The Ultimate Guide to Feedback for Educators

31 research-backed strategies for giving and receiving feedback in skills-based learning.

By Chad Jardine

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Feedback is essential for learning.

The role of feedback in learning is supported by thousands of studies (Jensen, 2005). This article presents the key data from many of those and is designed to give you the scientific support behind 31 key techniques that you can use to improve, adapt and deliver feedback in a host of teaching settings.

It aims to be the most comprehensive list of feedback tips and research-based info you're likely to find and it's specifically designed to be used by educators to enhance instruction. If you're teaching anything to anyone, you are involved in giving feedback. Whether you teach face-to-face, blended or online; are just starting out or have been deeply entrenched in education for years, I think you'll find these strategies useful.

Also, because this article is long (8,739 words), it's broken up into easily digestible chunks, all linked from the TOC.

Feedback's Native Role in Human Learning

Try to imagine total sensory deprivation.

No tactile feedback. No auditory, visual, olfactory, or gustatory feedback. No way to test an idea, confirm a hunch, or experiment on a thought. No trial and error; just trial with no feedback.

It would be *impossible* to learn.

Human beings are feedback sponges. We thrive on the stimulation of cognitive, sensory, and motor feedback.

From before we left the womb, our physical senses have delivered feedback from the world around us. We constantly test through trial and error. We try something. We

get feedback from others or from our senses (i.e., a hot stove), and our *brains change*.

We are never the same. We remember. We have learned. We now have experience.

Our brains record patterns of firing neurons, synthesizing enormous amounts of sensory data, and as they do we change.

We call this change in our brains *learning*.

Inside the brain is a structure called the *anterior cingulate*. It gets automatically activated when we're exposed to something that happens differently than we expected. Scientists believe that this part of our brains has been designed by nature to help us learn through trial and error (Jensen, 2005).

The spectrum of things humans can learn is vast. And this learning changes behavior. In fact, it empowers a learner to behave in ways that he or she didn't have the skills or understanding to behave before. Learning is the process of becoming *more*, which in turn makes the job of an educator that much more essential.

Childroom is a period of rapid learning

Childhood is a period of rapid and explosive learning, learning by trial and error, and learning by feedback, gaining experience in spades. As we look at higher order learning of more complex cognitive and kinesthetic skills, the mechanisms at work in those early years are still in play. Trial and error is natural and simple, because as *Teaching with the Brain in Mind* author Eric Jensen says, "Mistakes, not

correct answers, make us smarter (Jensen, 2005).”

These feedback facts become increasingly important as children age and acquire more complex skills. From early sandboxes and playgrounds to digital environments, classrooms, and workplaces, learning requires more input, more feedback. Which leads us to ask at the terminus of structured learning—the higher education classroom—how does feedback function? And how should it?

Feedback Basics

What do we know about how feedback works?

What do we know about feedback?

Feedback is an intrinsic element of learning. In fact, some have claimed that a key purpose of higher education is fundamentally to facilitate high-quality feedback exchanges (Evans, 2013).

Key skills and understanding don't just spring up in students without input from an instructor. Feedback is essential to developing many skills to a level of competence. Even with unlimited trial and error, there's no way to ensure that students will gain a thorough understanding or grasp the full scope of a subject on their own (Jensen, 2005). In fact research has shown that it is common for students to only recognize that they need to modify existing work after receiving feedback (Liu & Lee, 2013)

Our understanding of feedback is growing. Research on the depth and breadth of feedback remains incomplete (Shute, 2007). But the scientific link between feedback and learning is so strong that some researchers suggest that unless it actually has an impact on learning, it can't even be called feedback (Evans, 2013).

“Feedback is a crucial feature of the teaching and learning process (Askew, 2000).” Feedback-driven learning makes more accurate and

more complex neural connections in the brain. The neural connections are made more efficient by feedback-driven learning. They are made stronger by usage. Combine *feedback* and *practice* and you've got the perfect recipe for learning ([Jensen, 2005](#))

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"Feedback … improves learning… compared to control conditions ([Shute, 2007](#))." Students generally understand that feedback is a tool that will improve their learning and they are responsive to it from both instructors and peers ([Liu & Lee, 2013](#)).

It's not just that feedback helps students understand how to score or perform correctly. Increasingly, research is showing that the *right kind* of feedback can be critical for students to develop the ability to self-direct their own education, that is to become independent learners who monitor, evaluate and regulate their own learning.

This self-direction is what carries students into lifelong learning habits post-graduation and makes them effective professionals ([Evans, 2013](#)/[Ferguson, 2011](#)).

As Morpheus says to Neo, "I'm trying to free your mind, Neo. But I can only show you the door. You're the one who must walk through it ([The Matrix, 1999](#))." The right feedback primes a student's telic initiative.

What is the "right kind" of feedback?

Research supports that not all feedback is created equal. It's common for research studies to includes the caveat that feedback creates significant improvement in learning processes and outcomes but *only if delivered correctly* ([Shute, 2007](#)). The "right kind" is not so much one type of feedback or another as it is the kind that matches the circumstances and state

of the student. To figure out the right feedback, let's take a look at what types are out there.

The most basic type of feedback (and also often the least helpful) is yes/no. It's the ding of the bell or the buzzer. It's simply whether an answer—or a performed task—is correct or not.

As a 4th grader, I participated in my school's spelling bee. Don't get the wrong idea, I was NOT a precocious spelling phenom. I remember standing sweaty-palmed at the microphone looking at the judges, who mostly looked down at their notes.

My turn came. I boldly misspelled the word "demeanor." The judges continued looking at their notes for several uncomfortable seconds. I didn't *know* if I had spelled it right or wrong. Finally, one of

them looked up at me and said simply, "Incorrect."

That was it.

Just, "Incorrect."

I took my seat with the other non-winners and puzzled, *then how DO you spell it?*

The simplest form of feedback is like that.

