3RD EDITION

Better Learning

Through Structured Teaching

A Framework for the
Gradual Release of
Responsibility

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Preface to the Third Edition

Who would have thought back in 1999, when we resuscitated and revised the gradual release of responsibility framework, that we would still be adjusting it more than 20 years later? The foundational truths that anchor the two of us, Doug and Nancy, as educators still guide us as much today as they did when we first set out to define effective, intentional instruction. Yet the world continues to change, and we continue to learn, which is why we decided to revise this book for a third edition.

Those who are familiar with past editions may notice some changes. We have updated the chapter on focused instruction based on current thinking about direct instruction and how to ensure that lectures are meaningful. Of course, teacher modeling is still very important, but we know now that there are ways beyond modeling to focus students and ensure that they have strong cognitive apprenticeship experiences. Guided instruction, although far more than simply "telling" or otherwise sharing information, remains an important part of the learning process. You'll find new information about scaffolds that should shape the

ways that teachers interact with students to ensure that they are learning during this phase.

Over the past several years, we have also engaged in a great deal of thinking about students' ability to collaborate with their peers, and we drew on work related to professional learning communities to develop the concept of and guidelines for student learning communities. This edition's chapter on collaboration has a great deal of new information on what students gain from working with one another—not just deeper learning and enhanced social-emotional competency but also the awareness that people really do learn more, and learn better, when we learn with others. This chapter also looks at ways that students can collaborate from a distance as they work to negotiate meaning, problem solve, or reach consensus.

In terms of independent learning, we highlight the role of practice much more than we have before. As you will see, practice makes learning permanent, and the evidence on deliberate practice can guide the ways in which students are tasked with completing work. If we can use independent learning for students to preview and review, we might just accelerate their learning and help them reach new levels of success.

New and old readers alike may notice that the examples woven through the chapters include distance and blended learning, informed by lessons learned from teaching during the COVID-19 pandemic. Many of the experiences educators had during this period of mandatory distance learning will serve us well going forward, irrespective of the format of schooling. We have seen the value, for example, in creating interactive videos that provide students information and vocabulary in advance of a lesson.

But the biggest change in this edition is in our approach to assessment—specifically, the point that assessment cannot be "left until the end" of a lesson. Teachers should be adjusting their lessons in real time as they collect and analyze the data that they

get from students, whether that be during focused, guided, collaborative, or independent learning. Assessment is the engine that drives instructional decisions; it's what allows teachers to know if we are having an impact. When we are not achieving the desired impact—learning—we have to change course and try something else.

Finally, as we launch into this revised articulation of the gradual release of responsibility framework, we want to remind you just how much teaching matters. The decisions teachers make to structure students' encounters with learning have consequences powerful enough to change lives. Never forget the influence you have on the young people in your classroom. Choose your actions with care. And thank you for all you do, and all you will continue to do, to ensure that learning happens for every student, every day.

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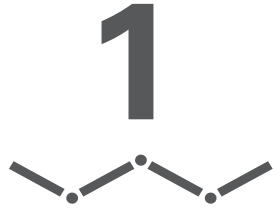
Learning and the Intentional Act of Teaching

As many have noted, teaching is both an art and a science. On the "science" side, there is considerable evidence about the measures proven to support learning that educators can use to inform instructional decisions. We ignore that evidence to our, and our students', peril. Aspects of teaching that fall under the "art" heading include healthy teacher–student relationships, the classroom learning climate, and teachers' passion for the work and their students' learning. This book focuses more on the science of teaching than the art, but you'll read examples that clearly mobilize both art and science.

What's most important is that teaching lead to learning—that it develop in students the knowledge, skill, and confidence they need to learn deeply, think critically and creatively, and be able to apply learning strategies to meet new challenges. If what we are doing is not having that effect, we need to change what we are doing.

The Case for Instructional Frameworks

There is a difference between being prescriptive about instruction and being intentional about it. The purpose of instructional frameworks is not to undercut teacher expertise or professionalism or to tell teachers what to say and how to say it; it's to provide a system of expectations for how students might be taught. Instructional frameworks are a tool that teachers can use to design learning and make informed decisions about the specific strategies that will best support their students' success. In addition, instructional frameworks create a shared vocabulary so that members of teacher teams can communicate more effectively when they interact with one another. Instructional frameworks make it easier to discuss instruction across platforms (face-to-face, distance learning, blended, or hybrid variants). Further, they help teachers identify professional learning opportunities. For example, if one aspect of an instructional framework focuses on student-to-student interaction, teachers might want to learn new ways to enhance this in their classrooms.

Essentially, an instructional framework is a way to organize strategies and deploy them to create cohesive learning experiences for students. It's a defense against the all-too-common and frankly exhausting "buffet model" of professional learning, where teachers are prompted to keep adding to their plates without any idea of where they're going to "put" it all.

A number of instructional frameworks have been developed over the years, but the one we'll be focusing on is called the gradual release of responsibility.

