

LAYING THE GROUNDWORK FOR VISIBLE LEARNING FOR LITERACY

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Every student deserves a great teacher, not by chance, but by design.

Who can disagree with that? Who doesn't believe that every student, in every classroom, deserves to be educated in ways that build his or her confidence and competence? Let's take apart that sentence and explore some of the thinking behind each word or phrase.

- *Every student* (not just some students, such as those whose parents can afford it or those who are lucky enough to live on a street that allows them to attend an amazing school)
- *deserves* (yes, we believe that students have the right to a quality education)
- *a great teacher* (one who develops strong relationships, knows his or her content and how to teach it, and evaluates his or her impact. This is where a lot of debate enters the picture because people differ in their understanding of what great teachers do and how they think)
- *not by chance* (meaning that we have to move beyond the luck of the draw that permeates much of the educational landscape. Children's education should not be left to chance, with one year being amazing and another average or awful. Further, children's education should be left not to whatever sense of challenge or level of expectation a teacher may have, but to an appropriate high level of challenge and expectation)
- *but by design* (yes, there are learning designs that work, when used at the right time. In fact, the literature is awash with evidence of designs that work and those that do not work)

The design we're talking about, the one that has great potential for impacting students' learning and allowing all of us to be great teachers, is John Hattie's *Visible Learning* (2009). So what do we mean by *visible learning*? In part, it's about developing an understanding of the impact that instructional efforts have on students' learning. Notice we didn't limit that to teachers. Students, teachers, parents, administrators—everyone can determine if the learning is visible. To do so, students have to know what they are learning, why they are learning it, what it

means to be “good” at this learning, and what it means to have learned. The adults *also* need to know what students are learning, why they are learning it, what it means to be “good” at this learning, and what it means to have learned. Some things are learned at the surface level, others at the deep level, and still other knowledge is available for transfer to new situations. Each of these surface, deep, and transfer levels of learning is important; each of these is the focus, in turn, of one of the following three chapters.

We believed that it was time to apply John’s previous work with visible learning to the world of literacy learning. We think that visible learning for *literacy* is important for several reasons:

1. Literacy is among the major antidotes for poverty.
2. Literacy makes your life better.
3. Literate people have more choices in their work and personal lives, leading to greater freedom.
4. Literacy is great at teaching you how to think successively—that is, making meaning one step at a time to then build a story.
5. Literacy soon becomes the currency of other learning.

Visible learning for literacy requires that teachers understand which strategies and instructional routines are useful in which teaching situations. There is no single right way to develop students’ literacy prowess. But there *are* wrong ways. In Chapter 5, we will turn our attention to a specific list of practices that do not work in the literacy classroom. For now, we will focus on those that do.

There are certain things that great teachers know:

- Great teachers understand that different approaches work more effectively at different times. For example, a great approach for developing students’ surface-level learning is not likely to ensure deep learning, much less transfer. But there are times when their surface-level learning is what students need.
- Great teachers know that different approaches work for some students better than for other students.

- Great teachers know that different approaches work differently depending on where in the learning process a student may be.
- Great teachers intervene in specific, meaningful, and calculated ways to increase students' learning trajectories. This requires that they understand and share challenging, yet specific and appropriate, goals with students; monitor progress toward those goals; provide and receive feedback; alter their actions when learning is not occurring; and share in the joy that comes from working with students to meet the learning goals.

Visible learning asks teachers to go even a step further. It asks us to create the conditions necessary for students to become *their own* teachers. We mean not that classrooms should be surrendered and the students be told to teach themselves, but rather that the expectation of the instruction students receive involves student engagement to the degree that they want to, and do, learn more and better—even beyond the classroom walls. This requires that teachers become learners of their own teaching, which is the major focus of this book.

The Evidence Base

Meta-Analyses

The starting point for our exploration of literacy learning is John Hattie's books, *Visible Learning* (2009) and *Visible Learning for Teachers* (2012). At the time these books were published, his work was based on over 800 meta-analyses conducted by researchers all over the world, which included over 50,000 individual studies that included over 250 million students. It has been claimed to be the most comprehensive review of literature ever conducted. And the thing is, it's still going on. At the time of this writing, the database included 1,200 meta-analyses, with over 70,000 studies and 300 million students. A lot of data, right? But the story underlying the data is the critical matter.

Before we explore the findings and discuss what we don't cover in this book, we should discuss the idea of a meta-analysis because it is the basic building block for the recommendations in this book. At its

root, a meta-analysis is a statistical tool for combining findings from different studies with the goal of identifying patterns that can inform practice. It's the old preponderance of evidence that we're looking for, because individual studies have a hard time making a compelling case for change. But a meta-analysis synthesizes what is currently known about a given topic and can result in strong recommendations about the impact or effect of a specific practice. For example, there was competing evidence about periodontitis (inflammation of the tissue around the teeth) and whether or not it is associated with increased risk of coronary heart disease. The published evidence contained some conflicts, and recommendations about treatment were piecemeal. A meta-analysis of 5 prospective studies with 86,092 patients suggested that individuals with periodontitis had a 1.14 times higher risk of developing coronary heart disease than the controls (Bahekar, Singh, Saha, Molnar, & Arora, 2007). The result of the meta-analysis was a set of clear recommendations for treatment of periodontitis, with the potential of significantly reducing the incidence of heart disease. We won't tell you too many other stories about health care or business, but we hope that the value of meta-analyses in changing practice is clear.

The statistical approach for conducting meta-analyses is beyond the scope of this book, but it is important to note that this tool allows researchers to identify trends across many different studies and their participants.

Effect Sizes

In addition to the meta-analyses, the largest summary of educational research ever conducted (*Visible Learning*) contains *effect sizes* for each practice (see Appendix, pages 169–173). An effect size is the magnitude, or size, of a given effect. But defining a phrase by using the same terms isn't that helpful. So we'll try again. You might remember from your statistics class that studies report statistical significance. Researchers make the case that something “worked” when chance is reduced to 5% (as in $p < 0.05$) or 1% (as in $p < 0.01$)—what they really mean is that the effect found in the study was unlikely to be zero: something happened (but there's no hint of the size of the effect, or whether it was worthwhile!).

One way to increase the likelihood that statistical significance is reached is to increase the number of people in the study, also known as sample size. We're not saying that researchers inflate the size of the research group to obtain significant findings. We are saying that simply because something is statistically significant doesn't mean it's worth implementing. For example, say the sample size is 1,000. In this case, a correlation only needs to exceed 0.044 to be "statistically significant"; if 10,000, then 0.014, and if 100,000, then 0.004—yes, you can be confident that these values are greater than zero, but are they of any practical value?

That's where effect size comes in.

Say, for example, that this amazing writing program was found to be statistically significant in changing student achievement. Sounds good, you say to yourself, and you consider purchasing or adopting it. But then you learn that it only increased students' writing performance by 0.3 on a 5-point rubric (and the research team had data from 9,000 students). If it were free and easy to implement this change, it might be worth it to have students get a tiny bit better as writers. But if it were time-consuming, difficult, or expensive, you should ask yourself if it's worth it to go to all of this trouble for such a small gain. That's effect size—it represents the magnitude of the impact that a given approach has.