It's an indication that the performance or the answer given was correct or incorrect, good or bad. It's feedback, but it's low-utility feedback because it doesn't contain

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much in the way of information about how to change. It's an evaluation, not mentorship.

A more instructive form of feedback, which is intended to modify the student's behavior or thinking and thereby enhance the learning, is called *formative* feedback (Shute, 2007).

Formative Feedback

"The main aim of formative feedback is to increase student knowledge, skills, and understanding in some content area or general skill (Shute, 2007)." In other words, formative feedback doesn't just tell you how you did, but what you can do about it.

Students tend to embrace formative feedback because of its usefulness.

Just like you need sensory feedback to keep your bearings,

formative feedback provides a "check-in" for students about how they are doing. It turns out that for students, not knowing whether they are performing well or not on a task can disrupt their attention and reduce performance. On the other hand eliminating uncertainty can increase motivation and keep students in a state where they are able to perform at their best (Shute, 2007).

Similarly, another study found that the demands of high performance tasks can be overwhelming for students and that formative feedback can lessen the cognitive load so their performance and learning won't be negatively affected by the stress (Shute, 2007).

The majority of students reported that they didn't care whether feedback was positive or negative as long as it was formative and helped them improve (Jones, Blankenship, 2014).

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Formative feedback is not a silver bullet. It isn't the answer for every student and every situation ([Evans, 2013](#)). But it's clear that it is helpful in many, many cases.

One author described the elements of effective formative feedback as the same as those detectives look for in a good murder case: motive, means, and opportunity. Motive centers around the student's need, opportunity describes the timeliness of the feedback, and means indicates that the student can actually make use of the feedback given ([Shute, 2007](#)). When students see feedback as helping them achieve their outcome as opposed to passing judgment on their final performance, they are more receptive ([Ching, 2014](#)).

In this article, I'll try to give you the information you need to adapt this research to your own situation and stack the deck of student outcomes in your favor. Strategies from this section include:

Strategy 1: Deliver formative feedback along the way to maintain students' focus and attention and to keep students from wasting energy feeling uncertain and stressed about how they are doing.

Strategy 2: The most effective feedback is timely, useful, and in line with student's motives for learning.

Knowledge vs. Skills Discussion

One conversation in the contemporary evolution of education centers around knowledge-led vs. skills-led learning. I'm not going to give a comprehensive treatment of this debate. But in overview, the technology-driven age in which we live highlights that a purely knowledge-based education is limiting because knowledge becomes out of date ([Askew, 2000](#)). Skills and competencies, influence what a student becomes and what he or she can *do* with what they know.
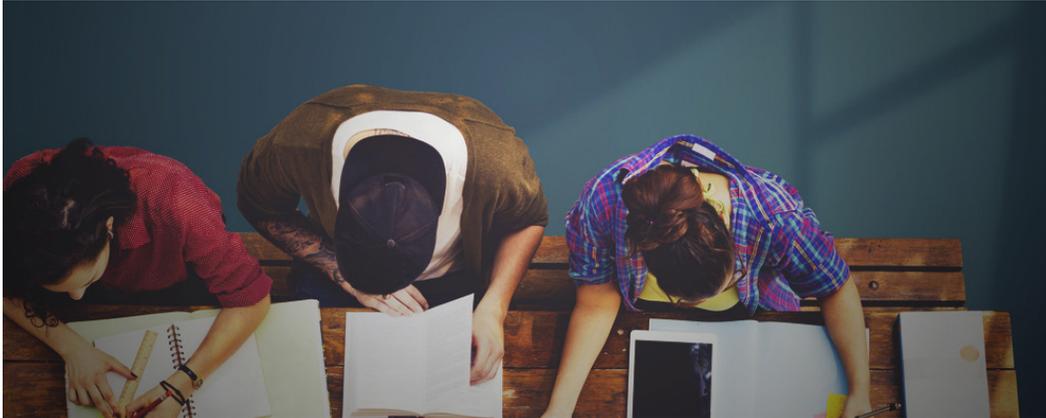
You don't want the wrong kind of outline.

The International Commission on Education for the Twenty-first Century published a report in 1996 that outlined four types of learning: learning to know, learning to live together, learning to be, and learning to do. It suggested that (at the time) educational methods were paying most attention to the first (Askew, 2000).

When educators see their role as only the conveyance of knowledge and not as being involved in training students to develop competency in certain skills, the perspective on how to incorporate feedback is limited.

As excited as I was about my revelation, I wasn't ready to abandon the advantages of traditional outlining. Rather, I concluded that there are two equally valuable outlining approaches, and that to have the greatest chance for success, every speaker really should master both.

Strategy 3: Consider what you want your students to be able to do that they currently cannot.

What's my motivation?

The impact of feedback on student learning and performance is significantly impacted by their learning goals and *motivation* ([Jones, Blankenship, 2014](#)). Are they motivated to pick up the knowledge and skills? Do they have a reason to care? Why are they here in the first place?

Fortunately, motivation is not a fixed attribute.

It can be influenced and one of the ways to do that is through feedback. Just as motivation has an important impact on learning, feedback (especially on goal-driven work) can *create* strong motivation ([Shute, 2007](#)). Formative feedback can be given in such a way that learners feel empowered and "in command" of their learning, which reinforces their motivation ([Ching, 2014](#)).

One author suggests that motivation and engagement are easy to achieve if you can create the right *state* in your students.

He used the example of a marriage proposal. The right state heavily influences the likelihood of receptivity and a positive response. The key takeaway here is that "states are the body's environment for making decisions. If you think you're going to get a negative response… change their state first. Then ask them to do the activity while they are in a state to say yes" ([Jensen, 2005](#)).

Among suggestions for how to change states in students, the giving of feedback is shown as one

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of the best ways to evoke intrinsic motivation (Jensen, 2005).

