IRA e-ssentials

ENGAGING
THE ADOLESCENT LEARNER

BY DOUGLAS FISHER AND NANCY FREY

Gradual Release of Responsibility Instructional Framework

The notion that students are <u>empty vessels</u> into which we can simply pour knowledge has long ago been debunked. If you asked educational researchers why this is so, they would offer different explanations. A cognitive scientist might discuss the importance of perception, memory, and emotion in learning. An educational psychologist could cite findings in the fields of neuroscience and organizational theory as they relate to the influence of biological and social environments. A language acquisition researcher would talk about social learning and the need for participation in relevant discourse. Regardless of the theoretical orientation, all would agree that learning requires interaction. It is an action-oriented experience, not a passive one.

Best practices for instruction reflect these theoretical orientations. The need for interaction—with the teacher, the content, and peers—is essential for learning. However, the interactions can't be mindless. A systematic approach for shifting the cognitive work from teacher to learner is in order. This shift requires a gradual release of cognitive responsibility across every lesson. Using this framework, literacy, language, and disciplinary knowledge can be developed so that all students achieve. In this article, we examine each element of the gradual release of responsibility framework across the disciplines.

The Transfer of Responsibility for Learning

The term *gradual release of responsibility* was coined 30 years ago to describe the complex transactional process that occurs in reading comprehension instruction as the control of an activity moves from teacher to learner (Pearson &

Gallagher, 1983). These practices have become familiar to a generation of teachers: shared reading, guided reading, and independent reading. A primary focus of our work for more than a decade has been in understanding how the gradual release of responsibility occurs as a function of knowledge building. We have come to realize that an important element—the interactions that come from work with peers—was not articulated in the original model. An illustration of this concept can be found in the Figure. Notice that the transfer shifts from teaching (the teacher's stance) to learning (the student's stance).
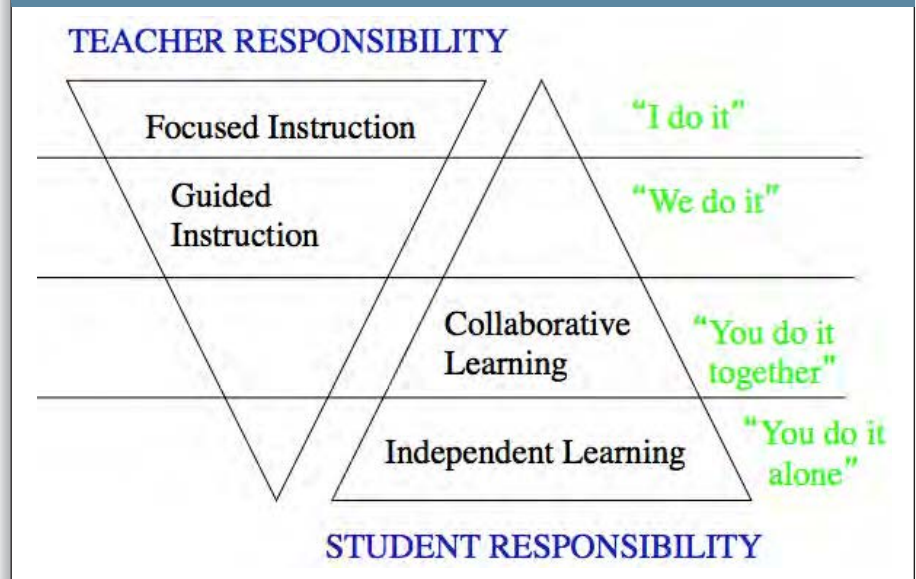
A common misunderstanding concerns the name of the process, especially in its use of the word *responsibility*. Rather than it being a character trait, it suggests ownership and province. In any learning situation, the novice steps forward as the teacher moves back, each taking cues from each other. In the classroom, this means that when the content is new and unfamiliar, the cognitive

responsibility is primarily the teacher's. As the learner acquires knowledge, the intellectual weight shifts.

Important instructional moves occur during a lesson regardless of the content being taught. *Focused instruction* is an umbrella term that describes the ways students are alerted to and primed for learning. This includes establishing purpose, modeling or demonstrating skills and concepts, and conducting teacher think-alouds. Once students have had preliminary instruction, the responsibility shifts slightly to *guided instruction*. In this phase, teachers use robust questions, prompts, and cues to scaffold when necessary as students put new knowledge into play.

