Welcome back to *The Bridge*, the monthly newsletter of the Center for Transformative Teaching and Learning. Each month *The Bridge* analyzes a specific aspect of teaching and learning through a Mind, Brain and Education Science research-informed lens.

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**Feedback: The Dos and Don'ts**

*By Ian Kelleher*

Imagine yourself working hard late at night, a mountain of essays and workbooks in front of you. Perhaps you are scribbling paragraph upon paragraph of feedback by candlelight, with the hours waning until sunrise. Tired and hungry, you rummage your pantry for a late night snack, or you fall asleep atop the mountain of paperwork, only to wake panicked in the morning.

When educators work in this way, both teachers and their students suffer. Though working with the best of intentions, when teachers write feedback that is too long and incomprehensible, it makes things worse so that both the students' performance and the teacher's physical and mental well-being deteriorates.

In their review of 90 years of feedback studies, Kluger and DeNisi (1996) found that in 38% of well-designed studies, feedback actually made performance worse. Consider those hardworking teachers marking papers feverishly for years who may have improved their students' performance by putting their pen down and binge-watching *The Wire*.

Now imagine what would happen if they had picked their pens up, armed with some simple research on what works. As many schools are staring at the daunting end of their first grading period, the aim of this Bridge is to equip you with strategies that can help both you and your students succeed and stay sane.

Great feedback may be the factor that we can control that has the largest impact on student learning, and it is at a low cost per pupil, as shown in the chart below from [Professor Rob Coe and the Education Endowment Foundation](http://www.eef.co.uk). But what should we do, and what should we avoid?
What should we do?
Simply providing more feedback is not the answer. **Quality is more important than quantity when it comes to feedback.** Quality feedback contains these three components:

1. **Show students what mastery looks like BEFORE they work on an assignment**
   Students need descriptions of what success or mastery would look like. Teachers tend to overestimate students' ability to figure this out themselves. It is just where their brains are at this point in time in their long development. Giving examples of work is good, yet too many teachers shy away from this. One interesting idea we heard was giving examples of a B+ piece of work, and then having a discussion about why it deserved a B+, including both positives and negatives.

2. **Tell students their current strengths and weaknesses**
   Students need feedback that tells them their strengths, weaknesses, and what they need to do to improve. We tend to focus on weaknesses, but we need to help with strengths too. Teachers tend to overestimate students' ability to recognize when they have started to do something correctly. So, when you think a student has made one of those important mental leaps forward in your class, or has really mastered a crucial concept, it may be entirely deliberately or they may have stumbled upon it to some degree. Ask yourself, how sure am I that they are totally aware of this? And err on the side of helping them identify it, and perhaps even walking them through the leap they have made.

   When working on weaknesses, make it a conversation about strategies, as best you can. What strategy did you use? How do you think that strategy worked? What are some other strategies you could have used? What are some strategies that have worked for your friends? If they become sick of the word "strategy," you have succeeded.

3. **Give students a path forward post-feedback**
   Students need feedback that helps them know where they're supposed to go next. Teachers tend to overestimate students' ability to know the next steps to take when
they receive the feedback. As Dylan Wiliam said, "Feedback should be more work for the recipient than the donor." This is still true. Ideally, we would give the smallest of nudges in the right direction and the result would be dramatically improved work. So we should not feel bad about giving a nudged sized piece of feedback to meet the individual student's current need.

In addition, consider the importance of relationships during this process of giving and receiving feedback. We must aid students in setting and maintaining high aspirations as well as help them stay in the game as they ride the seesaw between struggle and success.

What should we avoid?

1. **Incomprehensible feedback:** Make sure your students understand your feedback. This is one of the greatest problems students have with feedback. Teachers tend to underestimate how much of an issue this is.

2. **Feedback without opportunities for implementation:** Students need an opportunity to act on your feedback. In the words of the fabulous, esteemed Professor Dylan Wiliam, "Feedback, no matter how well designed, that is not acted upon by the student is a waste of time." We tend to overestimate students' ability to carry over feedback from one assignment to apply it to the next, so we need to provide students with opportunities to use the feedback they get.

3. **Feedback on summative assessments:** Stemming from this is a powerful challenge to you as teachers: do not give feedback on summative assessments for which the students have no further chance to do anything with that feedback. Just give a grade. Implicit in this recommendation is that students will have adequate opportunities to receive and act on feedback before the grade is given. This feedback may come from a combination of you and the creative use of other students. I also wonder if some small amount of conversational feedback that is focused on developing that relationship with the student will help, or something that helps put this one assignment into the bigger picture.

4. **Diluted feedback:** Use enough praise to keep students in the game - and even link it to the strategies they have used and the quality of their effort. Too much praise dilutes the feedback. Feedback has so much potential, and our teacher time too limited to dilute it.

5. **Including a grade with feedback:** Take a moment and rank these from greatest to lowest impact on learning:
   - grades only
   - comments only
   - grades + comments
   In several amazing studies by Ruth Butler, the best scenario by far was shown to be comments only. This improved not only the performance of students at all achievement levels, but their attitude to learning as well. Stunningly, grades + comments resulted in worse performance over time than grades only. Again, think of all that wasted work!

6. **Too much feedback:** Give each individual student the volume of feedback they can deal with. This may well be less than the amount to turn a C quality paper to an A quality paper, so we need to discuss this with our students, and think about how we can give them an appropriate number of opportunities to iterate before summative grades are awarded.

7. **Feedback when reteaching is necessary:** If you find you are writing the same thing again and again, we must hold our hand up and admit that perhaps we as teachers
could have done a better job explaining it, and so perhaps we should reteach it.

**8. Summative assessments only:** Use lots and lots of formative assessment prior to summative assessments so the both you and your students gets lots and lots of feedback on what you need to do differently while you still have time to act on it.

Lastly, think of what the feedback continuum looks like in your class. The feedback you give in May should not the same as the feedback you give in September. Early in the year, feedback should be detailed, specific and delivered rapidly. By the end of the year it should be delayed, reduced and summarized. Think of what minimum degree of feedback you want your students to thrive on in May. How do you get them there? Put this scaffolding into place and gradually peel it away.

If we approach feedback with these strategies, we are less likely to be overworked mountaineers and more likely to be effective teachers who can use scaffolding to help our students climb the mountain challenges we give them.

Please give us feedback on our bridge post; email us at cttl@saes.org with recommendations for future posts.

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**Upcoming CTTL Events**

**Diversity in the DMV: A Regional Student and Educator Conference**
February 23, 2018

**TAKOM: The Principles and Strategies of Neuroeducation**
June 18-20, 2018

**Creating Innovators Through Design Thinking**
June 18-20, 2018

**National Diversity Directors Institute**
June 24-27, 2018

**Science of Teaching and School Leadership Academy**
July 22-26, 2018

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