There is a certain level of sensitivity and precision required for feedback to enhance motivation. Student goals or objectives are typically more motivating than specific granular tasks. Feedback that is goal-oriented addresses the learner's progress toward the global goal. Motivation is strongest when the learner's goal and their anticipation that they can reach the goal are tightly matched. If goals are too lofty and the chance of success is low, motivation is replaced by discouragement. If goals are so easy that there is no doubt of their being accomplished, then motivation falls below what is required to drive greater effort (Shute, 2007).

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Strategy 4: Consider how feedback may influence a student's motivation
Strategy 5: Use thoughtful feedback to induce a physical and mental state of receptivity to more feedback.

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Collaboration/Interaction

White House honoree Ben Hernandez says, "… there is no teaching without learning."

As a young man, I loved that concept. If there is no learning going on, then there's no teaching going on either.

As a student I'd sat through many lectures where there was plenty of speaking, but according to Hernandez's definition, very little teaching.

Sir Ken Robinson talks about this same idea in his wildly popular 2013 TED talk, *How to Escape Education's Death Valley*. He echoes Hernandez, saying,

"Teaching, properly conceived, is not a delivery system. You know, you're not there just to pass on received information. Great teachers do that, but what great teachers also do is mentor, stimulate, provoke, engage. You see, in the end, education is about learning. If there's

no learning going on, there's no education going on."

So, why don't more teachers adopt a collaborative and interactive approach to teaching?

Well, for one it's difficult. It requires time that often simply isn't there.

The constraints on educators often results in only summative feedback. "Quite often this situation results in feedback being more judgmental than constructive (Ching, 2014)."

A response to this is to use technology to deliver or support the giving of feedback. For example, quiz tools might include prompts with information about student's correct or incorrect responses. Once set up, technology solutions provide feedback automatically without additional teacher input.

The downside of this is that feedback is not individual.

Automated feedback is often still a one-way street focused on content delivery rather than a dialogue. There is a view that *en masse* education (often supported by tech tools) "squeezes out the dialogue with the result that … a monologue is having to carry much of the burden of teacher-student interaction (Evans, 2013).

Despite the necessities that currently drive the monologue approach, it appears likely that educators will likely be forced to evolve. As one author quipped, "In times of change learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world which no longer exists (Askew, 2000)."

Ironically, as more technology adorns the classroom, the seeming disconnectedness of education

technology is at odds with demand for more interaction and connectedness. In fact, rather than replace instructors, technology that enhances and enables the

relationship between students and teachers serves best. The quality of the student-teacher relationship has great influence on how much impact the feedback and interaction lead to learning ([Askew, 2000](#)).

Technology that facilitates relationships rather than basking in its own virtuosity is what has the greatest educational impact. Students themselves prize feedback given human-to-human, a personal communication rather than simply an electronic response to stimuli

([García-Yeste, 2013](#)). Even in purely online courses, feedback was seen as essential for building connections between instructors and students. When technology limits feedback to only text-based comments, nonverbal cues that help in building relationships may be absent ([Leibold & Schwartz, 2015](#)).

The relationship lies at the root of the effectiveness of formative feedback. There is dialogue and a two-way conversation between human beings. When students also participate by giving feedback in return to instructors, student confidence grows ([Jones, Blankenship, 2014](#)), and the relationship between learning and teaching is seen in a more dynamic light as opposed to a one-way transmission of knowledge ([Askew, 2000](#)).

In *[Teaching With the Brain in Mind](#)*, Eric Jensen explains,

> *"Feedback must be corrective and positive enough to tell the student*

what the desired change must be. I also must be timely. For most students, "timely" means immediately following the learning or testing, but for students with high reactivity or with chronic anxiety and stress, it's often preferable to provide additional time between the learning event and the feedback on their performance. The element of choice is also key. When learners can choose the type and timing of the feedback, they are more likely to internalize and act on that feedback and improve their subsequent performance.

"Students tend to make more mistakes in the early stages of any new learning. Prompt feedback at this time is essential to prevent them from getting too far off course. As students' experience deepens, their error rate drops, and feedback can be more measured, infrequent, and deliberate.

"What doesn't make sense is constant one-way learning. Our brain is designed to learn from mistakes. We need to give it a chance to do just that! (Jensen, 2005)"

Mistakes equal opportunities for formative feedback.

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Strategy 6: Keep the relationship with students in mind. The stronger the relationship, the more receptive students will be to feedback.

Strategy 7: Look to provide feedback around interactions with students and adapt to student-reported insights. Avoid one-way feedback.

Strategy 8: Provide feedback timely and in keeping with where students are in their learning—promptly during early stages, and more measured and deliberate during later stages.

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Perceptions

In addition to the benefits of feedback in various types of learning, there is substantial research on how feedback is perceived. This helps to inform the discussion around buy-in from those receiving the feedback and how likely educators are to use a particular method of feedback. I should acknowledge that there is more research to do in this category before we know definitively and

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comprehensively how feedback is perceived (García-Yeste, 2013). But the anecdotal evidence helps to orient the conversation around what is reasonable.

Frustrations around feedback exist for both students and teachers. Students complain that feedback is unclear, unhelpful, or not delivered timely. Teachers mostly focus on whether or not students act on the feedback they are given (Evans, 2013).

That doesn't mean that students don't want feedback, however. One study showed 95% of students use feedback to improve on the work they do after receiving feedback (García-Yeste, 2013), and 95.4% believed that the quality of their assignments improved directly because of instructor feedback (Jones, Blankenship, 2014).

Not only does feedback improve students' work, but they like it. Feedback is highly valued by students who perceive it as a sign of how much instructors care about their efforts and whether their grades are justified (García-Yeste, 2013).

Rather than reluctance, students value feedback intended to improve their learning and are open to many types of feedback, including self-assessment, group-to-group feedback, electronic feedback and peer feedback, and appreciate timely and detailed input around the strengths and weaknesses of their work (García-Yeste, 2013).

They prefer a variety of feedback methods to a single method, especially if that method is impersonal. Along those lines, many forms of technology-enabled feedback are inherently impersonal, such as feedback that a quiz question was answered incorrectly. Even if an explanatory note is given and the feedback is more formative,

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students prefer feedback that is personal and individual from the instructor (García-Yeste, 2013).