Student learning begins as teachers take a step back—Kong and Pearson (2003) call it "teaching from behind" (p. 85)—while students work together to consolidate their understanding. However, the teacher still has an active role, beyond mere supervision. This *collaborative learning* phase is the time to gather

Figure. A gradual release of responsibility instructional framework

TEACHER RESPONSIBILITY

Focused Instruction — "I do it"

Guided Instruction — "We do it"

Collaborative Learning — "You do it together"

Independent Learning — "You do it alone"

STUDENT RESPONSIBILITY

Note. From *Better Learning Through Structured Teaching: A Framework for the Gradual Release of Responsibility* (2nd ed.), by D. Fisher & N. Frey, 2013, Alexandria, VA: ASCD. Copyright 2013 by ASCD. Reprinted with permission.

information, make observations, and listen for evidence of problem solving and reasoning. If a group stalls, the teacher can step in and offer further guided instruction, then step back again to monitor. The learning continues as students work *independently*, if in fact the task has been designed to move them to mastery and not simply to gauge whether they can regurgitate information. In the next section, we examine each of these phases in more detail.

Focused Instruction Up Close

The time to consider focused instruction is whenever new concepts or skills are being introduced. Components of focused instruction include establishing purpose, modeling or demonstration, and teacher think-alouds.

Establishing Purpose. Identifying a goal or target for a learner increases the likelihood that the he or she is set up for success. As with any journey, knowing where you are headed influences the trip itself. Even more important, the learning target further serves as a means for making mid-course corrections. And so it is with a clearly established purpose. This is usually accomplished both verbally and visually, through discussion of a statement posted on the board.

When seventh-grade social studies teacher Alex Watson says, "The purpose of the lesson today is to learn how religious beliefs accelerated the spread of progress from the Islamic Empire into medieval Europe," he is alerting students to the content purpose of the lesson. He continues, "You'll work with your table group using Google Earth to trace this movement visually on an interactive map," thereby priming

them for the language purpose of the lesson. Mr. Watson finishes with the social purpose, "to work together to complete the tasks within the allotted time."

Mr. Watson initially introduced this purpose statement to students at the beginning of the period and spent a few minutes parsing it to make sure students understood it. Later in the lesson, when it came time to make the transition into collaborative learning, he returned to the purpose statement. "Let's look at this again. I don't just want you to finish an activity," he said. "I want you to keep the learning in mind. We're looking for the link between religion and innovation."

Using a series of events, his students traced how the manufacture and use of paper spread rapidly from China to the Islamic Empire, and then across Western Europe because of the Hajj religious pilgrimage. As the lesson came to a close, the social studies teacher returned once more to the purpose. "As your ticket out the door, I'd like for you to rate yourself on how ably you accomplished these purposes today, and identify what helped you or got in your way."

Modeling and Thinking Aloud. "Just show me how to do it." How often has someone said that to you when you were trying to explain a process? The fact is that until we see an action performed, we have a hard time understanding it. The same thing occurs in the classroom. Explanation alone is insufficient; students need to see it for themselves. Good teachers incorporate demonstration into their instruction. A mathematics teacher uses a worked example to demonstrate how to arrive at a solution. A ceramics teacher demonstrates how to wedge wet clay to eliminate pockets of air. But often these demonstrations are accompanied by as a series of second-person directions:

Misconceptions About the Sequence

The gradual release of responsibility instructional framework articulates a series of instructional moves. Much like dance steps, it is essential to name and define these moves. By doing so, dancers can communicate accurately and efficiently with colleagues. However, dances are choreographed using a unique combination of steps. In similar fashion, lessons are organized to meet the learning needs of students. Therefore, an effective lesson is not defined by its rigid adherence to a sequence that begins with focused instruction, followed immediately by guided instruction, and so on. On a given day, a lesson might begin with a question posted for students to answer independently, followed by a brief collaborative conversation with a peer. After gathering formative assessment information about student learning through discussion, the teacher might establish purpose for the day's lesson. And all in the first 10 minutes! Like choreographers, educators need a common vocabulary for discussing practice regardless of content. An instructional framework provides the ability to do so.