Visible Learning provides readers with effect sizes for many influences under investigation. As an example, direct instruction has a reasonably strong effect size at 0.59 (we'll talk more about what the effect size number tells us in the next section). The effect sizes can be ranked from those with the highest impact to those with the lowest. But that doesn't mean that teachers should just take the top 10 or 20 and try to implement them immediately. Rather, as we will discuss later in this book, some of the highly useful practices are more effective when focused on surface-level learning while others work better for deep learning and still others work to encourage transfer. Purpose, context, and timing of practices all matter and must be considered. For general discussion of effect sizes, see Figure 1.1.

Effect size represents the magnitude of the impact that a given approach has.

EFFECT SIZE FOR DIRECT INSTRUCTION = 0.59

A PRIMER ON EFFECT SIZES

Let us get a sense of what an effect size means. There are two common ways to calculate an effect size: first, when two groups are compared—such as comparing a class receiving a literacy program with a similar class not receiving this program—and second, over time—such as comparing the performance of a group of students at the outset and again at the end of a series of literacy instruction. In both cases, the effect size represents the magnitude of the difference—and of course the quality of the comparison, the measuring instruments, and the research design to control extraneous factors are critical.

An effect size of $d = 0.0$ indicates no change in achievement related to the intervention. An effect size of $d = 1.0$ indicates an increase of one standard deviation on the outcome (e.g., reading achievement), a $d = 1.0$ increase is typically associated with advancing children's achievement by two to three years, and this would mean that, on average, the achievement of students receiving the treatment would exceed that of 84% of students not receiving the treatment. Cohen (1988) argued that an effect size of $d = 1.0$ should be regarded as a large, blatantly obvious, and grossly perceptible difference, and as an example, he referred to the difference between the average IQ of PhD graduates and high school students. Another example is the difference between a person at 5'3" (160 cm) and one at 6'0" (183 cm)—which would be a difference visible to the naked eye.

We do need to be careful about ascribing adjectives such as *small*, *medium*, and *large* to these effect sizes. Cohen (1988), for example, suggested that $d = 0.2$ was small, $d = 0.5$ medium, and $d = 0.8$ large, whereas it is possible to show that when investigating achievement influences in schools, $d = 0.2$ could be considered small, $d = 0.4$ medium, and $d = 0.6$ large (Hattie, 2009). In many cases, this attribution would be reasonable, but there are situations where this would be too simple an interpretation. Consider, for example, the effects of an influence such as behavioral objectives, which has an overall small effect of $d = 0.20$, and reciprocal teaching, which has an overall large effect of $d = 0.74$. It may be that the cost of implementing behavioral objectives is so small that it is worth using them to gain an influence on achievement, albeit small, whereas it might be too expensive to implement reciprocal teaching to gain the larger effect.

The relation between the notions of magnitude and statistical significance is simple: Significance = Effect size \times Study size. This should highlight why both aspects are important when making judgments. Effect sizes based on small samples or small numbers of studies may not tell the true story, in the same way that statistical significance based on very large samples may also not tell the true story (for example, a result could be statistically significant but have only a tiny effect size). Similarly, two studies with the same effect sizes can have different implications when their sample sizes vary (we should place more weight on the one based on the larger sample size). The most critical aspect of any study is the convincibility of the story that best explains the data; it is the visible learning story that needs critique or improvement—to what degree is the story in this book convincing to you?

Figure 1.1

EFFECT SIZE FOR
COOPERATIVE
VERSUS
INDIVIDUALISTIC
LEARNING = 0.59

The effect size of direct instruction doesn't mean that classrooms should be composed of all direct instruction any more than they should be fully cooperative versus individualistic (which has an effect size of 0.59). Direct instruction likely works better during surface-level literacy learning whereas cooperative learning can deepen students' understanding of content (provided that students have sufficient surface knowledge to then make relations and extend ideas). Both can be effective when used for the right purpose. The effect size list also includes some things that don't work.

Noticing What Works

If you attend any conference or read just about any professional journal, not to mention subscribe to blogs or visit Pinterest, you'll get the sense that everything works. Yet educators have a lot to learn from practices that do not work. In fact, we would argue that learning from what doesn't work, and not repeating those mistakes, is a valuable use of time. To determine what doesn't work, we turn our attention to effect sizes again. Effect sizes can be negative or positive, and they scale from low to high. Intuitively, an effect size of 0.60 is better than an effect size of 0.20. Intuitively, we should welcome any effect that is greater than zero—as zero means “no growth” and clearly any negative effect size means a negative growth. If only it was this simple.

It turns out that about 95%+ of the influences that we use in schools have a positive effect; that is, the effect size of nearly everything we do is greater than zero. This helps explain why so many people can argue “with evidence” that their pet project works. If you set the bar at showing any growth above zero, it is indeed hard to find programs and practices that don't work. As described in *Visible Learning* (Hattie, 2009), we have to reject the starting point of zero. Students naturally mature and develop over the course of a year, and thus actions, activities, and interventions that teachers use should *extend learning beyond what a student can achieve by simply attending school for a year*.

This is why John Hattie set the bar of acceptability higher—at the average of all the influences he compiled—from the home, parents,

schools, teachers, curricula, and teaching strategies. This average was 0.40, and Hattie called it the “hinge point.” He then undertook to study the underlying attributes that would explain why those influences higher than 0.40 had such a positive impact compared with those lower than 0.40. His findings were the impetus for the *Visible Learning* story.

Borrowing from *Visible Learning*, the barometer and hinge point are effective in explaining what we focus on in this book and why. Here’s an example of how this might play out from literacy:

Let’s focus on sentence-combining efforts, which are popular in literacy education circles. In essence, students are taught to use punctuation, compound sentences, subordination, reduction, and apposition to take two or more sentences and produce one. For example, students might be given the following three sentences and asked to combine them:

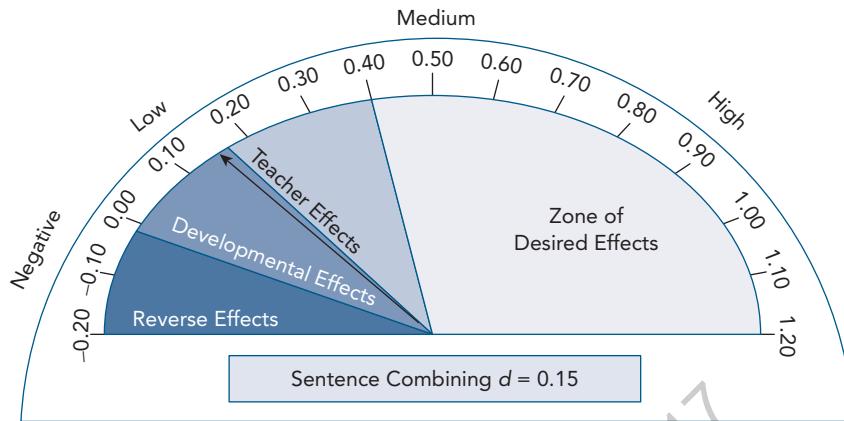
John F. Kennedy was inaugurated into office in January 1961.

