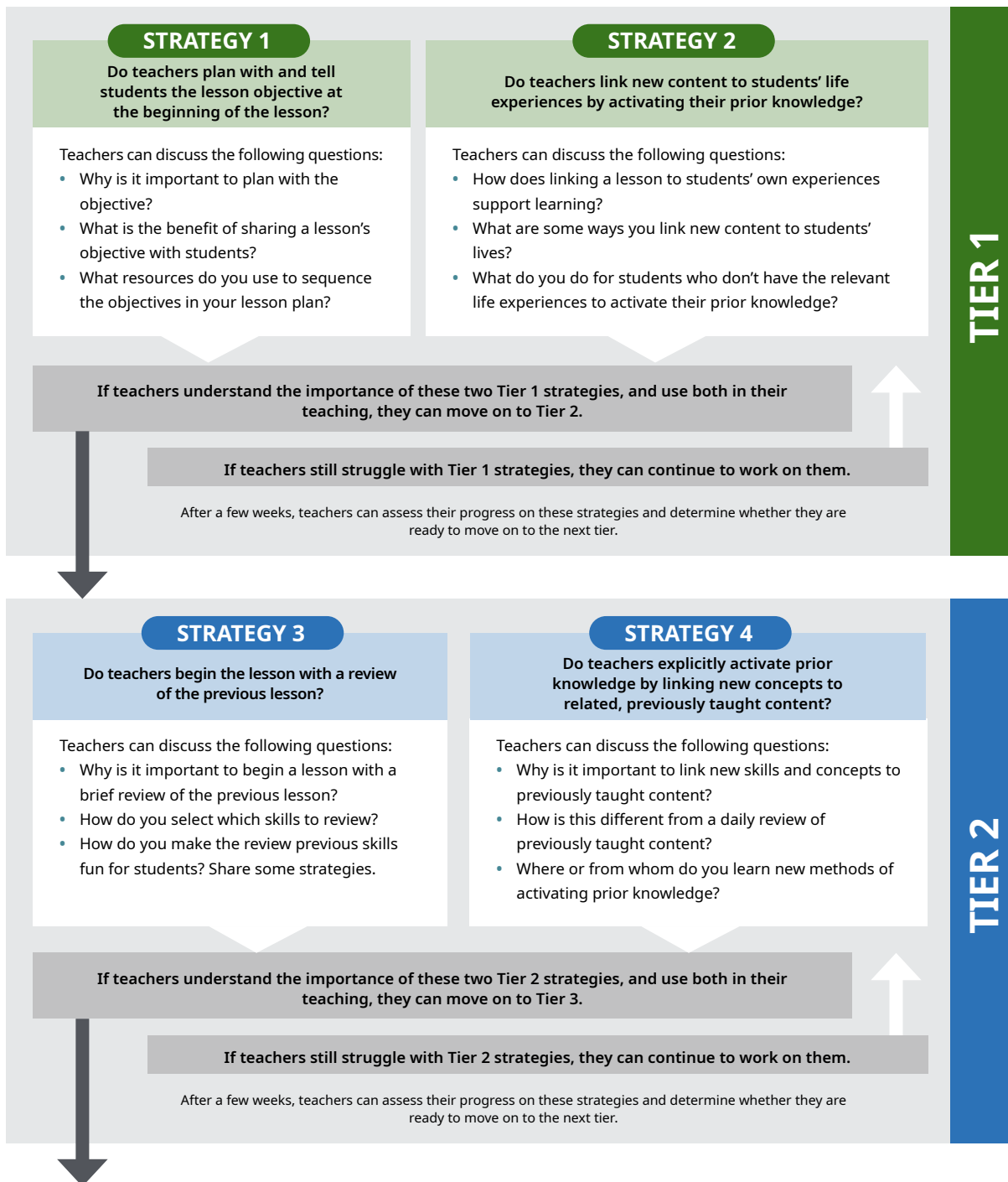
<sup>3</sup> Kyriakides et al. (2013).