The Gradual Release of Responsibility: A Structure for Supporting Learning

The gradual release of responsibility instructional framework is based on the belief that teachers can intentionally increase students' ownership of learning over time. The framework is

informed by several complementary theories, including the following:

- Piaget's (1952) work on cognitive structures and schemata
- Vygotsky's (1962, 1978) work on zones of proximal development
- Bandura's (1965, 2006) work on attention, efficacy, retention, reproduction, and motivation
- Wood, Bruner, and Ross's (1976) work on scaffolded instruction

Taken together, these theories suggest that learning occurs through interactions with others, and being intentional in these interactions allows for specific learning to occur. The mechanism behind the gradual release of responsibility is purposefully shifting the cognitive load from teacher-as-model to joint responsibility of teacher and learner, and then to independent practice and application by the learner (Pearson & Gallagher, 1983). This gradual *decrease* of teacher responsibility and parallel *increase* in student responsibility may occur over a single lesson, a day, a week, a month, or a year.

In the past, interpretations of the gradual release of responsibility limited these interactions to adult and student exchanges: *I do it; We do it together; You do it.* But that three-part model omits a truly vital component of learning: students' collaboration with their peers—the *You do it together* phase. Thus, our interpretation of the gradual release of responsibility framework includes four major phases. In Figure 1.1, we map out these phases of learning, indicating the share of responsibility that students and teachers have in each.

We are not suggesting that every lesson must always start with focused instruction (goal setting and modeling) before progressing to guided instruction, then to collaborative learning, and finally to independent tasks. Teachers can and often

do reorder the phases—for example, beginning a lesson with an independent task, such as bell work or a quick-write, or engaging students in collaborative peer inquiry prior to providing teacher modeling. As we stress throughout this book, what is important and necessary for deep learning is that students experience all four phases of learning when encountering new content. We will explore the four phases in greater detail in subsequent chapters, but let's proceed now with an overview of each.

Figure 1.1	A Structure for Instruction That Works
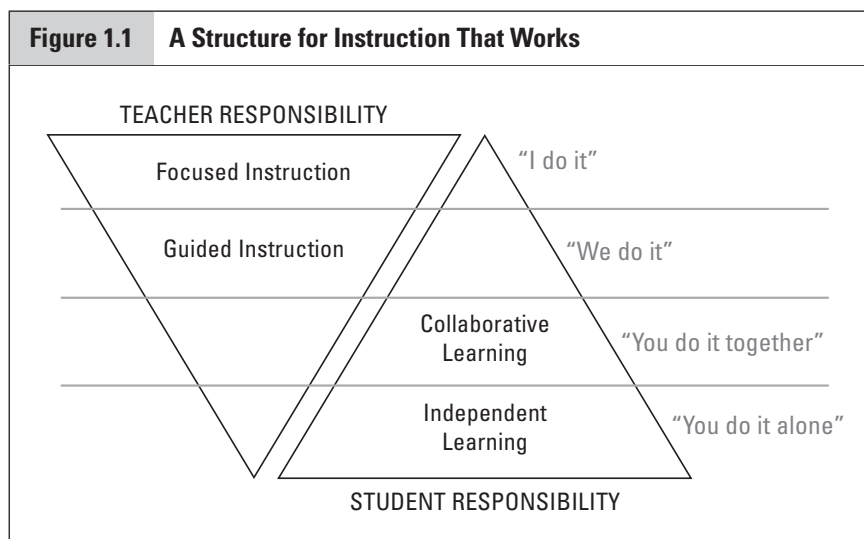
Focused Instruction

This phase includes two components: establishing the purpose for learning—that is, setting learning intentions and success criteria—and providing cognitive apprenticeship opportunities through modeling and demonstration. In focused instruction (which, as noted, does not have to come at the beginning of a lesson), students get to know what they are learning and see examples of the type of thinking that they are expected to do. Here

are some examples of what teachers and learners might be doing during the focused instruction phase:

Teacher Actions	Student Actions
• Describing the learning intentions and success criteria • Noting the relevance of the lesson • Thinking aloud, demonstrating, or providing direct instruction	• Listening and making connections • Taking notes or talking with a partner about what the class is learning • Developing a mental model of expertise

Focused instruction is typically done with the whole class and usually lasts 15 minutes or less—long enough to clearly establish purpose and ensure that students have a model from which to work. Bear in mind, too, that there is no reason to limit focused instruction to once per lesson. The gradual release of responsibility instructional framework is recursive, and a teacher might reassume responsibility several times during a lesson to reestablish the lesson purpose and provide additional examples of expert thinking.

Guided Instruction

The guided instruction phase is an opportunity to scaffold students' understanding. Through the use of questions, prompts, and cues, teachers can support student learning without telling them answers or simply providing them with information. Guided instruction can be done with a whole class, but many teachers are more effective when they guide small, purposeful groups that have been composed based on assessment data. Here are some examples of what teachers and learners might be doing during the guided instruction phase:

Teacher Actions	Student Actions
• Asking questions • Scaffolding with prompts, cues, and direct explanations • Meeting with intentionally selected groups of students • Monitoring progress and documenting learning	• Responding to the teacher's questions • Thinking and noticing, based on the scaffolds • Experiencing productive success with the support of the teacher

Guided instruction is an ideal time to differentiate learning experiences by varying the instructional materials used, the level of prompting or questioning employed, and the products expected. A single guided instructional event won't translate into all students developing the content knowledge or skills they are lacking, but a series of guided instructional events can. Over time and with cues, prompts, and questions, teachers can guide students to increasingly complex thinking. Guided instruction is, in part, about establishing high expectations and providing students with the support they need to reach those expectations.