He was assassinated in November 1963.

He spent only 1,000 days in office.

There are a number of correct responses to this task, but students may incorrectly think that the combined sentences are better, that sentence complexity is important above all else, or that combined sentences maintain the same meaning and focus as uncombined sentences. But as with much of the educational research, there are studies that contradict other studies. For example, Wilkinson and Patty (1993) compared sentence-combining instruction with a placebo treatment and found significantly better results for sentence combining. But did their sentence-combining approach raise achievement over that which was expected from simply attending school for a year? That’s where the meta-analyses and effect size efforts can teach us. The barometer and hinge point for sentence combining are presented in Figure 1.2. Note that this approach rests in the zone of “developmental effects,” which is below the teacher effects and better than reverse effects.

THE BAROMETER FOR THE INFLUENCE OF SENTENCE COMBINING



Source: Adapted from Hattie (2012).

Figure 1.2

Our focus in *Visible Learning for Literacy* is on actions that fall inside the *zone of desired effects*, which is 0.40 and above. When actions are in the range of 0.40 and above, the data suggest that the learning extends beyond that which was expected from attending school for a year.

Caution: That doesn't mean that everything below 0.40 effect size is not worthy of attention. In fact, there are likely some useful approaches for teaching and learning that are not above this average. For example, drama and arts programs have an effect size of 0.35, almost ensuring that students gain a year's worth of achievement for a year of education. We are not suggesting that drama and art be removed from the curriculum. In fact, artistic expression and aesthetic understanding may be valuable in and of themselves. Another critical finding was the very low effect of teacher's subject matter knowledge. While we may accept the evidence that it is currently of little import, surely this means we should worry considerably and investigate, first, why it is so

EFFECT SIZE
FOR DRAMA/ARTS
PROGRAMS = 0.35

low and, second, how we can change what we do in the classroom to ensure that the knowledge teachers bring to the classroom has a much higher effect.

It is important to note that some of the aggregate scores mask situations in which specific actions can be strategically used to improve students' understanding. Simulations are a good case. The effect size for simulations is 0.33, below the threshold that we established. But, what if simulations were really effective in deepening understanding but really, really bad when used with surface learning? In this case, the strategic deployment of simulations could be important. There are situations like this that we will review in this book as we focus on surface-level literacy learning versus deep literacy learning and transfer learning. For now, let's turn our attention to actions that teachers can take to improve student learning.

EFFECT SIZE FOR
SIMULATIONS = 0.33

Learning From What Works, Not Limited to Literacy

The majority of this book will focus on literacy, specifically. In this next section, however, we focus our attention more broadly. Literacy instruction is situated in a larger classroom environment, and learning to read, write, speak, listen, and view is contextualized in the general learning situations that students encounter. We believe that the following influences deserve attention from teachers in all classes, including those devoted to literacy.

Teacher Credibility

A few things come to mind when we consider actions that teachers can take at the more generic level. On the top of the list, with an effect size of 0.90, is teacher credibility. Students know which teachers can make a difference in their lives. Teacher credibility is a constellation of characteristics, including trust, competence, dynamism, and immediacy. Students evaluate each of these factors to determine if their teacher is credible, and if they are going to choose to learn

EFFECT SIZE
FOR TEACHER
CREDIBILITY = 0.90

Our focus is on actions that fall inside the *zone of desired effects*. When actions are in this range, the data suggest that the effort extends beyond that which was expected from attending school for a year.

from that teacher. Teachers can compromise their credibility when they violate trust, make a lot of errors, sit in the back of the room, or lack a sense of urgency. They compromise their credibility particularly if they are not seen to be fair. Of course, each of these needs to be held in balance. For example, too much pressure, and students will think that a given teacher is a stress case. Not enough, and they'll think their teacher doesn't care. Similarly, students might think a teacher is weird when he or she fakes excitement about a topic of study, or realize that their teacher doesn't care about the unit at all. Although not specifically focused on literacy, the dynamic of teacher credibility is always at play.

Consider Angela Conner. She's always excited about everything. She knows her content well and works to establish trusting relationships with her students. But every time something happens, it's as if it's the most important and exciting thing ever. She is over the top with enthusiasm. This worked well for her with her kindergarten students, but her fifth graders think she's a fake. As one of the students said, "Yeah, Ms. Conner pretends to be excited, even when we get a test back. Really? It's important, but it's not like she should be jumping around like she does." This student, and likely many more, is questioning Ms. Conner's credibility and thus compromising her students' ability to learn from her.

On the other hand, Brandon Chu exudes excitement episodically, and his students wait for it. Things seem very important to Mr. Chu, and he tells his students why things are important and how the class builds on itself over the course of the year. In one lesson, Mr. Chu said, "We've got some pressure on us to get some major work done. It's crunch time, people, and we need to support each other in our learning. Please make sure that each of you has completed the concept map and are ready to write. If you haven't had a peer review yet, let me know. We need to get these done so that they can be included in the upcoming e-zine. If we miss the deadline, we're out of the issue." Mr. Chu's students trust him and know when it's time to focus. They appreciate his dynamic yet not overzealous style. And, parenthetically, they learn a lot.

EFFECT SIZE
FOR CONCEPT
MAPPING = 0.60

Teacher–Student Relationships

Closely related to teacher credibility is teacher–student relationships, which have an effect size of 0.72. When students believe that the teacher is credible, they are more likely to develop positive relationships with that teacher, and then learn more from him or her. But relationships go deeper than credibility. Of course, relationships are based on trust, which is part of the credibility construct. But relationships also require effective communication and addressing issues that strain the relationship. Positive relationships are fostered and maintained when teachers set fair expectations, involve students in determining aspects of the classroom organization and management, and hold students accountable for the expectations in an equitable way. Importantly, relationships are not destroyed when problematic behaviors occur, on the part of either the teacher or students. This is an important point for literacy educators. If we want to ensure students read, write, communicate, and think at high levels, we have to develop positive, trusting relationships with students, all students.

EFFECT SIZE FOR
TEACHER–STUDENT
RELATIONSHIPS
= 0.72

The optimal relationships also include when the teacher establishes high levels of trust among the students. When students ask a question indicating they are lost, do not know where they are going, or are just plain wrong, high levels of peer-to-peer trust means that these students are not ridiculed, do not feel that they should be silent and bear their not knowing, and can depend on the teacher and often other students to help them out.