<sup>4</sup> Rosenshine (2012).

<sup>5</sup> James and Pollard (2011).

Teachers and those who support them can also gauge what type of strategies they use in the classroom by discussing questions such as the following:

- How do you incorporate students' life experiences and background into your lessons?
- When teaching new content, how do you activate students' prior learning?
- Do you review previously taught lesson content before teaching new concepts?
- Do you always follow your lesson plan, or do you make adjustments based on student responses to new content or questions?



**STRATEGY 5**  
Do teachers sequence instruction toward specific learning objectives?

Teachers can discuss the following questions:

- Why is the sequence of learning objectives important?
- What resources do you use to support your lesson sequence?
- What other factors influence your sequence of lessons?

**STRATEGY 6**  
Do teachers adjust the instructional sequence based on student responses?

Teachers can discuss the following questions:

- How can student responses to questions and learning activities inform your decisions about instructional sequence?
- What other information do you use to decide when to adjust the sequence of a lesson?
- How do you know if your modification to the sequence was successful?

**TIER 3**

If teachers understand the importance of these two Tier 3 strategies, and use both in their teaching, they can share their practices with others and continue the discussion.

If teachers still struggle with Tier 3 strategies, they can continue to work on them.

## STRATEGIES FOR THE LITERACY CLASSROOM

The strategies below can be used with students across the early primary grades and adapted for the upper grades. Teachers may need to adjust the strategy from the way it is described to work with a specific grade or group of children. The strategies in this mini-guide are written with the classroom teacher in mind, even though, in most cases, coaches or teacher learning facilitators will be the ones sharing the strategies with teachers. Whether it is providing printed handouts or discussing the strategies together, the coach can decide the best way to share them with teachers.

Each of the strategies corresponds to one of three tiers:

**Green: TIER 1**

**Blue: TIER 2**

**Purple: TIER 3**

**TIER 1: Teacher plans with and states the lesson objective and links new content to students' background (prior knowledge).**

### Strategy 1 – Planning with and Stating the Lesson Objective

Learning objectives guide the direction of a lesson; they help you select and organize course content, following a curriculum, and determine the types of activities and assessments to build into the lesson. Clear learning objects form the bedrock of a good lesson. In addition, they tell students what is important and guide them in monitoring their own learning.

<b>1.</b>	<p>Being familiar with the national curriculum, grade-level syllabus, or textbook will help you select and use lesson objectives in your planning. Lesson objectives in literacy instruction will often reflect one of the five major components of reading and may be taught across multiple lessons or days. The components of reading are:</p> <ul style="list-style-type: none"> <li>• phonemic awareness</li> <li>• alphabetic principle</li> <li>• vocabulary</li> <li>• fluency</li> <li>• comprehension</li> </ul>
<b>2.</b>	<p>Keep the objective of the lesson simple and clear for students. Usually, there will be only one objective per lesson even though the lesson may include multiple activities. For example, when planning a grade 1 lesson, you may use the following objective: <i>By the end of today's lesson, students will be able to identify each vowel letter and its sound.</i></p> <p>Note: Many teachers follow the <b>I Do, We Do, You Do</b> methodology<sup>6</sup> and clearly outline the steps by which they will model and explain the sound to students, who then practice as a class, in small groups, and individually.</p>
<b>3.</b>	<p>At the beginning of the lesson, tell the students what the objective of the lesson is so that they know exactly what they will learn. You can ask a few students to restate the objective to be sure they understand. Ensure that the planning activities support the lesson objective.</p>
<b>4.</b>	<p>Throughout the lesson, remind students about what they set out to learn. Move around the room, refocusing the learning on the objective when needed.</p>

## Strategy 2 – Activating Prior Knowledge: Using Students’ Life Experiences

Prior knowledge is acquired through experiences. When teachers use students’ experiences, or *activate prior knowledge*, content becomes more accessible to students. Helping students make connections between prior knowledge and new content by structuring lessons to build on what students already know will make learning more relevant to them.