Collaborative Learning

The collaborative learning phase of instruction is too often neglected. If used at all, it tends to be a "special event" rather than an established instructional routine. When done right, collaborative learning is a way for students to consolidate their thinking and expand their understanding. Negotiating with peers, discussing ideas and information, problem solving, and engaging in inquiry with others give students the opportunity to use what they have learned during focused and guided instruction. Here are some examples of what teachers and learners might be doing during the collaborative learning phase:

Teacher Actions	Student Actions
• Developing complex tasks • Forming groups purposefully • Assigning roles • Monitoring progress	• Using academic language in interactions with peers • Sharing opinions, ideas, and thoughts • Problem solving and using argumentation • Working to achieve consensus

Because collaborative learning situations help students think through key ideas, they are a natural opportunity for inquiry and a way to promote engagement with the content. As such, they are critical to the successful implementation of the gradual release of responsibility instructional framework. Note, though, that collaborative learning is not the time to introduce new information to students. This phase of instruction is a time for students to apply what they already know in novel situations or engage in a spiral review of previous knowledge.

Independent Learning

The ultimate goal of instruction is that students be able to independently apply information, ideas, content, skills, and strategies in unique situations. We want to create learners who are not reliant on others for information and ideas. As such, students need practice completing independent tasks and learning from those tasks. Overall and across time, the school and instructional events must be "organized to encourage and support a continued, increasingly mature and comprehensive acceptance of responsibilities for one's own learning" (Kesten, 1987, p. 15). The effectiveness of independent learning, however, depends on students' readiness to engage in it; too many students are asked to complete independent tasks without having received the focused or guided instruction they need to do so successfully. Here are some examples of what teachers and learners might be doing during the independent learning phase:

Teacher Actions	Student Actions
• Developing practice and application tasks • Monitoring student progress	• Completing assignments • Planning and monitoring their own efforts • Reflecting on their own successes

When students are ready to apply skills and knowledge, there is a range of independent tasks that might be used. Our experience suggests that the more authentic a task is, the more likely the student is to complete it. For example, a kindergarten teacher might ask a student to read a familiar book to three adults, a 6th grade science teacher might ask a student to predict the outcome of a lab based on the previous three experiments, and a high school art teacher might ask a student to incorporate light and perspective into a new painting. What's essential for an independent learning task is that it clearly relate to the instruction each student has received yet also provide the student an opportunity to apply the resulting knowledge in a new way.

Structures That Don't Support Learning

With this effective approach to instruction fresh in mind, let's look at some structures that don't support learning nearly as well. Unfortunately, there are still plenty of classrooms in which responsibility for learning is *not* being transferred from knowledgeable others (teachers, peers, parents) to students. Although they may feature some of the phases of instruction we have described, the omission of other phases derails learning in significant ways.

For example, in some classrooms, teachers provide explanations and then skip straight to asking students to complete independent tasks—an approach graphically represented in Figure 1.2. This situation is very familiar. A teacher demonstrates how to approach a particular kind of algebra problem and then asks students to solve the odd-numbered problems in the back

of the book. A teacher reads a text aloud and then asks students to complete a comprehension worksheet based on the reading. In both cases, the teacher fails to develop students' understanding of the content through the purposeful interaction of guided instruction. This is a sudden release of responsibility, not a gradual one. It's a structure that favors students who arrive already knowing the content. Students who are not yet proficient with the content suffer in this environment, because they lack sufficient scaffolding to learn.

Figure 1.2	In Some Classrooms...

TEACHER RESPONSIBILITY

Focused Instruction

"I do it"

Independent Learning

"You do it alone"

STUDENT RESPONSIBILITY
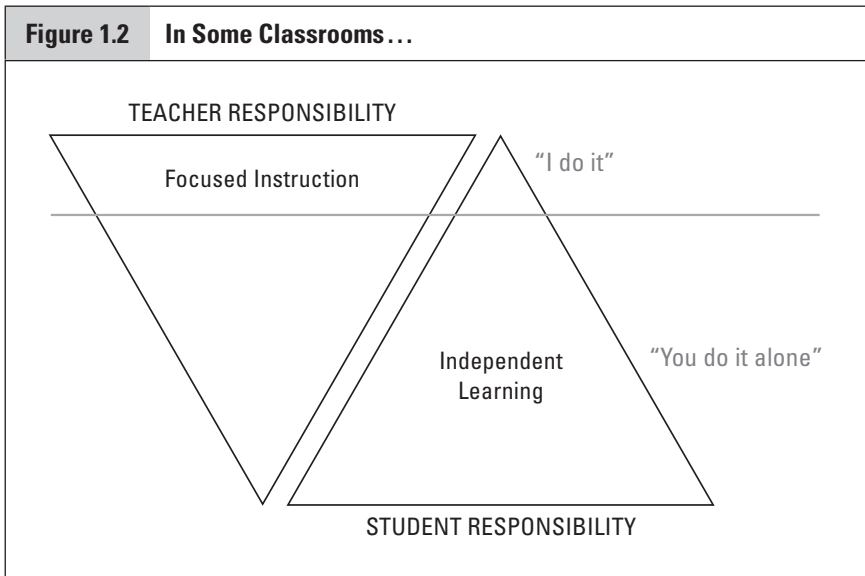
Sadly, there is a classroom model even worse than this, at least in terms of instructional development. It's the one in which students are asked to learn everything on their own, depicted in Figure 1.3. The structure of these classes is depressingly uniform. Students complete the prepared study packet of photocopied worksheets or online tasks, or they read the assigned pages and then answer the questions at the back of the textbook. Then

they follow this pattern over and over again, day after day. There really isn't much teaching going on in these classrooms; it's mostly assigning or *causing* work. This is do-it-yourself school, and frankly, we'd be embarrassed to accept our paychecks if we "taught" like this.