Unfortunately, in some cases, specific students are targeted for behavioral correction while other students engaged in the same behavior are not noticed. This happens often across the K–12 grade span. We remember a primary-grade classroom in which a student with a disability was repeatedly chastised for a problematic behavior, but other children engaged in the same behavior were ignored and allowed to continue. Yes, the children noticed. As one of the students said, “Mr. Henderson doesn’t want Michael in our class.” It’s hard to develop positive relationships, and then achieve, when you are not wanted. But, perhaps even more importantly, the poor relationship between Mr. Henderson and



Video 1.1
 Teacher–Student
 Relationships That
 Impact Learning

[http://resources.corwin.com/
 VL-Literacy](http://resources.corwin.com/VL-Literacy)

To read a QR code, you must have a smartphone or tablet with a camera. We recommend that you download a QR code reader app that is made specifically for your phone or tablet brand.

Michael spilled over to the rest of the students who didn't think their teacher was fair or that he was trustworthy.

We have also observed this phenomenon in secondary classrooms. There always seem to be some students who can get away with problematic behavior. Sometimes, these students are athletes; other times, they're cheerleaders or drama students or musicians or students whose parents work in the district. It doesn't really matter which group they belong to; their status allows them to get away with things that other students don't. And it always compromises the trust students have with their teacher and the relationships that develop.

But we're not saying that literacy educators should be strict disciplinarians who mete out punishments and consequences for every infraction. We are saying that it's important to be consistent, to be fair, and to repair relationships that are damaged when problematic behavior occurs. To develop positive relationships, it's important that teachers

- Display student work
- Share class achievements
- Speak to the accomplishments of all students
- Be sincere in their pride in their students and make sure that pride is based on evidence of student work, not generalized comments
- Look for opportunities for students to be proud of themselves and of other students or groups of students
- Develop parental pride in student accomplishments
- Develop pride in improvement in addition to pride in excellence

As we mentioned above, teachers also have the responsibility to repair harm to relationships. These restorative practices allow students to take responsibility for their behavior and to make amends. This can be a simple impromptu conference, a class meeting or circle, or a more formal victim–offender dialogue. Regardless, the point is to ensure that students understand that their actions caused harm and that they can repair that harm. Figure 1.3 contains questions, developed by the International

RESTORATIVE CONFERENCING

Questions to Ask the Offender	Questions to Ask the Victim
<ul style="list-style-type: none">• “What happened?”• “What were you thinking about at the time?”• “What have you thought about since the incident?”• “Who do you think has been affected by your actions?”• “How have they been affected?”	<ul style="list-style-type: none">• “What was your reaction at the time of the incident?”• “How do you feel about what happened?”• “What has been the hardest thing for you?”• “How did your family and friends react when they heard about the incident?”

Source: Restorative Conference Facilitator Script, Restorative Conferencing, International Institute on Restorative Practices, http://www.iirp.edu/article_detail.php?article_id=NjYy

Figure 1.3

Institute for Restorative Practices, that allow people to figure out what went wrong and how to repair the harm that has been done. We’ve spent time on this because relationships matter, and students achieve more and better when they develop strong interpersonal relationships with their teachers. It’s these humane and growth-producing conversations that help students grow in their prosocial behaviors. (Note that the greatest effect on achievement when students join a new class or school is related to whether they make a friend in the first month—it is your job to worry about friendship, counter loneliness, and help students gain a reputation as great learners not only in your eyes but also in the eyes of their peers.) And by the way, effectively managed classrooms, ones in which students understand the expectations and are held to those expectations in ways that are consistent with relationship development and maintenance, have an effect size of 0.52. A poorly run classroom will interfere with high-quality literacy learning.

EFFECT SIZE
FOR CLASSROOM
MANAGEMENT = 0.52

Teacher Expectations

Another influence on student achievement that is important for literacy educators, but isn’t directly a literacy approach, is teacher expectations,

EFFECT SIZE FOR
EXPECTATIONS = 0.43

with an effect size of 0.43. In large part, teachers get what they expect; yes, teachers with low expectations are particularly successful at getting what they expect. The more recent research has shown that teachers who have high (or low) expectations tend to have them for all their students (Rubie-Davies, 2015). Teachers' expectations of students become the reality for students. Requiring kindergarteners to master 100 sight words, and then aligning instruction to accomplish that, communicates the expectations a teacher has for five-year-olds. Believing that ninth graders can only write five-paragraph essays with 500 words sets the bar very low, and students will jump just that high, and no higher than that. Over time, students exert just enough effort to meet teacher expectations. Hattie (2012) called this the *minimax* principle, "maximum grade return for minimal extra effort" (p. 93). And it gets in the way of better and deeper learning. When expectations are high, the minimax principle can work to facilitate students' learning.

This does not mean that teachers should set unrealistic expectations. Telling first graders that they are required to read Tolstoy's *War and Peace* is a bit too far. Teachers should have expectations that appropriately stretch students, and yet those expectations should be within reach. Sixth graders who are held to fourth-grade expectations will be great fifth graders when they are in seventh grade; the gap never closes. And students deserve more. When high-yield literacy instructional routines are utilized, students can achieve more than a year's growth during a year of instruction. And that's what this book focuses on—maximizing the impact teachers have on students' learning.

Establishing and communicating a learning intention is an important way that teachers share their expectations with students. When these learning intentions are compared with grade-level expectations, or expectations in other schools and districts, educators can get a sense of their appropriateness. We will spend a lot more time later in this book focused on learning intentions and success criteria. Another way to assess the level of expectation is to invite students to share their goals for learning with their teachers—especially early in the instructional sequence. If students have low expectations for themselves, they're likely hearing that from the adults around them, and often this is what

they achieve. And finally, analyzing the success criteria is an important way of determining the expectations a teacher has for students. A given learning intention could have multiple success criteria, some of which may be fairly low and others of which may be high. The success criteria communicate the level of performance that students are expected to meet, yet are often overlooked in explorations about teacher expectations. We'll return to success criteria in the next section of this chapter, but before we do so, it's important to note that teachers establish expectations in other ways beyond the learning intention.

The ways in which teachers consciously and subconsciously communicate their expectations to students are too numerous to list. Expectations are everywhere, in every exchange teachers and students have. When teachers use academic language in their interactions with others, they communicate their expectations. When teachers maintain a clean and inviting classroom, they communicate their expectations. When teachers assign mindless shut-up sheets, they communicate their expectations. When teachers provide honest feedback about students' work, they communicate their expectations. When teachers give one class two days to complete work and another class one day, they communicate their expectations. We could go on. Students watch their teachers all the time trying to figure out what is expected of them and if they are trustworthy. Literacy learning can be enhanced when teachers communicate specific, relevant, and appropriate expectations for students. From there, teachers can design amazing learning environments. But it's more than instruction. Teachers should focus on *learning*. It's a mindset that we all need, if we are going to ensure that students develop their literate selves. A major theme throughout this book is how teachers think (and also how we want students to think). Hattie (2012) suggests 10 mind frames that can be used to guide decisions, from curriculum adoptions to lesson planning (Figure 1.4).

