Formative Assessment II: Feedback and Instructional Adjustments

**Concept Map**

**Effective Praise**
- Is specific
- Is spontaneous
- Relates to standards
- Focuses on internal attributions
- Indicates progress

**Types of Feedback**
- Verified
- Elaboration
- Goal-directed
- Scaffolded
- Self-referenced, Standards-referenced
- Norm-referenced

**Factors in Using Feedback**
- Timing
- Mode
- Type of task
- Differentiated
  - student ability
  - grade level
  - subject

**Instructional Adjustments**
- Mastery learning
- Differentiated instruction
  - content
  - process
  - products
- Learning progressions
- Recursive model

**Effective Feedback**
- Relates performance to standards
- Relates performance to strategies
- Indicates progress
- Indicates corrective action
- Is given frequently
- Is specific
- Focuses on errors
- Focuses on effort attributions

From Chapter 5 of *Classroom Assessment: Principles and Practice for Effective Standards-Based Instruction*, 5/e. James H. McMillan. Copyright © 2011 by Pearson Education. All rights reserved.
In the previous chapter we learned about gathering information for formative assessment, both informal, real-time data gathering and information that is collected from more formal assessments, such as quizzes and structured exercises. This chapter completes our discussion of formative assessment by considering two components that make formative assessment effective—providing feedback and implementing instructional adjustments. We will first consider feedback—a dimension of teaching that is more complex than what may appear at first to be a simple process.

Providing Effective Feedback

One way teachers use assessment information is to know how to respond to students after they demonstrate their knowledge, reasoning, skill, or performance. The teacher’s response is called feedback—the transfer of information from the teacher to the student following an assessment. Feedback can be provided in the form of grades on unit tests and report cards, though normally grades offer very limited feedback. Our discussion will focus on the characteristics of effective feedback that is provided both during and after instruction. In Chapter 13 feedback as grades is discussed in greater detail.

The nature, purpose, and types of feedback teachers give to students based on academic work has been extensively researched, with initial studies of positive reinforcement published nearly 100 years ago. More recently, several reviews of literature on feedback provide a strong case about what works and what doesn’t when teachers respond to student answers and products in particular ways (Brookhart, 2008; Hattie & Timperly, 2007; Kluger & DeNisi, 1996; Shute, 2008).

Research literature, as well as commonsense experience, has confirmed that the right kind of feedback is essential for effective teaching and learning. A simple definition of feedback is confirming the correctness of an answer or action, that is, whether it is right or wrong. This is what we do with most tests—tell students what they got right and what they missed; it is also the extent of the feedback teachers give to students’ answers to oral questions—“Good,” “That’s right,” “Close,” and so on. Feedback of this nature is only part of what students need to improve their learning. They also need to know how their performance compares to learning targets and what can be done to close the gap between their performance and these targets. When feedback is presented as information that can guide the student’s meaningful construction of additional knowledge and understanding, learning and intrinsic motivation are enhanced (Mayer, 2002).

To further illustrate the importance of effective feedback, allow me to tell you another short story about my daughter, Ryann. As a gymnast, Ryann had a goal to earn a score of 10 on each of her routines. After she completed a routine, the judges gave her a score of, say, 8.5 or 9.2. This is analogous to a teacher giving a student a score or grade. But simply knowing the score didn’t help Ryann know what she needed to do to improve her score. When the judge immediately indicated,
specifically, why certain points were deducted, then she knew what to work on. Furthermore, if the judge or coach told Ryann how she could correct the skill, she had the corrective procedures needed. Similarly, a student who receives a 70% on a test knows that he or she has not done well, but unless otherwise indicated, this information alone does not tell the student what to do next. Or suppose you just started to learn golf. You miss the ball. Your skill level is obviously low. But knowing that is not enough. You need to get feedback about *why* you missed it. Is it because of your stance, your hand grip, the position of your head, your backswing, or some other aspect of your swing? When the teacher tells you precisely what you did wrong, what you need to correct, how you can correct it, and how you can advance, effective feedback has been provided.

Because teaching is complex, depending on the nature of students, the context, and the subject being taught, effective feedback is also no simple matter. There are many choices about what kind of feedback to give, how much to give, and when to give it, depending on the learning targets and student characteristics. As Brookhart (2008) says, “In the final analysis, feedback is always adaptive. It always depends on something else” (p. 112). Effective feedback, then, is more than keeping in mind a few important principles, such as “keep feedback specific and individualized,” or “keep it positive and brief.” Rather, good feedback depends on appropriate teacher decision making and responses to students contingent on several important variables. That is, effective feedback is differentiated—what works for one student may not be effective for another student. An initial consideration is based on the type of feedback that is most appropriate to improve student learning and motivation.