Figure 1.3	In Some Classrooms…

TEACHER RESPONSIBILITY

Independent Learning

"You do it alone"

STUDENT RESPONSIBILITY
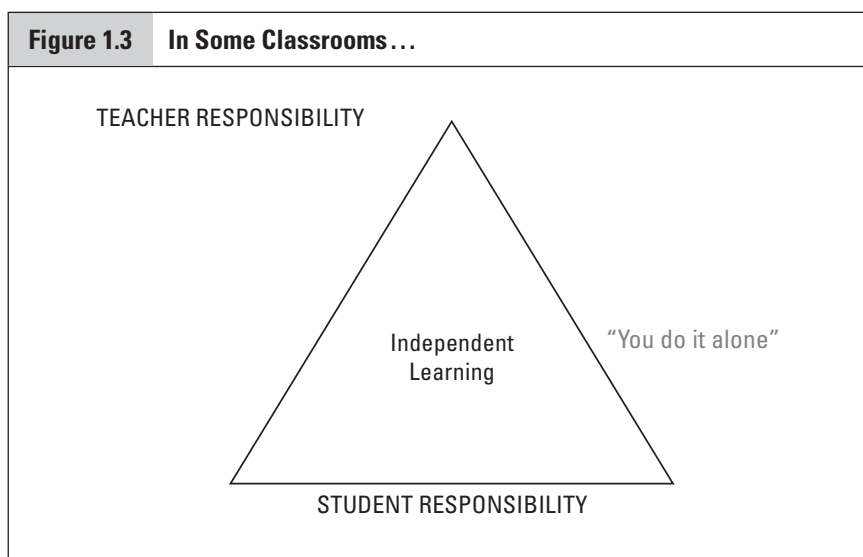
There are days at school when students do need to spend significant amounts of time working independently—completing projects, writing essays, and the like. However, this should not be happening every day, and on the days it does happen, students need to be reminded of the purpose of the lesson, experience a brief episode of expert thinking, and interact with their peers.

Even in classrooms that most people would consider "good" or "good enough," the gradual release of responsibility instructional framework is seldom fully operationalized. As noted, the most frequent omission is the collaborative learning phase, leading to the instructional approach represented in Figure 1.4.

Figure 1.4   In Some Classrooms…

TEACHER RESPONSIBILITY

Focused Instruction

"I do it"

Guided Instruction

"We do it"

Independent
Learning

"You do it alone"

STUDENT RESPONSIBILITY
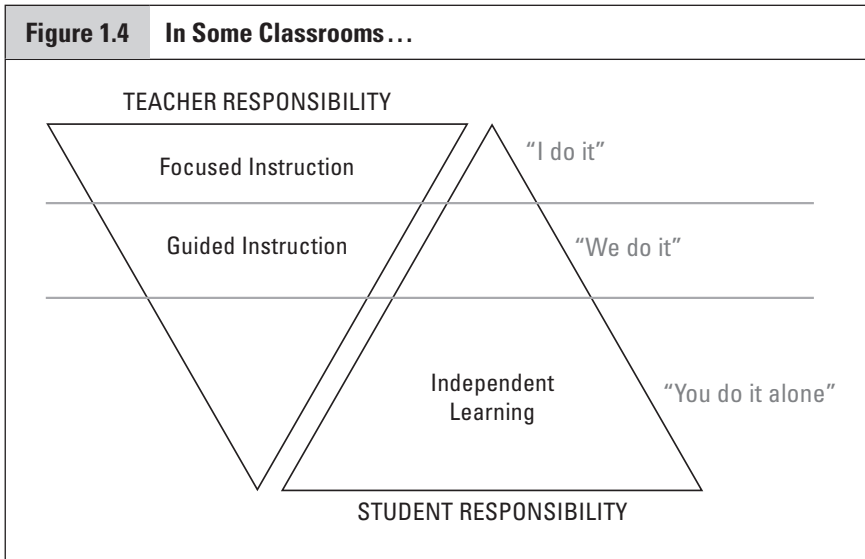
In these classrooms, the teacher provides modeling and then meets with small groups of students. But students don't have the opportunity to collaborate, as they are all required to complete independent tasks while waiting their turn to meet with the teacher. For example, the teacher might model comprehension strategies useful in understanding scientific texts (*I do it*) and then meet with two or three small groups of students to guide their understanding (*We do it together*). As this is going on, the rest of the students are more likely to be assigned independent reading from a textbook (*You do it alone*) than they are to work in collaborative learning groups (*You do it together*).

We believe that all four phases of the gradual release of responsibility framework—focused instruction, guided instruction, collaborative learning, and independent learning—are necessary if we want students to learn deeply, think critically and creatively, and be able to mobilize learning strategies.