Using Purpose Statements Formatively

A clearly established purpose not only is beneficial for students, but also it provides the teacher with a framework for formative assessment. The act of explicitly setting the learning target for students telegraphs how and in what ways checking for understanding should occur. The content, language, and social goals are precisely what should be assessed. In turn, evidence of learning is analyzed by the teacher to make decisions about future instruction.

- "Because you know the measure of angle 1 is 58 degrees, and the measure of angle 2 is 64 degrees, then you can add them to get the measure of angle 4, which is the nonadjacent exterior angle."

- "This is called a cylinder-wedge method for removing air from the clay. You form the clay into a ball and then push down and forward. Then you pull it back toward you and do it again about 30 times."

Students can get lost in the directions, especially if the process is unfamiliar to them. They may try to memorize all the steps, without really considering the logic of each. Worse, because students' memorization is likely to be incomplete, they can't work out how to solve problems because they didn't really understand why the steps were used in the first place. And so the demonstration begins again: "Because you know the measure of angle 1…"

A demonstration accompanied by a teacher think-aloud (Davey, 1983) can bridge student understanding by modeling expert thinking, not just the completion of steps in a process. Students sometimes erroneously believe that their teacher is able to solve problems because he or she has memorized a formula. They don't see all the problem solving that goes on internally as options are considered and discarded. Teacher think-alouds allow students to bear witness to your expert thinking. Rather than speaking in the imperative ("You form the clay into a ball and then push down and forward…"), you are channeling your decision making in first-person language. For example, the ceramics teacher says,

> I'm forming this into a ball because it's going to give me enough surface area to fit my hands around. I'm pushing down and forward, then drawing the clay back because I'm trying to get all those air bubbles out. I've had it happen before when I didn't wedge it enough and the pot cracked in the kiln. As I'm kneading the clay, I'm paying attention to the consistency of the clay. I'm feeling for areas that are stiffer or are less dense. When I feel that inconsistency, I know that means I need to wedge it some more.

In the 45 seconds that it took to model her thinking, the ceramics teacher showed her students how she used sensory feedback to know where she needs to devote more attention and how she integrated her prior experiences and background knowledge to decide when she had wedged it enough. This adds another dimension to student thinking as students apply reasoning when attempting a new skill or concept.

Guided Instruction Up Close

Direction explanation, modeling, and thinking aloud can provide a foray into new knowledge for students, but learning advances only when they get an opportunity to try it for themselves. Application is critical because it allows students to see how much they understand, as well as what they don't yet know. We have all seen this happen in our own classrooms. We wrap up focused instruction and ask, "Do you

Characteristics of a Teacher Think-Aloud

♦ Name a strategy, skill, or task.

♦ State the purpose of the strategy, skill, or task.

♦ Use "I" statements.

♦ Demonstrate how the strategy, skill, or task is used.

♦ Alert learners about errors to avoid.

♦ Assess the usefulness of the strategy or skill.

understand?" and they all nod back to us: Yes, it's perfectly clear. But once students attempt it, new questions arise. This is vital to learning, but their efforts can come to a halt without scaffolds to get them going again. Instructional scaffolds are analogous to those used in construction, because they perform two functions. First, they temporarily brace a structure that is not yet sturdy enough to stand on its own. Second, it extends the reach of the worker beyond what he or she could attempt without assistance. While construction scaffolds are made of steel, instructional scaffolds are composed of robust questions, prompts, and cues.

Robust Questions. Teachers ask questions to check for understanding; it is a staple of instruction. Robust questions are posed to jump-start thinking and expose misconceptions or partial understanding of a concept or skill. When Randy, a student in 10th-grade biology teacher Shanequa Grant's class, got stuck on articulating the comparisons between autotrophs and heterotrophs, she began by

asking him questions to propel his thinking:

Ms. Grant: Can you give me some examples of autotrophs?

Randy: Well, like a green plant.

Ms. Grant: Great—keep going. And write down your examples as you say them.

Randy correctly lists several other autotrophs, and Ms. Grant then repeats the same process for heterotrophs:

Ms. Grant: Now look at the two lists you've made. How are they different from each other? Let's start with one characteristic that makes them different.

