

Real-Time Teaching

Learners Need Purposeful and Systematic Instruction

Donna Ross
Nancy Frey

Consider the following scenarios that often occur in secondary classrooms:

- A mathematics teacher solves a series of problems on the board and then assigns the odd-numbered problems at the end of the chapter for homework.
- An English teacher reviews the previous chapter in the novel, lectures on the theme, and then assigns everyone to silent reading for the remainder of the period.
- A science teacher assigns Chapter 14 in the textbook and tells everyone to answer the questions at the end of the chapter (full sentences, please).

Are you asking where exactly did the instruction occur? While most agree that teaching is more than simply causing or assigning an activity, the teachers in the examples above moved almost immediately to independent work. Did you notice that students were not given an opportunity to try new content while being supported? If this is common practice, is it any wonder that the needs of so many adolescent students are not being met?

Our experience suggests that teachers who are addressing the learning needs of all students employ a recursive instructional process that includes

- Teacher modeling and guiding the acquisition of new content
- Time for students to collaborate as they refine their understanding of the new content
- Opportunities for students to try on the new content independently

In addition to thinking about the missing instruction in the first scenarios, also consider the prospect of the problem behaviors that could be anticipated because of the lack of student engagement. What is the likelihood that a student will write notes to a classmate in the math class, pull the hood of his sweatshirt up over his head in English, or visit the pencil sharpener countless times in science? These students are often the “canary in the coal mine”; the ones who are the first to react negatively to a learning environment with little support. Unfortunately, too often the student is blamed, without regard to the circumstances in which the problem behavior occurred. In these cases, it is fair to say that the absence of purposeful and systematic instruction contributed to student misbehavior.

Welcome to the Real-Time Teaching Department

The goal of each of the columns is twofold. First, we plan to provide motivating examples of research to practice instruction designed to support literacy learning for adolescent students. Second, the examples will be so explicitly shared that teachers will be able to use these as a base to create similar learning experiences for their students. Some of our topics this year include efforts to

- Seamlessly weave word work/vocabulary instruction into our units of study
- Scaffold and differentiate instruction to support the learning of all students, especially English learners
- Expand students' language registers so that formal, academic English is part of their spoken and written repertoires
- Enrich students' reading habits through their choices while still addressing state standards
- Support students as they assume responsibility for their learning
- Utilize students' knowledge of new literacies to promote their academic literacies
- Merge school, home, and work literacies

On the International Reading Association website we will also include connections to ReadWrite Think.org activities that validate and extend the content of the department. In addition, we will provide interviews with the authors through podcasts, videos of real-time teaching in action, and sample lessons and resources. We welcome your input on topics you feel are most pressing to a wide segment of *JAAL* readers. Please visit dx.doi.org/10.1598/JAAL.53.1.8 to find the video, podcast, and rubric that accompany this column.

Diane Lapp and Doug Fisher, editors, Real-Time Teaching department

Gradual Release of Responsibility

Pearson and Gallagher (1983) introduced a gradual release of responsibility model of instruction to describe a framework for effective instruction. This model depicts learning as a purposeful process that allows for a systematic shift in the cognitive load (responsibility) from the teacher to the student. In their model, explicit instruction is followed by guided practice in which the teacher and student have joint responsibility for using those skills or strategies. The learner takes the lead, with the teacher guiding her through the difficult spots and then stepping back as soon as the learner regains control. These first two steps are analogous to teaching someone to ride a bicycle. First, you show the learner all the parts and talk about the important things to remember, like pedaling and steering. You even get on the bike and show her how it's done. That's the modeled instruction phase of learning. But she'll never learn to ride it if she doesn't try it herself, so you invite her to get on the bike while you jog along, holding on to the back of the seat when she's getting wobbly and letting go as soon as she has regained control. That's the guided practice phase of learning. With lots of guided practice, she becomes sure of herself, you begin to fade your support, and soon you're standing nearby while she's riding independently. That's the final phase of instruction— independent practice.

Adding Productive Group Work

Although Pearson and Gallagher developed this model to describe how teachers develop students' reading comprehension, the framework works well across content areas. We would add an additional phase to this model: productive group work. We know that adolescents learn when they spend time interacting with their peers (Palincsar & Herrenkohl, 2002; Wentzel & Watkins, 2002). At some point, our novice bike rider begins to hone her skills in the company of other riders. They try new techniques together, make mistakes together, and generally come up with all kinds of things you would never teach her to do. (How did you first learn to pop a wheelie? Chances are, the responsible adult who taught you to ride did not also instruct you on the fine art of riding on the

back tire alone.) Putting the gradual release of responsibility model into practice should include a collaborative learning phase that we call productive group work because it requires individual accountability based on the collaborative work of the group.

Students learn best when they are provided with a model of how a skill, concept, strategy, or process is used: the algebra teacher who thinks aloud about relevant versus irrelevant information in a problem, the English teacher who describes how she figures out an unfamiliar vocabulary word, or the biology teacher who constructs a graphic organizer on RNA and DNA while explaining differences and similarities set their students up for success.

