

CHAPTER ONE

THE HINGE FACTOR: FEEDBACK

In the 1990s, Arthur Agatston, a cardiologist, identified a hinge factor that irrevocably changed his patients' lives. In the book, *The South Beach Diet* (2003), Agatston describes how his seemingly obvious epiphany that heart-healthy persons tend to be slimmer than his patients who battle heart disease led him to find a way to be slim without following a typical low-calorie diet. Previously Agatston and his patients were unable to successfully lose weight because most diets reduced food intake, caused unhealthy metabolism shifts, and resulted in subsequent weight gain. Low-calorie diets exacerbated their heart-related blood chemistry results. Agatston discovered that the hinge factor for balancing blood chemistry was reducing cravings for certain types of foods, which in turn led to losing unwanted weight. People who intentionally reduced cravings ate, as he described, *heart healthy*. By eating better, patients' cardiologist results improved, and they became slimmer.

Agatston argues that one should not try to lose weight. Instead, the South Beach diet provides a protocol for learning how to eat to manage cravings and Agatston provides examples to address many types. His patients, who became aware of the single issue,



cravings, conscientiously changed their habits to become heart healthy, and in the process lost weight.

MANAGING FEEDBACK

Can we make an analogy between a diet example and finding a way to improve student learning, especially for unmotivated or disengaged students?

Managing cravings by increasing eating challenged the prevailing notion that dieters need to reduce food intake. To make the analogy, there would have to be some factor in the science of learning that challenged the conventional wisdom.

More engaged learners achieve better, and to reach goals an observer can see that engaged learners actively seek feedback. In a very subtle way, this challenges the prevailing notion that only the teacher can provide timely and frequent feedback to students. Because higher achieving students have learned to seek feedback, that action also keeps them engaged throughout lessons. The unmotivated or disengaged learner could learn techniques to seek feedback that would, in turn, keep them more engaged in class, resulting in higher achievement.

Just as most dieters were unaware of managing cravings, I find that many students are unaware of tactics to seek feedback. When they learn to use simple tools to seek feedback about their progress, they become as motivated as any other student, engaged in lessons, and are able to perform as self-regulated learners.

PAUSE TO REFLECT

The prevailing notion is that the teacher gives the feedback to the student. Can a student learn to receive feedback from self and others to be productive in school?

RESEARCH ON FEEDBACK

In 2001, I coauthored a book about instructional strategies titled *Classroom Instruction That Works* (Marzano, Pickering, & Pollock, 2001). We posited that teachers at any grade level in any subject area could significantly improve learning if they deliberately taught students to use high-yield strategies in order to retain knowledge better, or learn better. One of the strategies, setting goals and providing feedback, showed a strong effect on learning ($d = 0.61$, or a 23 percentile point gain, considered to be very high) (p. 7).

When we think of feedback, we naturally think about assessment of progress. In our daily lives, we receive feedback about our performance on desired goals that we can use to improve ourselves. Feedback tied to a criterion or goal also clarifies relevant prospects for learning more information or for acting. That action intends to improve outcomes and as a result, provides the opportunity for a newly advanced goal.

Feedback can be the hinge factor for improving student learning, but there might be at least two reasons why we have not recognized it before. First, most classroom feedback has intentionally been directed from the teacher to the student, largely based on a behaviorist definition of feedback, intended mostly as assessment of student progress. Teachers evaluate how well students perform on tasks such as classwork, homework, or tests and communicate that to the students. When teachers are asked to increase feedback to students, they often respond that they are already taxed for time and are giving as much feedback as they can possibly give. The techniques this book suggests are primarily intended for students to use to increase feedback for themselves, but that requires teachers to make changes to teaching habits in order to provide the opportunities for learners.

Second, most teachers view curriculum goals and objectives as the content for the teacher to cover. Teachers provide a curriculum goal (and objectives) to students, but not deliberately for explicit

interaction (setting objectives and providing feedback), so students have not typically learned to self-evaluate or self-regulate their progress using curriculum objectives, thereby reducing the gaps between what they know and can do and the desired goals for their grade level and subject area.

To change the first issue, an understanding of classroom feedback can be broadened to include tools to deliberately maximize student self-evaluation and peer feedback. A student who knows ways to seek and use feedback other than solely from the teacher responsible for twenty or more students, will become more engaged in the class and achieve better over time. Regarding the second issue, the teacher can deliberately provide curriculum goals and objectives daily, with a strategy and time for students to interact with them.

PAUSE TO REFLECT

Explain the ways that you and your fellow teachers have deliberately used feedback in a positive way and how you can expand such practices to positively impact student learning.

FEEDBACK FOR INSTRUCTION, NOT ONLY ASSESSMENT

In the past ten years, meta-analyses have shown that the teacher is the most important school factor to improve student learning (Marzano et al., 2001) and that it is more important to consider the teacher effect rather than the school effect when it comes to improving student achievement (Hattie, 2009). When one stops to think about the amount of time that students spend each day in classrooms, then the impact that teachers have on student learning seems obvious. But, the teacher is not the hinge factor; *the transfer of information* is the hinge factor.