The teacher's questions are getting Randy to organize what he knows about the two types of organisms, but he isn't there yet. He still needs more scaffolds, this time in the form of prompts.

Prompts. Often the question alone isn't sufficient to restart students' learning, and prompts are

necessary. We use the term *prompts* to describe questions or statements designed to remind students about background information they have temporarily forgotten to use. This occurs frequently whenever any of us is learning a new skill: We forget about what we already know. Yet that background knowledge is often vital. At times, it may be about a process or procedure that we have learned. Randy possesses some background knowledge that Ms. Grant is sure he has. However, he has forgotten to put it into play in order to figure out this new dilemma. So she prompts his thinking:

Ms. Grant: I want you to think about what you've already learned about food chains. Where would you place autotrophs and heterotrophs?

Randy: I'm not sure I know what you mean.

Ms. Grant: Think about the levels.

Randy: So, like what eats what?

Ms. Grant: Keep going…

Randy's getting closer, but he isn't quite there. On the other hand,

Ms. Grant is confident that he can resolve this with a bit more support. She decides that another instructional scaffold, this time in the form of a cue, is going to do the trick.

Cues. This type is a bit more overt than a prompt, as it more explicitly directs the student's attention to a source of information. Cues come in several forms and are often paired, such as using a verbal prompt along with a gestural one. Prompts include the following:

♦ *Verbal cues* give a direction: When Ms. Grant instructed Randy to write a list, she was giving him a verbal cue so he could begin to notice the differences between the two lists.

♦ *Emphasis cues* are changes in vocal rate, pitch, or intonation to stress an idea. For example, when Ms. Grant slowed down her speech to tell Randy, "Keep going…" she was attempting to create a space for him to continue processing.

♦ *Visual cues* include techniques such as highlighting, underlining, or circling words or phrases in a text.

♦ *Physical and gestural cues* rely on movement and touch to shift a learner's attention. Placing a hand over a student's hand to guide the cursor on a computer screen is a physical cue. Examples of gestural cues include pointing to an object or hand signals that punctuate verbal information. There is some evidence that the use of purposeful gestures in math instruction increases learning (Cook, Duffy, & Fenn, 2013).

♦ *Positional cues* are used to move objects to a more favorable orientation in order for students to notice them. An example would be rotating a right triangle in geometry to a conventional orientation in order for the student to perceive that one of the angles is 90 degrees.

Ms. Grant believes that Randy would benefit from some cues to further shift his attention to a source of information. She points to a poster in the classroom that visually illustrates the food chain. Randy looks at it for a few moments, and then his eyes widen in recognition. "Oh, I get it! So autotrophs produce their own food, so that's at the primary level on the food chain. But heterotrophs, they have to eat autotrophs 'cause they can't make their own food. So they're on the secondary level." Ms. Grant starts the scaffolding cycle again. "Could a heterotroph be a tertiary consumer?"

Collaborative Learning Up Close

We've written extensively about collaborative learning and productive group work in other articles in this series (see *The First 20 Days: Establishing Productive Group Work in the Classroom* and *Collaborative Learning: Ensuring Students Consolidate Understanding*), so it should be evident that we highly value this phase of instruction. Given that learning is social, a construct forwarded by Vygotsky, Dewey, and a host of other theorists, it makes sense that time spent collaborating with peers is vital. This is a time when students consolidate their thinking as they encounter novel tasks that challenge their thinking. However, the design of the task dictates just how much learning takes place. A task that requires little engagement with one another other than dividing up the job is not going to result in new thinking. It's just replicating what is already known. Four desks pushed together does not automatically result in collaborative learning. Johnson, Johnson, and Smith (1991) call this *interdependence*; that is, the task must require the contribution of all of the members.

In addition, there should be a possibility for productive failure to occur. What we mean by that is that success is not assured, but rather that there is the possibility that students will make errors that must be resolved. Kapur (2012) has studied the effectiveness of productive failure in middle and high school mathematics

Ask Higher Order Questions

We expect doctors, nurses, and medical technicians to use critical thinking skills. After all, it's our health that's on the line. Medical education researchers Amin and Eng (2004) encourage professors to alter their questioning habits to promote critical thinking. Their advice works well for secondary classrooms as well.