What students don't like is negative feedback delivered publicly. Later we'll discuss how feedback can be threatening and an attack on a student's self-esteem. Over half of students in one study indicated that they preferred feedback to be given face-to-face in private (García-Yeste, 2013). One reason for this preference again ties into the relationship between instructor and learner. Students get value from the relationship and their receptivity to feedback and learning as a result of those interactions is enhanced. Some learning technologies, especially those suited to online classes, have privacy built in since student-instructor interactions are between logged in accounts and not in front of a group.

Strategy 9: Remember that students generally like and appreciate feedback. Keep it fresh with a variety of feedback methods.
Strategy 10: Seek opportunities to give feedback face to face.
Strategy 11: Deliver negative feedback in private.

How to give feedback

Knowing that feedback is an integral part of learning and leveraging feedback as an integral part of learning are two very different things, especially for higher education instructors who have limited time and resources but an unlimited supply of students and assignments to assess.

At first, feedback for classrooms of students seems impossible, or at least, unreachable considering constraints on educators' time and energy. Evidence proves individually

tailored feedback is best, but that means giving feedback to classrooms of students, each requiring a slightly different feedback delivered in a slightly different way.

Luckily, though, the process of giving feedback can be boiled down into a few different components: specificity, timing, and technique.

Focus on giving feedback that is specific

Feedback that is successful (improves or helps a learner develop, grow, change, learn) requires specificity to call attention to the exact problem or solution.

Remember my spelling bee story from earlier? Though "incorrect" was more specific than no answer at all, it really wasn't much more specific. I didn't know where I had gone wrong or how I had misspelled *demeanor*. Did I put the A before the E? Maybe I tried spelling it with a double E?

However I spelled it, I didn't know what specifically was right or wrong, only that my spelling was incorrect.

Providing that detail is part of what makes specific feedback... well, specific.

"Specific (or elaborated) feedback provides information about particular responses or behaviors beyond just their accuracy" ([Shute, 2007](#)).

Specificity takes on an even bigger role in higher education. Research papers, presentations, and group projects are just some of the higher education assignments that

require more than just "correct" or "incorrect."

A close friend of mine had this experience. He, like many of his peers, enrolled in public speaking to fulfill his communication requirement. They had several class presentations. The feedback he got on my first presentation set the tone for the rest of the course. There was none.

Well, not exactly none. He got a grade. He said, "This told me I did well, but I didn't get 100%. I must've made some mistakes, right?"

You can understand his frustration: how could he improve on his performance if he had no way of knowing what he did right or wrong?

After reviewing the research, this is apparently not a singular experience: "The corrective function effects appear to be especially powerful for feedback that is more specific (Baron, 1988; Goldstein,

Emanuel & Howell, 1968), which is described next" (Shute, 2007).

In fact, researchers tested general versus specific feedback and "found that the more specific feedback was clearly superior to general advice" (Shute, 2007).

Not only is specific feedback beneficial, but non-specific feedback can actually be harmful.

"Feedback lacking in specificity may cause students to view it as useless and/or frustrating (Williams, 1997). It can also lead to uncertainty about how to respond to the feedback (Fedor, 1991) and may require greater information processing activity on the part of the learner to understand the intended message (Bangert-Drowns et al, 1991). Uncertainty and cognitive load can lead to lower levels of learning (Kluger & DeNisi, 1996; Sweller et al., 1998), or even reduced motivation to respond to feedback (Ashford, 1986; Corno & Snow, 1986)" (Shute, 2007).

It's not just negative unspecific feedback that can be harmful.

"Giving praise in a general or indiscriminate way may be unhelpful, and may even lead to lower self-esteem and loss of confidence" (Askew, 2000).

Specificity includes tailoring your message to the learner. "There is no such thing as a single 'magic bullet.' The 'magic' of the bullet is highly context dependent, and so the bullets must be fashioned according to local circumstances, the shooters and the targets. The university teacher . . . has to make 'intelligent choices in complex situations' . . . under ever-changing conditions, government reforms and revised curricula" (Evans, 2013).

Regardless of the method or timing of feedback, specificity has proven to be a key component to any kind of feedback.

"In short, [researchers] found that feedback specificity (low, moderate, and high levels) had a significant influence on performance for individuals who were low on learning orientation (i.e., high feedback specificity was better for learners with low learning orientation). They also reported a significant influence of feedback specificity on performance for persons high in performance orientation (i.e., this group also benefited from more specific feedback). The findings support the general positive effect of feedback on performance and further suggest the use of more specific feedback for learners with either high performance or low learning goal orientations" (Shute, 2007).

Strategy 12: Give specific and detailed feedback. Avoid general and indiscriminate feedback.

All about the timing

Getting the right timing for your feedback depends from learner to learner.

Which is tricky because knowing when to give your specific feedback is just about as important as how specific your feedback is.

Helen Keller once said, "It was my teacher's genius, her quick sympathy, her loving tact which made the first years of my education so beautiful. It was because she seized the right moment to impart knowledge that made it so pleasant and acceptable to me" (Shute, 2007).

There are two approaches to feedback timing: either you give feedback immediately or you wait and give delayed feedback. Both offer advantages and are unique to the degree of a learner's skill or knowledge.

"Immediate feedback for students with low achievement levels in the context of either simple (lower level) or complex (higher level) tasks is superior to delayed feedback, while delayed feedback is suggested for students with high achievement levels, especially for complex tasks" (Shute, 2007).

In an experiment testing feedback intervals, researchers divided participants into four groups: those who would receive feedback after every trial, those after every five trials, after every ten trials, and after every fifteen trials. They found that "when feedback was present, all groups showed general improvements in performance across practice, although those in the longer length conditions showed worse performance relative to the shorter length conditions.

Those researchers concluded that "delayed feedback may be superior for promoting transfer of learning, especially in relation to concept formation tasks, while immediate feedback may be more efficient, particularly in the short run and for procedural skills (i.e., programming and mathematics)" (Shute, 2007).