Taken together, these mind frames summarize a great deal of the "what works" literature. In the remainder of this book, we focus on putting these into practice specifically as they relate to literacy learning, and address the better question, *what works best?* (Hattie, 2009). To do so, we need to consider the levels of learning we can expect from students. How,



Video 1.2
Making Learning Visible
With Teacher Clarity
and Expectations

[http://resources.corwin.com/
VL-Literacy](http://resources.corwin.com/VL-Literacy)

EFFECT SIZE
FOR TEACHER
CLARITY = 0.75

MIND FRAMES FOR TEACHERS

1. I cooperate with other teachers.
2. I use dialogue, not monologue.
3. I set the challenge.
4. I talk about learning, not teaching.
5. I inform all about the language of learning.
6. I see learning as hard work.
7. Assessment is feedback to me about me.
8. I am a change agent.
9. I am an evaluator.
10. I develop positive relationships.

Source: Hattie (2012). Reproduced with permission.

Figure 1.4

then, should we define learning, since that is our goal? As John himself suggested in his 2014 Vernon Wall Lecture, learning can be defined as

[t]he process of developing sufficient surface knowledge to then move to deeper understanding such that one can appropriately transfer this learning to new tasks and situations.

Learning is a process, not an event. And there is a scale for learning. Some things students only understand at the surface level. As we note in the next chapter, surface learning is not valued, but it should be. You have to know something to be able to do something with it. We've never met a student who could synthesize information from multiple sources who didn't have an understanding of each of the texts. With appropriate instruction about how to relate and extend ideas, surface learning becomes deep understanding. Deep understanding is important if

students are going to set their own expectations and monitor their own achievement. But schooling should not stop there. Learning demands that students be able to apply—transfer—their knowledge, skills, and strategies to new tasks and new situations. That transfer is so difficult to attain is one of our closely kept secrets—so often we pronounce that students can transfer, but the process of teaching them this skill is too often not discussed. We will discuss it in Chapter 4.

EFFECT SIZE FOR
SELF-REPORTED
GRADES/STUDENT
EXPECTATIONS
= 1.44

Unfortunately, up to 90% of the instruction we conduct can be completed by students using *only* the surface-level skills (Hattie, 2012). Read that sentence carefully—it did not say that teachers do not ask students to complete deeper analyses, and it did not say that teachers do not ask students to complete tests and assignments that focus on deeper learning. It said that students only need a high level of surface-level knowledge to do well on this work. Why? Because teachers value surface learning while often preaching deeper learning. We need to balance our expectations with our reality. This means more constructive alignment between what teachers claim success looks like, how the tasks students are assigned align with these claims about success, and how success is measured by end-of-course assessments or assignments. It is not a matter of all surface or all deep; it is a matter of being clear when surface and when deep is truly required.

The ultimate goal, and one that is hard to realize, is transfer (see Figure 1.5 on the next page). When students reach this level, learning has been accomplished. One challenge to this model is that most assessments focus on surface-level learning because that level is easier to evaluate. But, as David Coleman, president of the College Board, said in his Los Angeles Unified presentation to administrators, test makers have to assume responsibility for the practice their assessment inspires. That applies to all of us. If the assessment focuses on recall, then a great number of instructional minutes will be devoted to developing students' ability to demonstrate "learning" that way.

As teachers, we are faced with a wide range of assessments used to evaluate student achievement and teacher performance. But these come and go. Teachers also make tests and should assume responsibility for the practices that result from their own creations.

LEARNING DEFINED: THE THREE-PHASE MODEL

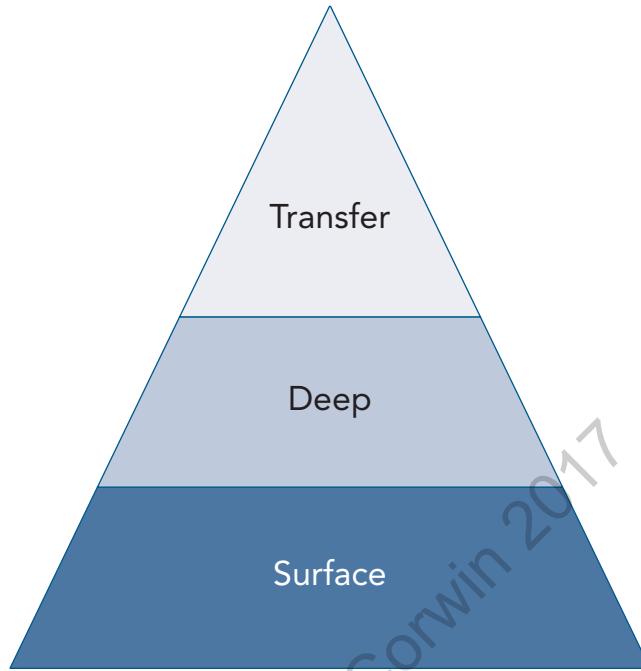


Figure 1.5

During an English department meeting at our school in San Diego, a group of teachers proposed a cumulative final exam. One of them said, “It would be better to mirror the expectations in college if we used a final exam as part of our grades.”

As the discussion continued, another teacher asked, “How many days do you think we’ll spend reviewing for the final?”

The range of answers was one day to two weeks. The assessment would change practice. Another said, “What about building transfer tasks for students to complete so that they would know that they had mastered the content for our courses? If we asked them to apply their knowledge to new tasks, we’d know they learned it, right? And we wouldn’t spend hours reviewing the past.”

The conversation continued, and this group of teachers made their decision. Our point here is not to debate the merits of final exams, but rather to focus on the levels of learning and the fact that teachers can choose to engage students in deeper understanding. It's within our power, as the mind frames suggest, to do so.

In this book, we devote time to each level or phase of learning. Importantly, there are teacher and student actions that work best at each of these phases. For example, note-taking works well for surface-level learning whereas repeated reading and close reading probably work better for deep learning. A key point that we will make repeatedly is that teachers have to understand the impact that they have on students, and choose approaches that will maximize that impact. Mismatching an approach with the level of learning expected will not create the desired impact. *What* and *when* are equally important when it comes to instruction that has an impact on learning.

What and when are equally important when it comes to instruction that has an impact on learning.

General Literacy Learning Practices

Before we dive into the levels of learning as they relate to literacy, there are three aspects of learning that transcend the three-phase model:

1. Challenge
2. Self-efficacy
3. Learning intentions with success criteria

These should be considered in each and every learning situation as they are global factors that impact understanding. We explain each of these in more detail below.

1. Challenge

The first of these global aspects is challenge. Students appreciate challenge. They expect to work hard to achieve success in school and life. When tasks become too easy, students get bored. Similarly, when tasks become too difficult, students get frustrated. There is a sweet spot for learning, but the problem is that it differs for different students. There

is a Goldilocks notion of making a task not too easy or too hard but just right. As Tomlinson (2005) noted,

Ensuring challenge is calibrated to the particular needs of a learner at a particular time is one of the most essential roles of the teacher and appears non-negotiable for student growth. Our best understanding suggests that a student only learns when work is moderately challenging that student, and where there is assistance to help the student master what initially seems out of reach. (pp. 163–164)

How, then, can literacy educators keep students challenged but not frustrated? There are several responses to this question, and our answer is embedded in every chapter of this book. In part, we would respond that the type of learning intention is important to maintain challenge.