With the model in their minds, students are guided in their learning as they begin to take on more of the cognitive load, with the teacher there to help with the tricky stuff. Therefore, a student explains her thinking as she solves an equation, while the teacher coaches and scaffolds (“Think about your next step. What is the problem asking you to solve for?”). In the next room over, a life sciences teacher listens as a student explains his proposed investigation of fertilizers and then the teacher asks, “Are there other variables you could control? How will you know for sure if it is the level of nitrogen affecting the growth rate?”

In addition, learners need time to work out the details with one another because this allows them to use academic and social language as they consolidate their understandings. For example, a chemistry teacher recently gave a brief lecture on acetylation, and her students followed her protocol to create acetylsalicylic acid in the science lab. But it wasn’t until they began drawing diagrams during the small-group discussions that students made the connection that they had formed aspirin by using acetic anhydride as an acetylating agent for salicylic acid. Without prompting, several of the students picked up molecular models to show others in the group where the acetyl groups were located. Others spontaneously looked up aspirin in their textbooks to confirm their thoughts. Their joint problem solving allowed them to arrive at deeper understandings they might not have achieved alone.

Once they have received modeled, guided, and collaborative experiences, students are ready for independent learning. Some of these independent tasks are

completed for homework, but most are done in class. The secret is that all activities need to be engaging and interesting.

A simple way to remember this instructional design is to think about where the cognitive load is situated:

- Modeling: “I do it.”
- Guided instruction: “We do it.”
- Collaborative learning: “You do it together.”
- Independent learning: “You do it alone.” (Fisher & Frey, 2008, p. 4)

Teaching Systematically and Purposefully

Teacher Mark Petersen (pseudonym) models the gradual release of responsibility in his Studio Arts class. His students are engaged in a unit of study on techniques for creating graphic novels. He knows these are popular among his students who have read visual narratives for years. Sometimes mistaken for comic books, graphic novels are self-contained narratives that utilize many of the principles of both prose text and visual arts. Once Mr. Petersen gains students’ attention and reviews the day’s agenda and the standards posted for this unit, as well as the questions they’ll answer later in class, he switches on the document camera and displays a page from Frank Miller’s classic graphic novel *Batman: The Dark Knight Returns*. “I know most of you have read this a thousand times,” he begins. The students nod in agreement. They know that this landmark graphic novel describes the events that brought Bruce Wayne out of retirement.

“I’m going to talk you through one page because I want to tell you what I see as an artist when I look at Miller’s work and his ability to tell a story visually.” Mr. Petersen displays the page where the main character recalls his parents’ murder outside a theater and his helplessness and terror as a child witnessing this tragedy. Mr. Petersen describes the artist’s use of color, the repeating image of a strand of pearls being torn from the mother’s neck, and the choice of a series of narrow panels to simulate the pounding heartbeat of the boy. This type of modeling taps into his disciplinary expertise and provides his students with an example of thinking like an art critic.

After modeling his instruction about these artistic techniques, Mr. Petersen divides the class in half. “I’m going to meet with each group separately and guide you through an analysis of these techniques in other graphic novels,” he explains. “While I’m doing guided instruction with one group, I’d like the other half of the class to take a look at the materials I’ve prepared for you. There’s a reading by Will Eisner on techniques for visual narratives. Please work in partners to read and discuss the questions I’ve posted on the board.”

Mr. Petersen spends about 10 minutes with each of the groups in guided instruction while the rest of the class engages in partner reading and talking about the questions. After finishing his guided instruction and quickly reviewing the questions answered by the partner groups, he moves the students into independent work. “We’re going into studio time now. You’ll have thirty minutes to create a storyboard of a vivid memory from your childhood, using at least two of the techniques we’ve examined today.” As his students settle in to work, Mr. Petersen meets with individual students. He’s confident of their success in this task because he knows he has constructed a carefully designed learning experience that is purposeful and systematic.

Disciplinary Literacy Is Purposeful and Systematic

Our experience teaching purposefully and systematically has allowed us to focus on disciplinary literacy.

As Shanahan and Shanahan (2008) noted, we have to move beyond basic and intermediate literacy if adolescents are going to achieve at high levels. Unfortunately, these types of disciplinary thinking are rarely taught. As we have integrated the gradual release of responsibility into our teaching practices, we have realized that disciplinary literacy is within our reach.

References

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Ross teaches at San Diego State University, California, USA; e-mail dross@mail.sdsu.edu. Frey teaches at San Diego State University, California, USA; e-mail nfrey@mail.sdsu.edu.

The department editors welcome reader comments. Douglas Fisher teaches at San Diego State University, California, USA; e-mail dfisher@mail.sdsu.edu. Diane Lapp teaches at San Diego State University, California, USA; e-mail lapp@mail.sdsu.edu.