### Types of Feedback

There are many different types of feedback. Some of these are summarized in Table 5.1, which shows feedback based on complexity, as either simple (verified feedback) or more complex (elaborated feedback). Interestingly, the research on whether increased complexity is better for learning than simple feedback is mixed (Schute, 2008). The inconclusive findings suggest that other factors in the nature of feedback may be more important than complexity. In addition to these, five other types of feedback are important for formative assessment—goal-directed, scaffolded, self-referenced, standards-referenced, and norm-referenced.

#### Goal-Directed

Feedback that is goal directed provides information about learners’ progress toward achieving a specific learning target. It is important that the targets are challenging yet attainable and that the learner has an expectation that they can achieve the goal. Goals that are too high will promote more failure and discouragement, whereas goals that are too low will not result in increased efficacy.
TABLE 5.1 Types of Feedback Based on Complexity

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Verification</strong></td>
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<tr>
<td>Correct response</td>
<td>Informs students of the correctness of their answers</td>
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<tr>
<td>Try again</td>
<td>Acknowledges student’s correct answer with no additional information</td>
</tr>
<tr>
<td>Error flagging</td>
<td>Acknowledges student’s incorrect answer and allows attempts to relearn in the same way</td>
</tr>
<tr>
<td><strong>Elaboration</strong></td>
<td></td>
</tr>
<tr>
<td>Attribute isolation</td>
<td>Includes explanation about why an answer was correct or incorrect; may allow for additional time to relearn</td>
</tr>
<tr>
<td>Response contingent</td>
<td>Presents central attributes of what is being learned</td>
</tr>
<tr>
<td>Hints</td>
<td>Describes why an incorrect answer is wrong and why a correct answer is right</td>
</tr>
<tr>
<td><strong>Hints</strong></td>
<td>Prompting or cues guiding the student in the right direction to learn the correct answer</td>
</tr>
<tr>
<td><strong>Bugs</strong></td>
<td>Misconceptions are explained with error analysis and diagnosis</td>
</tr>
<tr>
<td>Informative tutoring</td>
<td>Includes verification feedback, error flagging, and strategic hints on how to proceed without providing the correct answer</td>
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Source: Based on Shute, 2008, p. 160.

Moderately difficult, attainable targets also result in greater student motivation and engagement. This is especially true if the feedback is directed toward greater mastery and understanding, rather than simply obtaining a right answer. It has been well established that individuals with a mastery or learning goal orientation will be more motivated than individuals with a performance orientation, demonstrating greater persistence despite failure, and choosing more challenging tasks. A performance orientation, in contrast, results in a tendency to disengage with failure, show less interest in challenging tasks, and shows selection of tasks that are easy. Providing feedback that stresses mastery or learning helps to develop a mastery goal orientation. That is, the nature of the feedback can influence goal orientation in a way that can have a significant positive effect on learning and motivation.

**Scaffolded**

Scaffolding is an approach to instruction in which the teacher provides support to enhance learning by breaking a task down into smaller parts and interacting
with students to help them learn each part sequentially to reach a learning target (like what my daughter experienced in gymnastics). Typically, teachers give tips, strategies, new materials, and cues to students as “supports” that allow students to gradually develop autonomous learning strategies. Supports are removed as students progress in their learning and understanding.

Although there are many levels and types of instructional scaffolding, the elements of scaffolding that are important for feedback include the emphasis on manageable, sequential steps and the goal of gradually shifting responsibility for learning from the teacher to the student. Feedback is focused on skills that are just beyond the student’s capabilities and efforts, with guidance to pursue additional learning. This principle is based on Lev Vygotsky’s zone of proximal development, in which teachers identify and focus on skills that are within student capabilities and also challenge to move them to higher learning (Horowitz, Darling-Hammond, Bransford, Comer, Rosebrock, Austin, & Rvst, 2005). Teachers guide student attention by giving them ideas and directions to enhance performance without giving correct answers.

**Self-Referenced**

This type of feedback compares student work or expectations with previous performance. Showing students how they progressed from what they did previously helps them see the improvement they made. The focus is on how work builds on or is better than previous performance (e.g., “Pat, your writing today shows a better understanding of noun–verb agreement than what you handed in last week”). This encourages students to believe that they are capable of subsequent learning and helps students define what needs to be done next; for example,

> “Maria, your division has improved by showing each step you used in your work. Now you need to be more careful about subtraction.”

When students complete a learning task, they often think about why they were successful or unsuccessful. These messages are called attributions, and it is important for teachers to help students internalize the appropriate reasons. Motivation will be enhanced if students believe they were successful because of the effort they put forth (Pintrich & Schunk, 2002). Effort attributions are helpful because they help establish a positive self-efficacy that communicates an ability to do the work successfully. Hence, teachers can point out how students’ specific effort was responsible for being correct. Effort attributions are especially important for low-performing students. Too often these students develop external attributions that when they are successful, it is for some reason that is not under their control (e.g., luck or teacher help), rather than an internal attribution such as effort. These attributions should emphasize a moderate amount of effort. Too much effort may suggest less emphasis on ability attributions.