Attending to the Social and Emotional Dimensions of Learning

Learning isn't strictly an intellectual enterprise. The dispositions of the learner and that learner's investment in learning also play a powerful role in learning success. The extensive research on motivation in learning has demonstrated that self-determination matters a great deal. In fact, motivation is a stronger predictor of achievement than intelligence (Kriegbaum et al., 2018). However, motivation isn't monolithic, and people's reasons for engaging in behaviors can include both internal and external motivations (Howard et al., 2017). For example, individuals on a group bike ride are likely to represent a range of these internal motivations, even though their actions appear to be the same:

- "I have to do this." (I exercise because my doctor says I must.)
- "I can do this." (I am capable of riding a bike for 40 miles.)
- "I want to do this." (I like the way bike riding makes me feel physically and mentally.)

Our classrooms are likewise filled with students possessing a range of motivations. Because of motivation's complexity, we've found it helpful to think of a learner's motivation as being informed by three factors: *identity, agency,* and *self-regulation.*

Identity as a learner. Identity is an understanding of who we are. Our attributes, which is to say our *characteristics,* are informed by the way the world reacts to us. Young children learn about themselves relative to their interactions with others and align their responses to be consistent with those of their caregivers. A young child encounters a strange dog and looks to the adult holding his hand to see whether he should be afraid or not. This experience becomes a story he can tell about himself: "I saw a big dog, but Mama said I was brave because I didn't act scared."

A person's identity is further informed by fixed and fluid structures such as gender, race, sexual orientation, culture, and socioeconomic status. Societal messages can both enhance and inhibit a child's learning. Consider that the phenomenon of stereotype threat has a documented negative influence, with a measured effect equivalent to a year's loss of learning. A learning environment in which students perceive that a negative performance on their part will reinforce a negative stereotype about an affiliated group puts these students at risk. Their anxiousness about doing well actually reduces their performance. Stereotype threat has been documented in children as young as 1st grade (Désert et al., 2009). However, classroom instruction that incorporates exposure to positive messages about affiliated groups can help to create "stereotype boost" in these same children, enhancing their performance (Shih et al., 2012). We would be remiss if this book about instruction overlooked the importance of culturally relevant and culturally sustaining pedagogies in the learning lives of students.

Agency in learning. A person's sense of agency is closely linked to personal identity. *Agency* is one's perceived capacity to take action in the world. It is socially constructed and influenced by the network of relationships a child has at home and at school.

It's fair to say that agency is at the heart of the gradual release of responsibility instructional framework; after all, the framework is constructed to ensure that students have frequent opportunities to take calculated learning risks as they continually try on new knowledge and skills. Students with a higher degree of agency have the confidence necessary to step beyond reception and toward action, working through problems alone and with others, testing solutions, and reflecting on their results in order to innovate and improve on their attempts. At the same time, it is by successfully assuming responsibility, within the guardrails of the framework, that students build greater agency.

Of course, successful assumption of responsibility depends on the teacher's successful release of it. A teacher who overestimates the value of telling and fails to provide chances for students to try on new thinking thwarts their ability to develop agency in their learning. That teacher breeds a dependency and signals to children that learning is a one-way proposition*: I tell, and you listen.* This sets up learning as a passive experience rather than one that requires action and effort. Under these circumstances, is it any wonder that many students fail to recognize their own motivation as a critical part of the learning equation?

Self-regulation in learning. *Self-regulation* is a collective term that describes the habits, dispositions, and skills students need to "learn how to learn." Individuals who can self-regulate are able to direct their attention, organize their thinking, and make decisions about what they need to do next.

One important dimension of self-regulation is *metacognition,* which is thinking about one's thinking. It was once assumed that only older children could engage in metacognitive thinking. We know now that children as young as age 3 can reflect on a task and tell you what steps they must take to complete it. Further, they can describe, after the task is over, what actions would have made it easier (Marulis et al., 2016). Metacognitive abilities are accelerated when students have opportunities to reflect on their learning, which is required in all phases of the gradual release of responsibility instructional framework.

Persistence in tasks is another disposition important in the development of self-regulation. The ability to stick with a task even when it is difficult has a developmental component to it, but like metacognition, we see evidence of this at a surprisingly early age. Students who have strong persistence can direct, and redirect, their attention. They decide to continue working and thinking, in part because they have experienced success doing so in the past, and in part because others have recognized their

efforts to stay focused on the learning. They also grasp the restorative value of taking a little break before returning to a vexing task.

The X Factor in Instructional Success: Teacher Credibility

There is plenty of evidence about what works best to ensure academic learning and social-emotional development. But the same strategies can get different outcomes, based on the *credibility* the teacher has established with students.

The research points to four components of teacher credibility that play a significant role in students' growth: *trust, competence, dynamism,* and *immediacy.* Thankfully, there are specific actions teachers can take to increase personal credibility in each of these areas.

Trust

Students want to know that their teachers really care about them as individuals and have their best academic and social interests at heart. Students also want to know that their teachers are reliable and true to their word. First, a few general points about trust:

- If you make a promise, work to keep it, or explain why you could not.
- Tell students the truth about their performance; they know when their work is below standard and wonder why you are telling them otherwise.
- Don't spend all your time trying to catch students in "bad behavior," yet be honest about the impact that their behavior has on you as an individual.
- Examine any negative feelings you have about specific students; they sense it, and it compromises the trust within the classroom.