<b>1.</b>	<p>Ask simple questions about new content to find out how much students know and to support them in making connections to their prior knowledge. For example, when reading a text about rivers, you might ask, <i>Who has been to a river? What did you see there? How would you describe it—the smells, the feeling of walking on the bank, etc.? What words can we use to describe rivers?</i> Link students’ responses to new vocabulary and facts about the rivers found in the book.</p>
<b>2.</b>	<p>To extend this strategy, ask students to draw a line down the middle of a page in their exercise books. Ask them to write (or draw for non-writers) what they know about the ocean on the left side, and on the right side what they think they will learn.</p>
<b>3.</b>	<p>Refer back to their lists after the lesson and reinforce what they learned.</p>
<b>4.</b>	<p>Sometimes, students will not have prior knowledge about lesson content. For example, during a reading unit highlighting different cultures, you may need to plan an initial activity during which students learn about and begin to gain appreciation for other cultures. You can read a book aloud and discuss or invite parents to tell stories to the class. Students can ask parents (or another guest speaker) to tell the class about their favorite cultural meal, dance, or any other important traditional ceremony from their culture.</p>

<sup>6</sup> I Do, We Do, You Do is a time-limited, direct instructional method of gradual release in which the teacher first models and then does the activity again with the students. See the [Science of Teaching Literature Review on Structured Pedagogy](#).

## TIER 2: Teacher provides a daily review and links content to previous learning.

### Strategy 3 – Daily Review

There are a number of subskills that students must master in order to write well and read with comprehension. Devoting time, at the beginning of a lesson, to the review of previous lesson content improves learning because it supports students in making connections between new and old content. A daily review also gives you an opportunity to reteach skills when needed. Several different strategies for daily review are presented below.

<b>1.</b>	Daily review can also be done in pairs. Ask students to tell a partner one thing they learned from yesterday's reading lesson. Remind them of that lesson's objective, if needed, and prompt students with questions such as <i>What did we learn yesterday about how to use punctuation as we read? Or Let's think about yesterday's lesson when we talked about full stops and question marks. What do they tell you to do when you're reading?</i>
<b>2.</b>	During the review, encourage students to ask clarifying questions. Discuss these questions as a group or have students share with a partner. Be sure to correct any misunderstandings.
<b>3.</b>	Another review strategy is a "Question Box." Encourage students to jot down (or dictate to you) a question they have during a lesson. Later in the day or the following day, discuss these questions as a group and clarify any misunderstandings. You can vary this activity by having partners choose a question to discuss together.
<b>4.</b>	A final strategy is the use of a warm-up activity to review previous content. For example, for a vocabulary review you can use pairs of cards—one with the target word and one with a simple drawing of the word. Children can draw a card as they gather for the lesson and then find their "pair." Be sure to have enough cards for everyone to participate.

### Strategy 4 – Activating Prior Knowledge: Using Previous Learning

In addition to a daily review of skills, it is important to directly connect new content to lessons taught in previous days, weeks, months, or even grade levels. Because skills and concepts that students learn in school are taught in a progression, new content should naturally build on previously taught content. This means that you should take time to study the connections between skills taught in previous classes and grades and explicitly draw on those connections.

<b>1.</b>	<p>For example, the lesson objective is <i>Students will read the /sh/ sound in short words.</i></p> <p>You can tell students:</p> <ul style="list-style-type: none"> <li>• <i>Today we will learn to read with the sound /sh/.</i></li> <li>• <i>Last week we learned that the letter "s" makes the sound /s/. Invite them to give you a few words that have the /s/ sound.</i></li> <li>• <i>We also learned that "h" makes the sound /h/. Ask them to give you a few words that have the /h/ sound.</i></li> <li>• <i>Today we are going to learn the sound that these letters make when they "walk" together in a word. When we see "s" and "h" together in a word, they make the sound /sh/.</i></li> </ul> <p>Note: Plan to give extra support to students whose language background does not have the /sh/ sound.</p>
<b>2.</b>	Reinforce the review of previous learning by giving students more oral practice through games or by reciting a rhyme that has the sound.