Learning Intention: Surface, Deep, or Transfer

The teacher should know if students need surface-, deep-, or transfer-type work—or what combination—while ensuring the parts are explicit for the student. In this way, the teacher can maintain the challenge while providing appropriate instructional supports. Showing students near the beginning of a series of lessons what success at the end should look like is among the more powerful things we can do to enhance learning. There are many ways to do this—among them,

- Showing them worked examples of an A, B, and C piece of work, and discussing how they differ
- Giving them the scoring rubrics at the outset and teaching them what they mean
- Sharing last year's students' work in the same series of lessons
- Building a concept map with them up front to show the interrelationships between the various parts they will learn about

—anything to help provide a coat hanger for students to know what good enough is, what success looks like, how they will know when they get there. Not showing this is like asking a high jumper to jump the bar but not telling or showing him or her how high the bar is!

Student-to-Student Interaction

In addition, we would note that schools should be filled with student-to-student interaction. As one of the mind frames above suggests, classrooms should be filled with dialogue rather than monologues. We say this for several reasons, including the fact that no one gets good at something he or she doesn't do. If students aren't using language—speaking, listening, reading, and writing—they're not likely to excel in those areas. Further, as students work collaboratively and cooperatively, the assigned tasks can be more complex because there are many minds at work on solving the tasks. Of course, this requires clear expectations for group work and instruction about how to work with others. But the outcomes are worth it—students learn more deeply when they are engaged in complex tasks that involve collaboration (they don't necessarily learn more from collaborating with others when the learning focuses on surface-level content). Further, when students work together in groups, they have an opportunity to engage in peer tutoring, which has an effect size of 0.55.

EFFECT SIZE
FOR COOPERATIVE
LEARNING = 0.42

EFFECT SIZE
FOR PEER
TUTORING = 0.55

Feedback

How else can we maintain challenge for each learner? Our third response relates to feedback. When students are engaged in appropriately challenging tasks, they are more likely to respond to feedback because they need that information to continue growing and learning. Feedback focused on something that you already know does little to change understanding. Feedback thrives on errors. For example, Marco has a strong sense of English spelling. His writing is filled with complex vocabulary terms that are spelled correctly. He understands how to use resources to build this knowledge about words. Thus, feedback about the misspelling of the word *acknowledge*, which he spelled "acknowlege" in his handwritten draft, is not likely to result in great changes in his learning. Any spell-check program on a computer will tell him he is wrong, and he can correct it. A better use of time might be to focus on Marco's use of clichés in his writing. A useful conversation with him could show him that the more familiar a term or phrase becomes, the more often readers skip over it as they read, essentially rendering the text ineffective.

We don't believe that teachers can radically impact students' learning by making them do a lot more work.

What Makes a Task Challenging?

Unfortunately, some people confuse difficulty with complexity. We like to think of *difficulty* as the amount of effort or work a student is expected to put forth whereas *complexity* is the level of thinking, the number of steps, or the abstractness of the task. We don't believe that teachers can radically impact students' learning by making them do a lot more work. We know that students learn more when they are engaged in deeper thinking. That's not to say that difficulty is bad. We think of this in four quadrants (see Figure 1.6). The quadrant that includes low difficulty and low complexity is not unimportant. We think that note-taking fits into that quadrant. If that's all students experience, learning isn't likely to be robust. However, learning to take notes, and then engaging in study skills with those notes (which likely raises the complexity but not the difficulty), could impact learning. As part of each lesson, teachers should know the level of difficulty and complexity they are requiring of students. They can then make decisions about differentiation and instructional support, as well as feedback that will move learning forward.

2. Self-Efficacy

A second global consideration for literacy educators is students' self-efficacy. Hattie (2012) defines self-efficacy as “the confidence or strength of belief that we have in ourselves that we can make our learning happen” (p. 45). He continues, with descriptions of students with high self-efficacy, noting that they

- Understand complex tasks as challenges rather than trying to avoid them
- Experience failure as opportunities to learn, which may require additional effort, information, support, time, and so on
- Quickly recover a sense of confidence after setbacks

By contrast, students with low self-efficacy

- Avoid complex and difficult tasks (as these are seen as personal threats)

DIFFICULTY AND COMPLEXITY

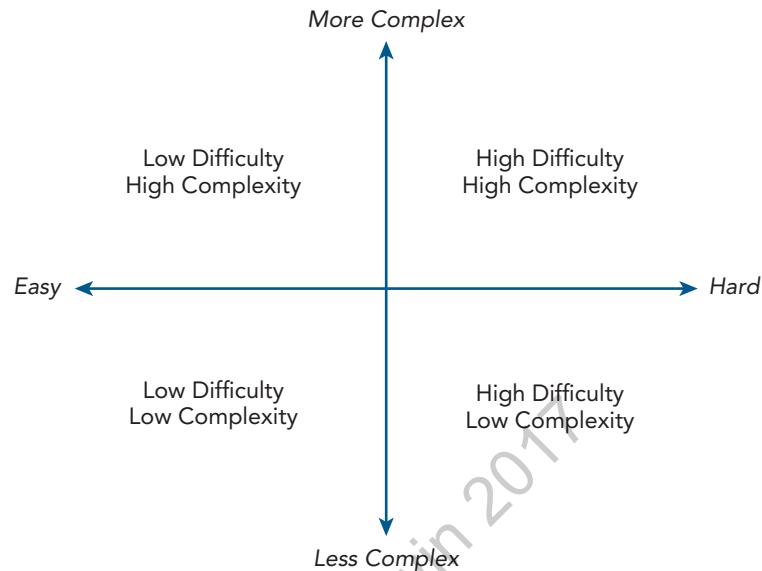


Figure 1.6

- Maintain weak commitment to goals
- Experience failure as a personal deficiency
- Slowly recover a sense of confidence after setbacks

It almost goes without saying that the impact of self-efficacy on learning is significant. Our emotions, the sense of failure, and our anxieties are often invoked in our learning—or more often in our resistance to engage in learning. Building a sense of confidence that you can indeed attain the criteria of success for the lessons may be a first critical step—without a sense of confidence, we often do not open our ears to what we are being taught. Most of us are more likely to engage in difficult, complex, or risky learning if we know there is help nearby, that there are safety nets, that we will not be ridiculed if we do not succeed—this is where the power of the teacher lies.

Students with high self-efficacy perform better and understand that their efforts can result in better learning. This becomes a self-fulfilling

prophecy: the rich get richer, and the poor get poorer. Students with poor self-efficacy see each challenge and setback as evidence that they aren't learning, and in fact can't learn, which reduces the likelihood that they will rally the forces for the next task the teacher assigns.