Competence

This aspect of teacher credibility is the main focus of this book. Students expect an appropriate level of expertise from their teachers in terms of delivery and accuracy of information. In other words, they want teachers to know their stuff and know how to teach that stuff. Students expect lessons to be well paced and effective, and they expect the information you provide to be accurate. To build recognizable competence…

- Make sure you know the content well; this kind of preparation requires advance planning. Be honest when a question arises that you are not sure how to answer.
- Organize lesson delivery in a cohesive and coherent way.
- Consider how your nonverbal behaviors communicate competence, such as the position of your hands when you talk with students or your facial expressions. Students notice defensive positions and indications that you are dismissing or don't value their comments or contributions.

Dynamism

This aspect of teacher credibility focuses on the passion teachers bring to the classroom and the content they teach. Dynamism is really about the ability to communicate enthusiasm—for subject matter and for students' learning. It's also about developing lessons capable of capturing students' interest. To increase dynamism…

- Remind yourself why you wanted to be a teacher and what aspects of the content you love. Students notice when their teachers are bored by what they're teaching. (We think "Make content interesting!" is a motto all teachers should adopt.)
- Consider the relevance of your lessons. Does the content lend itself to application outside the classroom? Do

students have opportunities to learn about themselves and their problem-solving abilities? Does the content link in some way to civic engagement or provide opportunities for tangible community action? When students don't see the relevance of their assignments, they check out; you may get compliance, but you will not get committed learning.

- Seek feedback from trusted colleagues about your lesson delivery. Ask those colleagues to focus more on the passion you bring to lesson content than on the individual strategies you use. Students respond to passion and energy in a lesson, even when they didn't think they would be interested.

Immediacy

This final construct of teacher credibility focuses on how accessible students perceive the teacher to be—the immediacy of the teacher's attention and responses. Teachers who make themselves accessible, who move around the room and work to be easy to connect with and relate to, signal to students that their learning is a priority. To improve your immediacy…

- Get to know your students as people. Students easily detect when you're indifferent to their interests and passions; it communicates to them that you're not invested in them or their overall success.
- Attend extracurricular events so that students see you outside the familiar classroom setting. Even the most skeptical students will notice you're there and think about your presence.
- Teach with urgency, but not to the point that the classroom climate becomes stressful. Students want to know that their learning matters and that you are not wasting

their time, but they also want to be pulled into the feeling that the work is important and worth their investment rather than something imposed on them.

- Start the class on time and use every minute wisely. This means preparing tasks that students can complete while you engage in routine work like taking attendance. It means having a series of "sponge activities" ready when lessons run short. Students notice when time is wasted. Lots of "free time" communicates to them that neither the content nor their learning is a high priority.

Take a moment to think about how these aspects of teacher credibility encompass both art and science. As noted previously, this book focuses mainly on the intentional use of instructional strategies that deepen student learning and develop students' learning capacity. Over several decades' worth of experience and research, we have come to believe that planning and delivering lessons with the gradual release of responsibility instructional framework enhances teacher competency and, thus, teacher credibility.

Conclusion

The gradual release of responsibility framework is a structure that requires teachers to commit to the following:

- Knowing their students and content well
- Regularly assessing students' understanding of the content
- Purposefully planning lessons that transfer responsibility from the teacher to the student in order to build student identity and agency by equipping them with the self-regulation skills they need to fuel their own learning

In the remainder of this book, we examine each aspect of this instructional framework and note how intentionally structuring learning experiences helps teachers meet students' needs and develop both students' confidence and competence and their own.

References

Aldrich, C. (2005). *Learning by doing: A comprehensive guide to simulations, computer games, and pedagogy in e-learning and other educational experiences*. San Francisco: Jossey-Bass.

Anderson, N. J. (2002, April). *The role of metacognition in second language teaching and learning* (ERIC Digest EDO-FL-01-10). Retrieved from http://www.cal. content/download/1560/16583/file/RoleofMetacognitioninSecondLanguageTeachingandLearning.pdf

Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. *Psychology of Learning and Motivation, 2,* 89–195.

Bandura, A. (1965). Influence of models' reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology,* (6)*1,* 589–595. doi:org/10.1037/h0022070

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science, 1,* 164–180.

Benjamin, A. (2002). *Differentiated instruction: A guide for middle and high school teachers*. Larchmont, NY: Eye on Education.

Burke, J. (2002). *Tools for thought: Graphic organizers for your classroom.* Portsmouth, NH: Heinemann.

Cain, S. (2012). *Quiet: The power of introverts in a world that can't stop talking*. New York: Broadway Paperbacks.

Choppin, J. (2011). The impact of professional noticing on teachers' adaptations of challenging tasks. *Mathematical Thinking and Learning, 13*(3), 175–197. doi:10.1080/10986065.2010.495049

Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick

(Ed.), *Knowing, learning, and instruction: Essays in honour of Robert Glaser* (pp. 453–494). Hillsdale, NJ: Lawrence Erlbaum Associates.

Daniels, H. (2001). *Literature circles: Voice and choice in book clubs and reading groups.* York, ME: Stenhouse.

Daniels, H. (2006). What's the next big thing with literature circles? *Voices from the Middle, 13*(4), 10–15.