### TIER 3: Teacher purposefully sequences lesson objectives and adjusts the teaching sequence as needed.

#### Strategy 5 – Purposefully Sequence Lesson Objectives

Learning objectives should be realistic (achievable), align to grade-level expectations, and specifically target students' learning levels. With careful preparation, you can sequence lessons and learning objectives (from simple to more difficult) and help students reach the overall learning goal.

<b>1.</b>	When teaching letter writing, for example, the first lesson objective might be <i>Students write vertical strokes used in many letters</i> . You could teach a lesson focused on how to write a vertical stroke on a line. Always provide time for students to practice.
<b>2.</b>	In the next lesson of the sequence, the objective might be <i>Students write circular strokes found in letters</i> . During the lesson, you could teach students how to write the circular or semicircular stroke found in many letters.
<b>3.</b>	When students have mastered the vertical stroke and the circular or semicircular strokes, they are ready for the next objective in the sequence, the more difficult one—combining these strokes to write letters “b,” “d,” “g,” “h,” “p,” etc.  Notes: <ul style="list-style-type: none"> <li>• Give students time to practice these two shapes in the air, in sand, on their desks, or on one another’s backs.</li> <li>• Remember to demonstrate for both right- and left-handed students and to face the same direction as students when writing.</li> </ul>

#### Strategy 6 – Adjusting the Teaching Sequence

It is important to regularly adjust your instruction, including the sequence of lesson objectives, as needed. Students’ responses or questions during a lesson can shed light on whether the class is following a lesson and progressing at an appropriate pace. If it is apparent that students need more time to understand and practice a new skill, you should consider re-sequencing the week’s plans to revisit these skills before moving on to new content. It is better to adjust the sequence of learning objectives and lessons than to later need to provide remediation.

<b>1.</b>	A sample scenario might be this: You have planned a two-week unit on writing stories in which the sequence is (1) write sentences, (2) write sentences that describe the setting, (3) write sentences to describe the main character, and (4) write a story.
<b>2.</b>	After three lessons, you notice your students struggling to write descriptive sentences. They are asking questions such as, <i>How should I start? What do you mean by descriptive?</i> Or they may have trouble getting started and just stare at the blank page.
<b>3.</b>	You may decide to adjust the sequence and extend the lesson on writing sentences to three lessons. You may include vocabulary development in these lessons, read sample texts with descriptive sentences, and ask students to describe the area around the school or their homes.
<b>4.</b>	After the students receive the additional lessons to the instructional sequence, they are now able to meet the learning objective of writing descriptive sentences and eventually a story.



## REFERENCES

- Ambrose, S., Bridges, M., DiPietro, M., Lovett, M., & Norman, M. (2010). *How learning works: 7 research-based principles for smart teaching*. Josse-Bass. <https://firstliteracy.org/wp-content/uploads/2015/07/How-Learning-Works.pdf>
- Ball, D., & Forzani, F. (2010). Teaching skillful teaching. *Educational Leadership: Journal of the Department of Supervision and Curriculum Development*, 68, 40–45. <https://www.ascd.org/el/articles/teaching-skillful-teaching>
- Danielson, C. (2022). *The framework for teaching: At a glance*. Danielson Group.
- James, M., & Pollard, A. (2011). TLRP's ten principles for effective pedagogy: Rationale, development, evidence, argument and impact. *Research Papers in Education*, 26, 275–328. <https://doi.org/10.1080/02671522.2011.590007>
- Kyriakides, L., Christoforou, C., & Charalambous, C. (2013). What matters for student learning outcomes: A meta-analysis of studies exploring factors of effective teaching. *Teaching and Teacher Education*, 36, 143–152. <https://doi.org/10.1016/j.tate.2013.07.010>
- Rosenshine, B. (2012). Principles of instruction: Research-based strategies that all teachers should know. *American Educator*, Spring, 12–19. <https://www.aft.org/sites/default/files/Rosenshine.pdf>