For just about twenty years, John R. Anderson and Albert T. Corbett conducted experiments in designing Advanced Computer Tutoring (ACT). They were studying how students reacted to computer tutoring in algebra, geometry, and LISP programming. The experiments attempted all kinds of variations, such as whether the computer tutor was presented to the student as a technological learning aid, or as a replacement for a human tutor.

One of the most consistent findings of their research was the benefit of immediate feedback. They studied the effect of feedback timing on their students. Similar to the above experiment, Anderson and Corbett divided students into 4 groups: those who would receive immediate feedback and "immediate error correction," those who'd only receive "immediate error-flagging," those who could request feedback, and those who received no support (Shute, 2007).

They found that the students in group A—the one with immediate feedback and correction—"yielded the most efficient learning . . . , completed the tutor problems fastest, and their performance on criterion tests was equivalent to that of the other groups" (Shute, 2007).

Keep in mind strategies 2 & 8 which deal with timing.

Strategy 13: If in doubt, give feedback immediately. Delayed feedback may be better with conceptual and high-achievement (proficiency) complex learning.

Feedback delivery techniques

Specificity and timing aren't the only important considerations to keep in mind when giving feedback.

In the earlier section on Collaboration/Interaction, we introduced research that relationship quality has an impact on receptivity to feedback. There is also an element of respect or concern that is expected of the educator because poorly delivered feedback or feedback meant to discourage can prove harmful to the learner.

This section contains research-driven strategies on how to deliver feedback: what to do and what not to do when giving feedback.

Four more strategies on things to avoid in your delivery:

Avoid Negativity

Negative feedback demotivates, for example, by discouraging, being overly judgmental, critical, giving unclear or contradictory messages and encouraging dependence on others for assessing progress" (Askew, 2000).

Strategy 14: Don't be negative, overly critical, or unclear.

Avoid thoughtless delivery

Pay attention to *how* your message gets there. Authors and researchers, Susan Askew and Caroline Lodge stated, "We have coined the phrase 'killer feedback' to describe situations when the receptive-transmission form of feedback blocks learning. [We both] have experience receiving such feedback on writing. The feedback was intended to be constructive and developmental, but its effect was to discourage all further redrafting.

This was because there was too much and it felt overpowering, it did not connect with our thinking at the time, there was no discussion or dialogue and it did not give any help in how to start making changes. It felt as if the person giving the feedback had their own purposes and goals for our writing" (Askew, 2000).

Strategy 15: Don't overwhelm. Remember that how feedback is given is as important as the feedback itself.

Avoid disrupting a student's flow

Don't interrupt a student who is focused and engaged. "Interrupting a student who is actively engaged in problem solving with feedback from an external source has too has been shown to inhibit learning (Corno & Snow, 1986)" (Shute, 2007).

Strategy 16: Don't interrupt. Don't create a disruption with feedback when the student is in the flow of learning.

Promote mindfulness, not mindlessness

Feedback can promote learning if it is received mindfully. Conversely, feedback can inhibit learning if it encourages mindlessness, as when the answers are made available before learners begin their memory search, or if the

feedback message does not match students' cognitive needs (e.g., too easy, too complex, too vague)" (Shute, 2007).

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Strategy 17: Exercise restraint. Don't give feedback too early or give answers before the student has tried to figure out the problem on his or her own.

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Once you've made sure your feedback avoids these common feedback errors, consider elevating your feedback with the following strategies:

Could you please elaborate?

Upon first glance elaborative feedback seems synonymous with specific feedback. Both require individual attention and tailoring to the learner.

Elaborative feedback is a type of specific feedback that builds on the initial correct/incorrect information. "Effective feedback provides the learner with two types of information: verification and elaboration. Verification is defined as the simple judgment of whether an answer is correct, and elaboration is the informational aspect of the message that provides relevant cues to guide the learner toward a correct answer" (Shute, 2007).

Elaboration provides more utility to the learner, giving them more to go on in their efforts to improve. "While verification [i.e., correct/incorrect] feedback did not improve learning, correct response, response-contingent, and a combination of the other levels of feedback have been shown to significantly improve student learning (e.g., Gilman, 1969). This may be due to… elaboration feedback, which allows students

to correct their own errors or misconceptions ([Shute, 2007](#)).".

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Strategy 18: Consider elaborating and providing important detail. Find ways to provide additional detailed information that can assist students in figuring out improvement on their own.

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Simplify

The simpler, the better. If you want your feedback read by your students, make it simple. Simple feedback has been shown to be more accessible than complex feedback: "If feedback is too long or too complicated, many learners will simply not pay attention to it, rendering it useless. Lengthy

feedback can also diffuse or dilute the message" ([Shute, 2007](#)).

In a study of undergraduate students and the complexity of feedback they receive, "authors showed that more complex versions of feedback had a small effect on students' ability to correct their own errors, and the least complex feedback demonstrated greater learner benefits in terms of efficiency and outcome than complex feedback"([Shute, 2007](#)).

Wait, didn't we just read that elaboration was helpful?

Yes, but it turns out poorly written or garbled feedback increases the chances that students will ignore

it. So, where's the sweet spot? The simple feedback rule of thumb is if your students won't follow your logic, they won't apply your feedback. Simplicity is less about length and more about accessibility to the content, the voice of the feedback. By carefully and thoughtfully composing feedback for clarity, you can simplify while providing the necessary level of detail (and not more).

Strategy 19: Make feedback accessible to students. Generally, that means make it concise and clear.

Keep your eye on the ball

Feedback is most successful when focused on a specific task. Task-level feedback "typically provides more specific and timely (often real-time) information to the student about a particular response to a problem or task compared to summary feedback, and it may additionally take into account the student's current understanding and ability level" ([Shute, 2007](#)).

So rather than giving feedback on an entire project or as a summation of all the feedback you might give, providing specific advice throughout the learning process and on specific steps in that process is more effective because it supplies more specific and more immediate feedback.