Feedback is typically characterized as assessment of progress toward a goal, but it is also a cue to seek more information or instruction. Think about the typical conversation with your child or another student when you ask, “How are you doing in Class X?” The student responds nonchalantly, “I don’t know yet, but I will next week after I take the test.” If the student interacts with the curriculum goals at the beginning and throughout the lesson, then the natural process of using feedback to cue an instructional need or opportunity presents itself. It appears that we have missed the opportunity to systematically use feedback in this instructive way.

The best way that a school can provide for a student to learn and use feedback strategies is for the teacher to make teaching changes to incorporate feedback throughout instruction as well as during assessment in every class.

Just as a hinge connects two panels so they can swing relative to each other, feedback is the hinge that swings the information about goals and progress between teacher and student. Teachers who deliberately teach students to use feedback and help-seeking strategies to learn the content of the curriculum objectives report that student engagement increases. As students become more engaged in the learning activities, their actions and self-assessment provide feedback to teachers, who in turn make deliberate decisions to adjust teaching.

Considering feedback as a learning strategy, not just something teachers are required to do, inspires teachers to teach students to self-evaluate and use feedback from others as a critical part of all lessons.

PAUSE TO REFLECT

What do you think about when you hear the word feedback? Do you think about improvement?

SMALL CHANGES, POSITIVE GAINS

This book, *Feedback: The Hinge That Joins Teaching and Learning*, is about making small changes in every classroom to dramatically increase student engagement and achievement. This book shares practical examples of how to incorporate instructive feedback into daily lessons by optimizing opportunities for students to seek and receive goal-based feedback through self-regulation and from others, as well as by changing the direction of the feedback so students can learn to initiate feedback productively.

The next chapter, “Positive Deviants,” gives a brief but intriguing explanation about a change process that focuses on solutions that are “invisible in plain sight.” The change process described there zeroes in on small behaviors within a community that can lead to large gains in an organization, resulting in coveted improvements. The story of the soup and the ladle will inspire some teachers to change their teaching habits slightly. They will find that the solution of changing the direction of feedback in the classroom is as basic as ladling soup differently.

In Chapter 3, “The Tell-Tale Students,” I explain the first of various practical feedback tools, a goal accounting template, with examples that require minimal changes to teaching time or materials for any classroom at any age level, from an elementary resource classroom to a high school honors course. A goal accounting template is a student-managed tool that calls attention to the student’s progress on curriculum goals and objectives. This powerful student self-regulating technique changes school for underachieving learners. These templates engage every student at the beginning, during, and at the end of every lesson, increasing interaction and achievement. When students use the templates, they provide feedback to teachers about how they perceive their progress; this information has prompted many teachers to find ways to provide better instruction.

Chapter 4, “Learn to Engage,” emphasizes strategies that a student can use during a lesson to seek feedback about his or her progress that extend beyond self evaluation to self-teaching, peer interaction or peer teaching, and seeking further instruction from the expert (teacher) in the class. The strategies, turn-and-talk and note taking, are familiar to most teachers and students, but by most accounts, not deliberately used to increase engagement and achievement. Students may have taken notes, for example, as a classroom activity and received points or grades for doing so. As a feedback strategy, students take notes to manage what they know about the curriculum goals and objectives. Because it is written and visible to others, students can use their notes as a tool to seek further information from others. That leads to the other strategy, turn-and-talk, which is a powerful tool to manage feedback orally.

Changing instruction by increasing feedback is significant, but changing assessment adds another opportunity to positively impact student achievement. Criterion-based or standards-based record keeping is a process that increases the teacher-to-student feedback, both as formative and summative assessment. Chapter 5, “Feedback From the Teacher,” provides a discussion about the companion technique to the student goal accounting template so that teachers can track and document student performances by goals and objectives during instruction and on assessments.

The final chapter, “Feedback Changed My Teaching,” is included for school principals and instructional coaches who work with teachers. This chapter explains how some principals or coaches successfully work side-by-side with teachers to help them incorporate better feedback, instruction, and assessment to learners. The teachers explain the importance of receiving feedback from their colleagues in order to change teaching strategically.

Within each chapter, teachers contribute their personal successes and challenges about making and sustaining changes to instruction based on the hinge factor, feedback. Whether they

teach science or English, at the high school or elementary level, in resource or general education classes, teachers have shown that they can incorporate the suggestions because the tools increase student engagement and teach students to become more self-regulated, able to use peer feedback, and motivated to seek feedback from the teacher.

The greatest lesson about the hinge factor, feedback, is that when students become motivated to share their own progress with teachers, the teachers become inspired to teach better.

PAUSE TO REFLECT

How has your school responded to the need to improve engagement and student achievement?

When observing for feedback in classrooms, which students seem to naturally seek and receive feedback? Could other student behaviors change if the teacher provided a cue or instruction to do so?