Désert, M., Préaux, M., & Jund, R. (2009). So young and already victims of stereotype threat: Socio-economic status and performance of 6 to 9 years old children on Raven's progressive matrices. *European Journal of Psychology of Education, 24*(2), 207–218.

Donovan, M. S., & Bransford, J. D. (2005). *How students learn: History, mathematics, and science in the classroom.* Washington, DC: National Research Council.

Duffy, G. G. (2009). *Explaining reading: A resource for teaching concepts, skills, and strategies* (2nd ed.). New York: Guilford.

Dufresne, A., & Kobasigawa, A. (1989). Children's spontaneous allocation of study time: Differential and sufficient aspects. *Journal of Experimental Child Psychology, 47*(2), 274–296. Retrieved from doi:10.1016/0022-0965(89)90033-7

Duke, R. A. (2012). Their own best teachers: How we help and hinder the development of learners' independence. *Music Educators Journal, 99*(2), 36–41. Retrieved from doi:10.1177/0027432112458956

Dweck, C. (2007). *Mindset: The new psychology of success*. New York: Ballantine Books

Dweck, C. S. (2010, September). Even geniuses work hard. *Educational Leadership, 68*(2), 16–20.

Ericsson, K. A., Krampe, R. T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100*(3), 363–406.

Falloon, G. (2020). From simulations to real: Investigating young students' learning and transfer from simulations to real tasks. *British Journal of Educational Technology, 51*(3), 778–797.

Fisher, A. T., Alder, J. G., & Avasalu, M. (1998). Lecturing performance appraisal criteria: Staff and student difference. *Australian Journal of Education, 42*(2), 153–168.

Fisher, D., & Frey, N. (2008). Homework and the gradual release of responsibility: Making "responsibility" possible. *English Journal, 98*(2), 40–45.

Fisher, D., & Frey, N. (2012). *Collaborative learning: Ensuring students consolidate understanding.* Newark, DE: International Literacy Association.

Fisher, D., & Frey, N. (2015). *Checking for understanding: Formative assessment techniques for your classroom* (2nd ed.). Alexandria, VA: ASCD.

Fisher, D., & Frey, N. (2019). *Improving adolescent literacy: Content area strategies at work* (5th ed.). Upper Saddle River, NJ: Pearson.

Fisher, D., Frey, N., & Almarode, J. (2020). *Student learning communities: A springboard for academic and social-emotional development.* Alexandria, VA: ASCD.

Fisher, D., Frey, N., Anderson, H., & Thayre, M. (2015). *Text-dependent questions: Pathways to close and critical reading, grades 6–12.* Thousand Oaks, CA: Corwin.

Fisher, D., Frey, N., & Pumpian, I. (2012). *How to create a culture of achievement in your school and classroom.* Alexandria, VA: ASCD.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*(10), 906–911. Retrieved from soi:10.1037/0003-066X.34.10.906

Frey, N., & Fisher, D. (2011). *The formative assessment action plan: Practical steps to more successful teaching and learning.* Alexandria, VA: ASCD.

Frey, N., Fisher, D., & Gonzalez, A. (2010). *Literacy 2.0: Reading and writing in 21st century classrooms.* Bloomington, IN: Solution Tree.

Gonzalez, J. (2018, March 26). Frickin' packets [Blog post]. *Cult of Pedagogy.* Retrieved from https://www.cultofpedagogy.com/busysheets/

Graff, G., & Birkenstein, C. (2009). *They say/I say: The moves that matter in academic writing.* New York: Norton.

Guzzetti, B. J., Snyder, T. E., Glass, G. V., & Gamas, W. S. (1993). Promoting conceptual change in science: A comparative meta-analysis of instructional interventions from reading education and science education. *Reading Research Quarterly, 28*(2), 116–159. doi:10.2307/747886

Hattie, J. A. C. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* New York: Routledge.

Hattie, J. A. C. (2013). Calibration and confidence: Where to next? *Learning and Instruction, 24,* 62–66. doi:10.1016/j.learninstruc. 2012.05.009

Hattie, J. A. C., Brown, G. T., & Keegan, P. (2005). A national teacher-managed, curriculum-based assessment system: Assessment tools for teaching & learning (asTTle). *International Journal of Learning, 10,* 770–778.

Hattie, J. A. C., & Donoghue, G. M. (2016). Learning strategies: A synthesis and conceptual model. *NPJ Science of Learning,* 1, article 16013. doi:10.1038/npjscilearn.2016.13

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112. doi:10.3102/003465430298487

Howard, J. L., Gagné, M., & Bureau, J. S. (2017). Testing a continuum structure of self-determined motivation: A meta-analysis. *Psychological Bulletin, 143*(12), 1346–1377.

International Society for Technology in Education. (2012). *Advancing digital age learning.* Retrieved from http://www.iste.org/standards/nets-for-students

Kellough, R. D., & Kellough, N. G. (1999). *Secondary school teaching: A guide to methods and resources.* Upper Saddle River, NJ: Prentice Hall.

Kesten, C. (1987). *Independent learning.* Regina, Canada: Saskatchewan Education.

Kriegbaum, K., Becker, N., & Spinath, B. (2018). The relative importance of intelligence and motivation as predictors of school achievement: A meta-analysis. *Educational Research Review, 25,* 120–148.