REGURGITATION

Use less of	Use more of
What	Why
When	How
Where	Suppose
Who	Justify
Which	Example
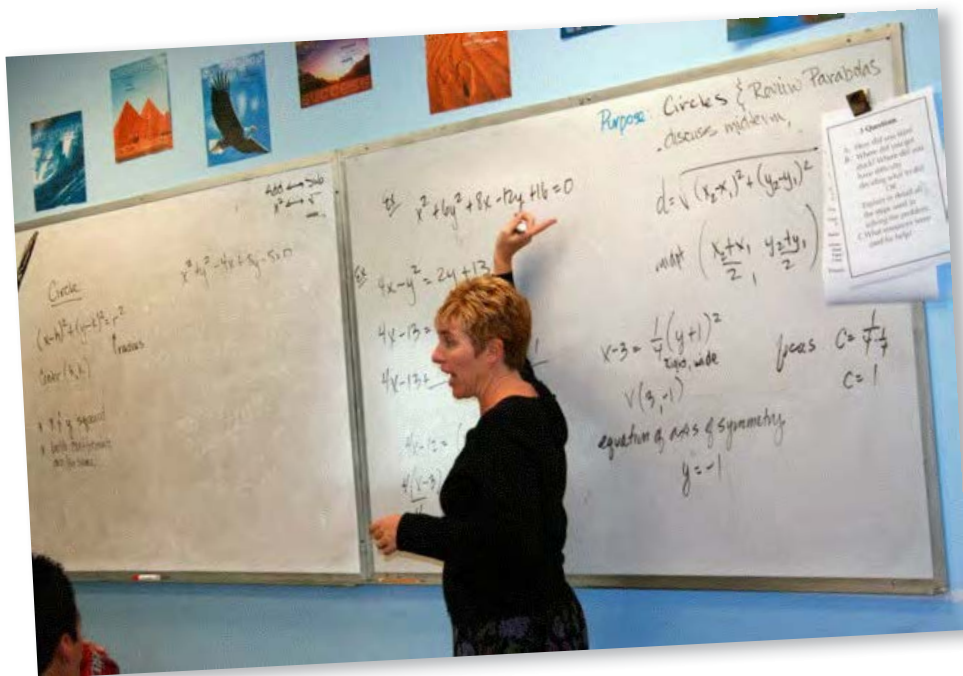
classes. His findings point to the use of productive failure tasks to encourage students to generate solutions. Even when not successful, he has found that the situation is a priming function for follow up direct explanation and worked examples because students were now listening more closely for information that would help them resolve the problem.

This is precisely why collaborative learning is the linchpin for this instructional framework. Based on students' progress toward transferring learning to novel situations, a teacher may move into the group to offer some guided instruction, then step back again to monitor (recall the notion of "teaching from behind" mentioned earlier in this article). Productive failure leads students back into the focus lesson. This time, students are even more prepared to process the information.

Ninth-grade English teacher Stephan Robeson posts a thought-provoking question on the board each day to provoke this effect. Students begin the class with discussion with their table peers. Mr. Robeson doesn't expect them to be able to address it, but rather to spark speculation and problem solving. One question, "How would you know if you were in a state of nirvana?" caused considerable conversation but no resolution. Most were unfamiliar with the term *nirvana*, while a few recalled the name of a band in their parents' record collections. Soon Mr. Robeson was introducing them to Herman Hesse's novel *Siddhartha* and concepts of Buddhism that guide the spiritual journey of the protagonist.

Independent Learning Up Close

The learning shouldn't stop when the independent phase of instruction begins. As with collaborative learning, the design of the independent learning task must be considered carefully. Whether reading or writing, a task may be for any one of these four purposes:

1. *Fluency building* to practice skills that have been learned but are improved with practice. Reading is a good example of a complex skill that responds to fluency building.

2. *Spiral review* of previously learned material, especially to revisit concepts that will be integral in upcoming lessons.

3. *Application* of skills and concepts, especially for the purpose of consolidating background knowledge and new knowledge.

A research paper is an example of application.

4. *Extension* to deepen one's knowledge about a topic. An example would be conducting interviews of people with salient knowledge or experience about a topic.