In their study about ways to increase students' self-efficacy, Mathisen and Bronnack (2009) suggested a combination of the following (each of which is addressed later in this book in more detail):

- Direct instruction with modeled examples
- Verbal persuasion through introductory information
- Feedback on attempts made by learners
- Guided use of techniques on well-defined problems
- Supervised use of techniques on self-generated problems

To this we add

- Demonstrating your credibility by being fair to all
- Being there to help students reach targets
- Creating high levels of trust between yourself and the students and between students
- Showing that you welcome errors as opportunities for learning

Others have made different recommendations (e.g., Linnenbrink & Pintrich, 2003), and our point here is not to endorse one approach over another but rather to confirm that teachers can change students' agency and identity such that self-efficacy, the "belief that we have in ourselves that we can make our learning happen" (Hattie, 2012, p. 46), is fostered.

3. Learning Intentions With Success Criteria

The third and final global aspect that should permeate literacy learning relates to being explicit about the nature of learning that students are expected to do and the level of success expected from the lesson. Teacher

clarity about learning expectations, including the ways in which students can demonstrate their understanding, is powerful. The effect size is 0.75. Every lesson, irrespective of whether it focuses on surface, deep, or transfer, needs to have clearly articulated learning intention and success criteria. We believe that students should be able to answer, and ask, these questions of each lesson:

EFFECT SIZE
FOR TEACHER
CLARITY = 0.75

1. What am I learning today?
2. Why am I learning this?
3. How will I know that I learned it?

The first question requires deep understanding of the learning intention. The second question begs for relevance, and the third question focuses on the success criteria. Neglecting any of these questions compromises students' learning. In fact, we argue that these questions compose part of the Learner's Bill of Rights. Given that teachers (and the public at large) judge students based on their performance, it seems only fair that students should know what they are expected to learn, why they are learning that, and how success will be determined. The marks teachers make on report cards and transcripts become part of the permanent record that follows students around. Those documents have the power to change parents' perceptions of their child, determine future placements in school, and open college doors. And it works. Clearly articulating the goals for learning has an effect size of 0.50. It's the right thing to do, and it's effective.

EFFECT SIZE FOR
GOALS = 0.50

We're not saying that it's easy to identify learning intentions and success criteria. Smith (2007) notes, "Writing learning intentions and success criteria is not easy . . . because it forces us to 'really, really think' about what we want the pupils to learn rather than simply accepting statements handed on by others" (p. 14). We are saying that it's worth the effort.

Learning intentions are more than a standard. There have been far too many misguided efforts that mandated teachers to post the standard on the wall. Learning intentions are based on the standard, but are chunked into learning bites. In too many cases, the standards are not understandable to students. Learning intentions, if they are to be effective,



Video 1.3
Making Learning
Visible Through
Learning Intentions

[http://resources.corwin.com/
VL-Literacy](http://resources.corwin.com/VL-Literacy)

have to be understood and accepted by students. Simply writing a target on the dry-erase board and then reading it aloud waters down the power of a learning intention, which should focus the entire lesson and serve as an organizing feature of the learning students do. At minimum, learning intentions should bookend lessons with clear communication about the learning target. In addition, teachers can remind students of the learning intention at each transition point throughout the lesson. In this way, the learning intention drives the lesson, and students will develop a better understanding of how close they are to mastering the expectations. Most critical, the learning intention should demonstrably lead to the criteria of success—and if you had to use only one of these, we would recommend focusing on being more explicit about the success criteria. Both help, but the judgment about the standard of work desired is more important than explication about the particular tasks we ask students to do. It is the height of the bar, not the bar, that matters.

Figure 1.7 contains some poorly written learning intentions and some improvements that teachers made collaboratively as they explored the value of this approach. Note that the intentions became longer, more specific, and more interesting. The improved versions invite students into learning. Of course, learning intentions can be grouped. Sometimes an activity can contribute to several learning intentions, and other times a learning intention requires several activities. However, when learning intentions spread over many days, student interest will wane, and motivation will decrease. When teachers plan a unit of study and clearly identify the learning intentions required for mastery of the content, most times they can identify daily targets. In doing so, they can also identify the success criteria, which will allow for checking for understanding and targeted feedback.

The success criteria must be directly linked with learning intentions to have any impact. The success criteria describe how students will be expected to demonstrate their learning, based on the learning intention. That's not to say that success criteria are just a culminating activity, but they can be. Consider the following ways that students might demonstrate success based on a learning intention that reads, "Analyze visual images presented in the text and determine how this information contributes to and clarifies information."

SAMPLE LEARNING INTENTIONS

Grade	Poor Example	Improved Version
K	Compare the experiences of characters in two stories.	Today, we'll read two stories about city and country life. We'll focus on comparing the lives of the two characters and the differences in their lives based on where they live.
5	Use technical language in the revisions of essays.	As we revise our opinion papers, we are going to learn how to update our word choices so that we use technical vocabulary like the authors we've been studying use.
7	Determine the central idea of a text.	Each group has a different article, and our learning today is going to focus on locating the central or controlling idea, the idea that the author uses to hold the entire text together.
11	Compare two texts for different themes.	Compare how two texts from the same point in U.S. history address a common theme and figure out what each author is trying to say in response to the theme.

Figure 1.7

- Discuss with a partner the way the author used visuals and how they helped you understand the text.
- Identify one place in the text that was confusing and how one of the visuals helped you understand that information.
- In your annotations, make sure to include situations where the visual information helped you understand the text itself.
- Create a visual that will help another person understand the words in the text.

All of these work, in different situations. Clarity is important here. What is it that students should be learning, and how will they know (not to mention how will the teacher know) if they learned it? That's the power of learning intentions and success criteria.

Importantly, students can be involved in establishing the success criteria and, in many cases, the learning intentions. Teachers can ask their



Video 1.4
 Making Success Criteria
 Visible in Fourth Grade

[http://resources.corwin.com/
 VL-Literacy](http://resources.corwin.com/VL-Literacy)

students, “How will you know you have learned this? What evidence could we accept that learning has occurred?” In these situations, students can share their thinking about the success criteria, and often they are more demanding of themselves than their teachers are. In a sixth-grade English class focused on learning to come to group discussions prepared, the students identified several ways that they would know if they met this expectation. Several suggested that they should have their learning materials with them when they moved into collaborative learning. Others added that they should have their notes and annotations updated and be ready to talk about their reading, rather than read while they are in the group. One student suggested that they should practice vocabulary before the group so that they would be ready. Another added that they should each know their role in the group so that they can get started right away. None of these answers were wrong; they were all useful in improving the collaborative learning time. In this case, the students established the success criteria and opened the door to feedback from their peers and the teacher in their successive approximations in demonstrating mastery of their learning.

Further, when students understand the success criteria, they can be most involved in assessing their own success, and their progression toward this success. A simple tool allows students to put sticky notes in one of four quadrants to communicate their status (see Figure 1.8). This alerts the teacher, and other students, about help that is needed. It mobilizes peer tutoring and cooperative versus competitive learning, as well as building student-centered teaching.