"Formative feedback that focuses the learner on aspects of the task promotes learning and achievement" ([Shute, 2007](#)).

Strategy 20: Focus feedback on the most essential aspects.

Is oral or written feedback better?

To speak or not to speak? That is the question. Feedback can be given

in a lot of different ways. If you're teaching a more creative discipline, consider giving your feedback orally. Oral feedback provides for quicker, more immediate interactions between learner and educator, allowing the learner to ask for clarification, boosting the efficacy of the feedback in "complex, creative work."

"Where possible, teachers may need to use oral forms of feedback more often in creative disciplines as a means of communicating both the explicit and tacit knowledge associated with complex, creative work" (Budge, 2011).

St Strategy 21: Consider what you want your students to be able to do that they currently cannot.

To direct or guide

Two options for the type of feedback you give are direct (directive) and indirect (facilitative). "Directive feedback tells the

student what needs to be fixed or revised. Such feedback tends to be more specific than facilitative feedback, which provides comments and suggestions to help guide students in their own revision and conceptualization" (Shute, 2007).

Depending on learner level, you may choose to give direct or indirect feedback. "When testing different types of feedback, Clariana (1990) argued that low ability students benefit from *correct-response* feedback more than from *try-again* feedback" (Shute, 2007). In this case, correct-response feedback would be direct feedback and try-again feedback would be facilitative.

Strategy 22: Use a rubric to standardize feedback to students and share it with students so they will know what they are being evaluated on.

Should I use a rubric?

Yes, use a rubric. It's pretty simple: student participants of a study on online feedback and learning "recommended the use of rubrics, and that educators refer to them in feedback (Leibold & Schwartz, 2015). If applicable, take a look at the tech tools you use in your classes. Are there ways to incorporate feedback in those tools?.

Strategy 23: Use direct feedback early, and indirect, facilitative feedback when you need to guide students to try again. Indirect feedback is giving the next piece of the puzzle, while direct is demonstrating how to do the puzzle correctly.

Questions can be effective feedback

Don't forget to ask. Sometimes giving feedback has less to do with giving and more to do with guiding. (Facilitative feedback, remember?) "The quality of learner writing performance improved the most with the use of epistemic feedback and epistemic + suggestive feedback (Guasch, Espasa, Alvarez, & Kirshner, 2013). This evidence supports the intervention that asking a question to promote critical thinking in learners is an effective feedback skill for educators to incorporate in their practice" (Leibold & Schwartz, 2015).

So before you move from the verification step to elaboration, consider asking the learner that could help them arrive at the solution on their own.

Strategy 24: Ask effective questions to prompt students to think deeper.

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Peer Feedback

Feedback takes time. Sometimes that is time teachers feel they just don't have.The finished outline may look very similar to what you ended up with from the top-down approach. But, you used a different route to get there.

Time constraints threaten quality feedback

"Unfortunately, the use of feedback as a pedagogical tool in higher education is still a dilemma.

(Carless, 2007) stated that feedback activity can be a challenge in teaching large classes. Many good answers go unrecognized in a large group as teachers are constrained with heavy workloads. Ultimately, this will push the teachers to think giving feedback is both impractical and too time-consuming (Carless, 2007). As a result, it becomes incompatible with the demands of schooling" (Zher, Hussein, Raja & Saat, 2016).

With class sizes growing each year, some higher education instructors feel that feedback is the deadweight that needs to be cut.

"This imbalance in the student-teacher ratio means that instructors often have to read and comment on a considerable number of assignments. . . . This situation has been reported in a number of studies (e.g. Hyland, 2003) as having negative effects on the feedback students receive" (García-Yeste, 2013).

To give specific, tailored feedback to each student on each assignment could consume all the time of any well-meaning instructor.

"As university lecturers, we often struggle to provide our students with good quality feedback in a consistent manner. This is usually caused by the increasing imbalance in teacher-student ratios (Hounsell et all., 2008), as well as the pressure of academic life and the lack of time (Sadler, 2010)" (García-Yeste, 2013).

It seems naive to hope that class sizes of all college classrooms (or any classroom) will improve the student-teacher ratio any time soon. Educators have a lot to do, and feedback often takes a back seat.

Of course, educators want to give good feedback. It's just hard. "This tension between the teacher's desire to provide effective feedback and the lack of resources (e.g. time) has been reported in the literature.

For instance, Sadler (2010) points out that 'the desirability of feedback cannot be separated from the practical logistics of providing it [. . .] feedback should not only be of an appropriate type but also be provided within the available resources, especially time for academics to give feedback to individual students" (García-Yeste, 2013).

Leveraging peers for effective feedback

Because of the difficulties instructors face in giving quality feedback to so many students, researchers have begun to examine the efficacy of peer feedback, with some championing it as an effective teaching and learning strategy.

Students appreciate good feedback; they also appreciate peer feedback and consider it useful.

"Overall, 90% of learners reported the peer feedback they received useful or somewhat useful. Sixty percent of learners perceived that peer feedback was useful. Learners reported that feedback helped them identify holes in their case analysis and ideas that had been overlooked or that could be analyzed deeper. Useful peer feedback also gave them suggestions on how to improve their work" (Ching, 2014) .

Peer feedback allows for the instructor to not worry as much about providing each student with feedback on every assignment. Through the use of peer feedback, instructors can be sure students receive the feedback and attention that they need. It also speeds up the feedback cycle for large classes: "Peer feedback should be capitalized as students received more feedback from peers and more quickly in comparison to receiving feedback from lecturers (Liu & Carless, 2006)"(Zher, Hussein, Raja & Saat, 2016).

In addition to being a quicker option for giving students feedback, peer feedback helps students inhabit different roles which provide different peer interactions.

"Peer feedback activities engage learners in cognitive interactions of sharing relevant experiences, exchanging ideas, and negotiating meanings"(Ching, 2014).