Well-designed independent learning tasks require students to think metacognitively as well. This can be accomplished by including reflective questions as part of the assignment. It isn't unusual, for instance, to ask students to explain in writing how they arrived at an answer in mathematics. Mr. Robeson assigns independent reading each night and asked students to annotate part of the text to formulate their questions for the following day's discussion. Independent tasks for secondary learners are improved when self-regulation is featured as well. This means that students are able to reflect on their own actions and decisions and the effects on learning. As part of the nightly reading assignment, Mr. Robeson asks students to record the amount of time they spent on it and to rate their own attentiveness.

Conclusion

A major challenge of secondary schooling concerns its organizational structure and the difficulty in promoting meaningful dialogue about instructional practices across disciplines. While each possesses unique features, one unifying concept can be found in instruction. A gradual release of responsibility instructional framework describes principles and practices that are shared across disciplines. As well, it promotes the kind of cross-curricular conversations that are vital for continuous improvement because it provides a common vocabulary for discussing our practices.

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Douglas Fisher and **Nancy Frey** are professors in the College of Education at San Diego State University and teacher leaders at Health Sciences High and Middle College. They are interested in quality instruction for diverse learners and are coauthors with Diane Lapp of *Text Complexity: Raising Rigor in Reading* (International Reading Association, 2012). You may contact Doug at dfisher@mail.sdsu.edu and Nancy at nfrey@mail.sdsu.edu.

IRA Resources

Fisher, D., Frey, N., & Lapp, D. (2009). *In a reading state of mind: Brain research, teacher modeling, and comprehension instruction*. Newark, DE: International Reading Association.
> This book–DVD combination blends current research about the brain and learning with classroom examples to show you how instructional modeling can lead to increased engagement and literacy learning. You'll learn what happens in the brain as a person reads and how to model your own thinking effectively. You also will meet a number of middle- and secondary-grade teachers who use modeling to help their students understand complex ideas. Chapters explore ways you can model comprehension and word solving strategies, as well as how to use text structures and text features to learn and retain information. The DVD gives you an opportunity to see teacher modeling in action in real classrooms, and the final chapter in the book serves as a professional development guide with discussion questions that correspond to segments of the DVD.

Grant, M., Lapp, D., Fisher, D., & Johnson, K., & Frey, N. (2012). Purposeful instruction: Mixing up "I" "we" and "you." *Journal of Adolescent & Adult Literacy*, *56*(1), 45–55.
> The article discusses literacy education as a component of secondary science education and offers suggestions for fostering vocabulary and reading comprehension skills as a part of science lessons. The gradual release of responsibility (GRR) teaching method is particularly examined, and other teaching methods such as independent tasks, group work, and guided instruction are commented on. The usefulness of GRR for fostering student interest and inquiry is also explored along with the strengths of its nonlinear model.

Parris, S., Fisher, D., & Headley, K. (Eds.). (2009). *Adolescent literacy, field-tested: Effective solutions for every classroom.* Newark, DE: International Reading Association.
> This edited book highlights instructional practices in effective secondary classrooms. You'll find best practices in key areas such as writing, comprehension, vocabulary, collaborative learning, new literacies, assessment, and the content areas. Chapters address your challenges by illustrating effective teaching methods for both the general population of middle and secondary students and groups such as struggling readers, English learners, and African American adolescents. You'll also read about a model high school environment and find recommendations for progressive professional development. Special features for busy teachers include lesson ideas in a quick-read format, questions to extend and apply your thinking, and suggestions for professional development.

Seeking Social Justice Through Satire: Jonathan Swift's "A Modest Proposal"
> This nine-lesson unit of instruction is designed for high school English and Humanities teachers. Teacher John Wilson Swope explains: "Jonathan Swift's 1729 pamphlet 'A Modest Proposal' is a model for satirizing social problems. In this lesson, students complete multiple readings of Swift's essay: a guided reading with the teacher, a collaborative reading with a peer, and an independent reading. The online Notetaker tool helps students restate key ideas from Swift's essay as they read and elaborate upon these ideas postreading. After independent reading, pairs of students develop a mock television newscast or editorial script, like those found on *Saturday Night Live's* Weekend Update, *The Daily Show with Jon Stewart*, or *The Colbert Report*, including appropriate visual images in PowerPoint." The lesson can be found at www.readwritethink.org/classroom-resources/lesson-plans/seeking-social-justice-through-30827.html

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