EFFECT SIZE
 FOR PEER
 TUTORING = 0.55

EFFECT SIZE FOR
 COOPERATIVE
 VERSUS
 COMPETITIVE
 LEARNING = 0.54

EFFECT SIZE
 FOR STUDENT-
 CENTERED
 TEACHING = 0.54

Other times, the tools used to create the success criteria involve rubrics and checklists. For example, students in a high school language arts class were tasked with selecting a worthy cause, something that they cared passionately about and whose value they could explain to others. Students were encouraged to select topics that were personally relevant and to learn more about that topic. As part of the assignment, students wrote an analytic essay about their chosen topic. Another part of the project required that they develop a web page, a Facebook page, or another electronic way of communicating with a wider world about their cause. And still another part of their assignment required the development of an informational pamphlet that they could use to educate adults about the

SAMPLE SELF-ASSESSMENT OF LEARNING

I do not yet understand. I need coaching.	I am starting to understand. I need coaching but want to try some on my own.
I understand! I make a few mistakes, so I'm working through those.	I understand very well. I can explain this to others without telling them the answers.

Figure 1.8



Template available for download at <http://resources.corwin.com/VL-Literacy>

issue. Students selected a range of worthy causes, from Islamophobia to endangered animals to mental health. Figure 1.9 on the next page contains the checklist that the teachers used to communicate their expectations to students. Note that many of these are compliance-related items that will subsequently allow teachers, and students, to determine if the experience left a lasting impact. The teachers were aiming to tap into and integrated curricular approaches. They were also looking for evidence of learning transfer, asking students to mobilize their literacy skills for a task they had not completed before.

Clearly articulating the success criteria allows errors to become more obvious. Errors should be expected and celebrated because they are opportunities for learning. If students are not making errors, they have likely previously mastered the learning intention. Also note that feedback thrives on the presence of errors. Errors should be the hallmark of learning—if we are not making enough errors, we are not stretching ourselves; if we make too many, we need more help to start in a different place. Unfortunately, in too many classrooms, students who already know the content are privileged, and students who make errors feel shame. In those situations, learning isn't occurring for students who already know the content; they've already learned it. But learning isn't occurring for the students who make errors because they hide their errors and avoid feedback. Classrooms have to be safe places for errors to be recognized.

EFFECT SIZE
FOR CREATIVITY
PROGRAMS ON
ACHIEVEMENT = 0.65

EFFECT SIZE
FOR INTEGRATED
CURRICULA
PROGRAMS = 0.39

SAMPLE PROJECT CHECKLIST

Pamphlet Portion		
Item	Date Projected	Completed ✓
Cover has the title, image, and your name		
Description of your cause (minimum 10 sentences)		
List 3–5 important facts		
Map of where this is occurring		
Demographics of who/what is impacted		
Minimum of 3 images in your brochure		
Contact information (websites, telephone numbers)		
Upcoming events (celebrations, day, movie, anniversary date, races, etc.)		
Pamphlet is attractive and well organized		
Correct spelling and grammar		

Figure 1.9



Template available for download at <http://resources.corwin.com/VL-Literacy>

For example, a secondary science class was focused on reviewing the changes in climate—there were clipboards everywhere, with students running around the school checking temperatures. They had great analyses and stunning box and whisker plots. But when they were asked how long they had been doing this task, they said three weeks (and that it was fun). What a waste. Perfection is not necessarily the aim of lessons; the presence of errors is a better indicator of a successful lesson, and surely hints to the teacher and student where is the most likely place to go next.

When errors are celebrated and expected, feedback takes hold. Feedback has a powerful impact on student learning, with an effect size of 0.75, placing it in the top 10 influences on achievement. But it's only when the feedback is received that it works. Giving feedback is different from receiving feedback. Feedback is designed to close the

gap between students' current level of understanding or performance and the expected level of performance, which we call the success criteria. For feedback to work, teachers have to understand

- Students' current level of performance
- Students' expected level of performance
- Actions they can take to close the gap

EFFECT SIZE FOR
FEEDBACK = 0.75

Feedback, as Brookhart (2008) describes it, needs to be “just-in-time, just-for-me information delivered when and where it can do the most good” (p. 1). Figure 1.10 on the next page includes information about the ways in which feedback can vary in terms of timing, amount, mode, and audience. We'll focus on feedback in greater depth in the chapter on deep literacy learning (Chapter 3). For now, we hope you appreciate the value of feedback in impacting student learning.

Conclusion

Teachers, we have choices. We can elect to use instructional routines and procedures that don't work, or that don't work for the intended purpose. Or we can embrace the evidence, update our classrooms, and impact student learning in wildly positive ways. We can choose to move beyond surface-level learning, while still honoring the importance of teaching students surface-level skills and strategies. We can extend students' learning in deep ways and facilitate the transfer of their learning to new tasks, texts, and projects, if we want. We can design amazing lessons that mobilize the evidence and provide opportunities for students to learn. And we can decide to evaluate our impact, if we are brave enough.

Monica was lucky enough to transfer to a school that embraced *Visible Learning for Literacy*. Her teachers tried out the instructional ideas, monitored progress, and provided feedback to her and to each other. Monica went from a failing student, tracked in a class with low expectations, to a lead learner providing support for her peers. Impact has a face. It's not an abstract idea or ideal. Together, we can impact the literacy learning of every student. Let's make it so.

Errors should be expected and celebrated because they are opportunities for learning. If students are not making errors, they have likely previously mastered the learning intention.

FEEDBACK STRATEGIES

Feedback Strategies Can Vary in . . .	In These Ways . . .	Recommendations for Good Feedback
Timing	<ul style="list-style-type: none"> • When given • How often 	<ul style="list-style-type: none"> • Provide immediate feedback for knowledge of facts (right/wrong). • Delay feedback slightly for more comprehensive reviews of student thinking and processing. • Never delay feedback beyond when it would make a difference to students. • Provide feedback as often as is practical, for all major assignments.
Amount	<ul style="list-style-type: none"> • How many points made • How much about each point 	<ul style="list-style-type: none"> • Prioritize—pick the most important points. • Choose points that relate to major learning goals. • Consider the student's developmental level.
Mode	<ul style="list-style-type: none"> • Oral • Written • Visual/ demonstration 	<ul style="list-style-type: none"> • Select the best mode for the message. Would a comment in passing the student's desk suffice? Is a conference needed? • Interactive feedback (talking with the student) is best when possible. • Give written feedback on written work or on assignment cover sheets. • Use demonstration if "how to do something" is an issue or if the student needs an example.
Audience	<ul style="list-style-type: none"> • Individual • Group/class 	<ul style="list-style-type: none"> • Individual feedback says, "The teacher values my learning." • Group/class feedback works if most of the class missed the same concept on an assignment, which presents an opportunity for reteaching.

Source: Brookhart (2008).

Figure 1.10