Peer feedback offers valuable insight to students. In one study, "when students discovered that peer reviewers were unable to understand their work, they would rewrite it with more extensive explanations and adopt feedback to generate new ideas or research directions. Finally, the students made valuable modifications to their work with the help of feedback from others, and most of the students had a positive impression of peer observation after participating in online peer assessment activities" (Liu & Lee, 2013).

Peer feedback helps both sets of students: those receiving the feedback and those giving the feedback. "Benefits have been found for both receiving and providing peer feedback. When receiving feedback, learners invite peers to contribute experiences and perspectives to enrich their own learning process (Ertmer, et al., 2007). When providing feedback, learners actively engage in articulating their evolving understanding of the subject matter (Liu & Carless, 2006). They also apply the learned knowledge and skills when assessing others' work" (Ching, 2014).

In fact, some researchers suggest that students learn more giving feedback than receiving it. "Examining how undergraduate peer reviewers learned from giving comments, Cho and Cho (2011) found that students improved their writing more by giving comments than by receiving comments. Giving comments involves evaluative and reflective activities in which students identified good writing, problematic areas in the writing, and possible ways to solve the problem" (Ching, 2014).

All these benefits to peer feedback are all great, but if your students don't know how to give good feedback, your students won't get good feedback. "Instructors should encourage students to provide more specific and detailed feedback, which includes more suggestions to guide their peers in the process of revision" (Lee & Chen, 2009; Liu & Lin, 2007).

To help your students know how to give good peer feedback, researchers suggest role-playing.

"The findings revealed potential positive impact of role-playing on learners' generation of constructive feedback as role-playing was associated with higher frequency of problem identification in the peer comments." (Ching, 2014).

Role-playing places students in the position of giving feedback without the stress of actually giving feedback, making students feel more comfortable. "When learners were asked about their experiences of using the role-play strategy to provide feedback to peers, it was found that the role-play strategy alleviated cognitive challenges of peer feedback, made the activity more engaging, and relieved the affective barriers of providing peer feedback" (Ching, 2014) .

In addition to helping students give better feedback, role-playing increases the investment of students in feedback. "Learners also thought the role-play strategy made the peer feedback activity more engaging and authentic as they were put into stakeholders' shoes to make sense of the analysis and use the corresponding perspective to address complex issues" (Ching, 2014).

For convenience, if you're considering using peer feedback, remember the following ten things from (Evans, 2013):

"A more detailed look at the higher education literature on peer feedback highlights the following:

1. For accuracy: Multiple peer markers are preferred over single markers (Bouzidi & Jaillet, 2009).
2. Peer assessment is most effective when included as an element within a holistic assignment design (Nicol & MacFarlane Dick, 2006).
3. Peer feedback can be a positive experience for many students but not for all (Fund, 2010).
4. The nature of the implementation and roles of assessor and assessee influence outcomes (Gielen et al., 2011).
5. Receiving feedback has less impact on future performance than giving feedback (Kim, 2009).
6. The academic ability of the feedback giver and recipient is important (Van Zundert et al., 2010).
7. The affective dimension is very important, as is the provision of choice—*most* recommend the formative use of peer assessment rather than summative (Nicol, 2008).
8. The nature and type of feedback peers are asked to

give impacts on performance ([Tseng & Tsai, 2010](#)).

9. The importance of training students in how to give feedback (Sluijsmans, Brand-Gruwel, & Van Merrienboer, 2002).

10. The need to enhance research design and reporting of results ([Strijbos & Sluijsmans, 2010](#)).

Peer feedback can be a positive experience for students (De Grez, Valcke, & Berings, 2010;Fund, 2010), leading to enhance performance ([Carillo-de-la-Pena et al., 2009](#); [Sluijsmans *et al.*, 2002](#))" ([Evans, 2013](#)).

Strategy 25: Consider using peer feedback when time constraints limit the feedback you can give directly.

Strategy 26: Giving feedback to peers creates another avenue for students to learn the material. For best results, train students in giving feedback to others using role-plays.

Feedback in Online Courses

Online courses are growing.

As they grow, students are becoming increasingly dissatisfied with feedback in their online classes. "Learners have reported that inadequate feedback from teachers is less than satisfactory in an online course ([Soon, Sook, Jung, & Im, 2000](#)). These factors create the need for well-crafted online feedback in the written, audio, video, or in the live synchronous web-based conference format" ([Leibold & Schwartz, 2015](#)).

Other researchers cite similar data. In one study, more than two-thirds of students polled stated poor feedback from instructors "as one of their most vexing issues (Sull, 2008)" ([Jones & Blankenship, 2014](#)).

To be more specific, students felt that timeliness was missing in

online feedback. "The 2013 National Online Learners Priorities Report presents responses over a three year period of 114,138 students from 110 institutions to The Noel-Levitz Priorities Survey for Online Learners. Nearly 73,000 of the responses were from primarily online undergraduate students who identified timely feedback from faculty about their progress as one of the top challenges to online education ([Noel-Levitz, 2013](#))" ([Jones & Blankenship, 2014](#)).

Problems with feedback in online courses

The issue with online feedback timing is failed attempts to meet student expectations. "The Net Generation learners prefer and even expect immediate feedback (Groome, 2011)" ([Leibold & Schwartz, 2015](#)).

To help prepare your students for online feedback, set clear expectations with students early. "One way to clarify student expectations is to include additional information in the course syllabus about when and how feedback will be provided" ([Jones & Blankenship, 2014](#)) .

To start improving online feedback, you should understand that giving online feedback is a different skill than face-to-face feedback. "Giving effective online feedback is an important skill for educators to develop because it guides the learner's development. Since feedback is important to the learning process, the art of giving effective online feedback is a critical skill for an educator. Teacher skills for giving online feedback to learners varies from giving feedback in face-to-face courses because non-verbal communications (tone of voice, facial expressions) are absent

in written online feedback" ([Leibold & Schwartz, 2015](#)).