Lee, I. (2009). Ten mismatches between teachers' beliefs and written feedback practice. *ELT Journal, 63*(1), 13–22. doi:org/10.1093/elt/ccn010

Marulis, L. L., Palincsar, A., Berhenke, A., & Whitebread, D. (2016). Assessing metacognitive knowledge in 3–5 year-olds: The development of a metacognitive knowledge interview (McKI). *Metacognition & Learning, 11,* 339–368.

McMahon, S. I., Raphael, T. E., Goatley, V. J., & Pardo, L. S. (2007). *The book club connection: Literacy learning and classroom talk*. New York: Teachers College Press.

Nathan, M. J., & Petrosino, A. (2003). Expert blind spot among preservice teachers. *American Educational Research Journal, 40*(4)*,* doi:10.3102/0002831204004905

National Association of Colleges and Employers. (2012, June). More than half the class had internship/co-op experience. *Spotlight for Career Services Professionals.* Retrieved from http://www.naceweb.org/s06062012/intern-co-op-experience/?menuID=364&referal=knowledgecenter

Oczkus, L. (2018). *Reciprocal teaching at work: Powerful strategies and lessons for improving reading comprehension* (3rd ed.). Alexandria, VA: ASCD.

Osborne, J., & Dillon, J. (2010). How science works: What is the nature of scientific reasoning and what do we know about students' understanding? In J. Osborne & J. Dillon (Eds.), *Good practice in science teaching: What research has to say* (pp. 20–45). Berkshire, England: McGraw-Hill Education.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction, 1*(2), 117–175. doi:10.1207/s1532690xci0102_1

Partnership for 21st Century Skills. (2009). *Framework for 21st century learning.* Retrieved from http://www.battelleforkids.org/networks/p21

Pearson, P. D., & Gallagher, G. (1983). The gradual release of responsibility model of instruction. *Contemporary Educational Psychology, 8,* 112–123.

Piaget, J. (1952). *The origins of intelligence in children.* New York: Norton.

Raphael, T. E., Highfield, K., & Au, K. H. (2006). *QAR now: A powerful and practical framework that develops comprehension and higher-level thinking in all students*. New York: Scholastic.

Resnick, L. (1995). From aptitude to effort: A new foundation for our schools. *Daedalus, 124*(4), 55–62.

Rosenshine, B. (2008*). Five meanings of direct instruction*. Center on Innovation & Improvement. Retrieved from http://www.centerii.org/search/Resources%5CFiveDirectInstruct.pdf

Shih, M. J., Pittinsky, T. L., & Ho, G. C. (2012). *Stereotype boost: Positive outcomes from the activation of positive stereotypes.* In M. Inzlicht & T. Schmader (Eds.), *Stereotype threat: Theory, process, and application* (pp. 141–156). New York Oxford University Press.

Short, D. J., Fidelman, C. G., & Louguit, M. (2012). Developing academic language in English language learners through sheltered instruction. *TESOL Quarterly, 46*(2), 334–361.

Singer, S. R., Hilton, M. L., & Schweingruber, H. A. (2006). *America's lab report: Investigations in high school science*. Washington, DC: National Research Council.

Smith, D., Fisher, D., & Frey, N. (2019). *All learning is social and emotional: Helping students develop essential skills for the classroom and beyond.* Alexandria, VA: ASCD.

Smith, T. (2014). Elementary science instruction: Examining a virtual environment for evidence of learning, engagement, and 21st century competencies. *Education Sciences, (1),* 122–138.

Summers, J. J. (2006). Effects of collaborative learning in math on sixth grad-ers' individual goal orientations from a socioconstructivist perspective. *Elementary School Journal, 106,* 273–290.

Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). Alexandria, VA: ASCD.

U.S. Department of Labor Office, Office of Disability Employment Policy. (2012). Soft skills to pay the bills: *Mastering soft skills for workplace success.* Wash-ington, DC: Author.

Van Ryzin, M. J., Roseth, C. J., & McClure, H. (2020). The effects of cooperative learning on peer relations, academic support, and engagement in learning among students of color. *Journal of Educational Research, 113*(4), 283–291.

Vatterott, C. (2018). *Rethinking homework: Best practices that support diverse needs* (2nd ed.)*.* Alexandria, VA: ASCD.

Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

Webb, N. M., Nemer, K. M., & Ing, M. (2006). Small-group reflections: Parallels between teacher discourse and student behavior in peer-directed groups. *Journal of the Learning Sciences, 15*(1), 63–119.

White, E. B. (1948). Death of a pig. *The Atlantic, 81*(1), 28–33.

Wiggins, G. (1998). *Educative assessment: Designing assessments to inform and improve student performance.* San Francisco: Jossey-Bass.

Wiggins, G., & McTighe, J. (2005). *Understanding by Design* (2nd ed.). Alexan-dria, VA: ASCD.

Wilson, J., & Cutting, L. (2001). *Contracts for independent learning: Engaging stu-dents in the middle years.* Melbourne: Curriculum Corporation.

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solv-ing. *Journal of Child Psychology and Psychiatry, 17*(2), 89–100. doi:10.1111/j. 1469-7610.1976.tb00381

Index

The letter *f* following a page locator denotes a figure.

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To learn more about Doug, Nancy, and their work, please visit www.fisherandfrey.com.

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