

Providing Feedback That Moves Learning Forward

Practical Techniques

If I had to reduce all of the research on feedback into one simple overarching idea, at least for academic subjects in school, it would be this; feedback should cause thinking. All the practical techniques discussed here work because, in one way or another, they get the students to think, rather than react emotionally to the feedback they are given. When I talk to teachers about the first of the two studies by Ruth Butler and her colleagues discussed previously (the one in which students were given comments, scores, or both), I ask them, “When the students were given both comments and scores, which did they look at first?” Everyone realizes, of course, that it was the score. What is more interesting is what the students looked at next: somebody else’s score.

As soon as students compare themselves with someone else, their mental energy becomes focused on protecting their own sense of well-being rather than learning anything new. In one school I have worked with, the principal insists that there is a score or a grade on each student’s work every two weeks. The language arts teachers give students the traditional letter grades at the end of each marking period, but during the marking period, they use a grading scheme that they call “minus, equals, plus.” As well as comments, each student receives a symbol of -, =, or + depending on whether the work submitted was not as good as, about the same as, or better than his or her last work on the topic. The students who used to get A grades hate it, because they have to keep getting better to get a +. It is particularly interesting when high-achieving students in these classes compare their grades with other students’ and find that they have received = or even – when students with lower absolute achievement get a +. The important feature of such a grading scheme is that it feeds back to learners about things that are within their control, such as whether they are improving, rather than things that are not within their control, such as how they compare with other students in the class.

To be effective, feedback needs to direct attention to what’s next rather than focusing on how well or badly the student did on the work, and this rarely happens in the typical classroom. Pam Hayes, a middle school math teacher, told me about a conversation she had with a fifth grader in which the student said, “When you get a lot of feedback on your work, it means it wasn’t very good.” When asked to explain this rather surprising comment, the girl pointed out that successful work is usually just given a (high) grade and a comment like “Good job,” whereas less successful work is returned to the student with lots of annotation from the teacher. To this girl, the more “feedback” you got, the worse your work must have been. In many classrooms, teachers require students to do corrections for homework, leaving high achievers with nothing to do. Used in this way, feedback really is punishment.

If, however, we embrace the idea of feedback as a recipe for future action, then it is easy to see how to make feedback work constructively; don’t provide students with feedback unless you allow time, in class, to work on using the feedback to improve their work. Then feedback is not an evaluation of how well or how badly one’s work was done but a matter of “what’s next?”

One technique for structuring this that is particularly effective when responding to a piece of student writing is called “three questions.” As the teacher reads each student’s work, when she sees something on which she would like the student to reflect, she places a numbered circle at that point in the text. Underneath the student’s work, the teacher writes a question relating to the first numbered circle, leaves a number of lines for the student’s response, writes a question for the second, leaves space for the student’s response, and then writes a third question. The first ten or fifteen minutes of the next lesson are taken up with responding to the three questions posed by the teacher. The important feature of this technique is that no matter how bad or good your work was, everyone has the same amount of work to do.

This idea that feedback is about “what’s next?” also addresses another shortcoming of much current practice. I often ask teachers whether they believe that their students spend as much time utilizing the feedback they are given as it has taken the teacher to provide it. Typically, fewer than 1 percent of teachers believe this to be the case, and this needs to change. The first fundamental principle of effective feedback is that feedback should be more work for the recipient than the donor.

Giving students comments, rather than grades or scores, is obviously useful, but most teachers still find it difficult to get the students to read the comments. Charlotte Kerrigan, a language arts teacher, had been giving only comments to her students for a while but was still unhappy with the amount of attention the students were giving to her comments, so she made a small but extremely powerful change in the way she provided feedback. Her tenth-grade class had just completed essays on a Shakespeare play they had been studying. Kerrigan collected the essays, and instead of writing her comments in the students’ notebooks, she did so on strips of paper. Each group of four students received their four essays and the four strips of paper, and the group had to decide which comment belonged with which essay

A second principle of effective feedback is that it should be focused. We generally give our students large amounts of what we call feedback (although an engineer probably wouldn’t), but it is usually of moderate quality, and we generally don’t require students to do much with it. In giving feedback, less is often more.

I learned this the hard way when I first became a teacher educator, working with preservice teachers and observing them during their periods of practical teaching. I would sit at the back of their classrooms and assiduously note all the errors they had made in their teaching- I would frequently generate as many as three pages of comments on all the errors the student teacher had made in a forty-five-minute lesson. At the end of the period, I would bestow this wonderful feedback on the hapless student. I was frustrated that my wonderful feedback did not seem to be having any effect. After a while, I realized that the problem was that I was giving far too much feedback; I needed to give less, but more focused, feedback. Rather than handing over a whole list of errors to be corrected, I started saying things like, “Over the next two weeks, I want you to work on these two things: first, before you give any important instructions to the class, make them put their pens down, and second, make sure that you don’t talk over the students- if they start talking to each other when you are talking, stop talking.” I gave less feedback and had more impact by being focused.

A third principle is that the feedback should relate to the learning goals that have been shared with the students. If the teacher has provided a scoring rubric, then it is important that the feedback relates to that rubric. If there are learning intentions and success criteria for the work, then the feedback should loop back to those. This sounds obvious, but I have lost count of the number of times I have seen teachers provide students with rubrics or success criteria and yet fail to use these in framing their feedback to the students.

Math teachers may be thinking that ideas such as comment-only grading may work well in language arts and social studies, but math is different. After all, if a student has solved twenty equations, and the teacher places a check mark next to fifteen of them and a cross next to the other five, the student can work out his score of fifteen out of twenty, even if the teacher does not put a score of 75 percent on the work. As noted previously, however, what is important is not the form that the feedback takes but the effect it has on students.

Putting a check or a cross next to each of the solutions leaves nothing for the student to do, except maybe correct those that are incorrect. An alternative would be to say to the student, "Five of these are wrong. You find them; you fix them."

This technique is particularly well suited to mathematics as it is often easier to check whether a solution is correct (for example, by substituting for a solved variable back into the original equation). However, it can also be readily adapted to other subjects. When reviewing a final draft of a piece of writing, a language arts teacher placed a dot in the margin of each line where there was something that needed attention. For weaker students, she replaced the dot with a *g* for an error in grammar, an *s* for a spelling error, a *p* for punctuation, and so on, thus differentiating the feedback. The important point is that the feedback is focused, is more work for the recipient than the donor, and causes thinking rather than an emotional reaction.

Conclusion

The word *feedback* was first used in engineering to describe a situation in which information about the current state of a system was used to change the future state of the system, but this has been forgotten, and any information about how students performed in the past is routinely regarded as useful. It is not. In this chapter, we have seen that in almost two out of every five carefully designed scientific studies, information given to people about their performance lowered their subsequent performance. We have also seen that when we give students feedback, there are eight things that can happen, and six of them are bad.

Some ways to give effective feedback have been described in this chapter, but every teacher will be able to come up with many more, provided that the key lessons from the research on feedback are heeded. If we are to harness the power of feedback to increase student learning, then we need to ensure that feedback causes a cognitive rather than an emotional reaction- in other words, feedback should cause thinking. It should be focused; it should relate to the learning goals that have been shared with the students; and it should be more work for the recipient than the donor. Indeed, the whole purpose of feedback should be to increase the extent to which students are owners of their own learning.