Due to distance, online courses use technology to deliver feedback to students. "In technology-assisted instruction, similar to classroom settings, formative feedback comprises information—a message, display, and so on—presented to the learner following the learner's input (or upon request, if applicable), with the purpose of shaping the perception, cognition or action of the learner (e.g., [Moreno, 2004](#); [Schimmel, 1983](#); [Wager & Wager, 1985](#)). The main goal of formative feedback—whether delivered by a teacher or computer, in the classroom or elsewhere—is to enhance learning and/or performance, engendering the formation of accurate, targeted conceptualizations and skills" ([Shute, 2007](#)).

Understanding which tech tool to adopt can be a little intimidating.

From a student perspective, researchers who studied online learner perception of instructor feedback found that "the two most helpful types of feedback [are] the numerical grade and a grading rubric with comments at the end of the assignment. Ninety-three percent of students reported they read the feedback" ([Leibold & Schwartz, 2015](#)). So when considering a tool, keep in mind that what students find most helpful is the simple stuff.

You can evaluate feedback technology with a few other criteria. Effective tech "(a) enables instructors to provide good quality feedback so as to support the development of students' self regulation; (b) helps teachers produce and deliver feedback in a consistent manner; and (c) facilitates replicability so the system can be used by more than one teacher" ([García-Yeste, 2013](#)).

Strategy 27: Learn to give effective feedback within the limitations of online courses (i.e., without the benefits of body language, tone and expression which are inherent in a face-to-face course).

Strategy 28: Set clear expectations about the method, amount and timeliness of feedback in your course syllabus.

Strategy 29: Consider what types of technology you are using to give feedback in online courses. Select tools that students will find familiar.

Video technology for online courses

One growing piece of tech used in online courses is video feedback. With the increased availability of cameras, instructors can record themselves and their feedback for students. It's an effective way to bridge the gap between student and instructor, allowing both parties to interact a little more. In fact, "[one student] felt like he actually received more 'one-on-one and face-to-face' feedback then he would have received in a 'regular classroom'" (Borup, West, Thomas & Graham, 2014).

Video feedback has that unique power to create connection between online learners and instructors. Researchers who studied the effects of video feedback on social presence "found that participants generally viewed video feedback to be more effective at establishing instructor social presence because instructors

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could better speak with emotions, talk in a conversational manner, and create a sense of closeness with students" ([Borup, West, Thomas & Graham, 2014](#)).

The same study suggested that video feedback was effective in creating instructor-student relations because "it added a 'human touch' that let students know that they 'were talking with a real person' and not receiving a 'computer generated response'" ([Borup, West, Thomas & Graham, 2014](#)).

That "human touch" and increased social presence helped students feel "a sense of closeness with their instructor" ([Borup, West, Thomas & Graham, 2014](#)).

Those benefits of video feedback add to increasing student confidence. "[One student] also explained that the authenticity

of video feedback helped her to increase her confidence in her abilities because she could better see that the instructor "felt like [she] was competent in what [she] was doing." The ability of students to see their instructors' demeanor and hear their tone of voice was also helpful in avoiding misconceptions" ([Borup, West, Thomas & Graham, 2014](#)).

Instructors felt similarly regarding video feedback's ability to convey their emotions, stating "that the visual and vocal cues in video allowed students to recognize the authenticity of their emotions" ([Borup, West, Thomas & Graham, 2014](#)).

Online feedback in the form of video or synchronized feedback saves you time and can help develop your skills as an instructor ([Leibold & Schwartz, 2015](#)).

"Feedback is an important intervention for the online educator

because it is an opportunity to develop the instructor-learner relationship, improve academic performance, and enhance learning" (Leibold & Schwartz, 2015).

To reap all those benefits of online learning, establishing an effective feedback strategy is key. First, create multiple avenues of feedback for students: "promote learner self-reflection, use peer review, vary feedback so it fits the assignment, user group feedback, teacher feedback, and automated feedback" (Leibold & Schwartz, 2015).

Remember that online feedback should build upon itself over the course of the semester. "An online instructor needs to not only consider the design and descriptive elements to provide for their courses but also must afford opportunities that will provide assignments feedback that build on one another until the objectives for the course

are achieved. So feedback takes on a wider variety of dimensions with online instruction than with face-to-face instruction" (Jones & Blankenship, 2014) .

As mentioned earlier, rubrics can be a fundamental part of your online feedback strategy. "In a descriptive exploratory, two phase study, Bonnel and Boehm (2011) studied best practices for giving feedback to online learners.

Common themes emerged: 1) maximize technology, 2) use rubrics, templates, and automated responses, 3) have a system, and 4) create a feedback-rich environment" (Leibold & Schwartz, 2015).

Five themes that you should cultivate to improve online feedback are "student involvement and individualization (feedback being a mutual process involving both student and instructor); positively constructive (providing constructive guidance that builds confidence);

gentle guidance (offering explicit expectations and ongoing coaching); timeliness (mutually established and met timelines); and future orientation (applicable to future situations) (Getzlaf, et al., 2009)" (Jones & Blankenship, 2014) .

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Strategy 30: Use video when appropriate to add the "human touch," deliver more clear communication, and strengthen the relationship between teachers and students.

Strategy 31: Use multiple feedback types to create a "feedback rich" environment.

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Better feedback makes us better

I hope you've found value in this guide to feedback for educators and the 29 strategies outlined here. There's no question that higher quality feedback is a key component to giving more students that "light bulb" moment, where their understanding of key concepts and their ability to demonstrate new skills clicks in their minds. Being a part of that process is one of my favorite things about being an educator.

The great Vince Lombardi said, "Practice doesn't make perfect.

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Perfect practice makes perfect." Which is a "perfect" wrap up for this treatise on feedback.

This piece is published by education technology software makers, GoReact. GoReact is a cloud-based video software for giving feedback on student speeches, presentations, lessons and performances. If you liked this article, I recommend you check out GoReact and see if it's right for you and your classes.

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BONUS Strategy 32: Use GoReact to give feedback in your classes!

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