**Source of Research:** Hattie, J., & Timperley, H. (2007). Review of Educational Research, 77(1), 81-112.

## What is this research about?

This article is about understanding why particular kinds of feedback promote learning effectively and why others do not. Circumstances under which feedback has the greatest impact are identified.

#### What did the researchers do?

The researchers synthesized evidence related to the power of feedback and conceptualized and used a model to identify how feedback could be used to enhance teaching and learning.

# What you need to know...

A critical aspect of feedback was the information given to students and their teachers about the attainment of learning goals related to the task or performance. Defining success criteria was also critical in providing clarity as to when and how a student (and teacher) would know they were successful in attaining goals set out for learning.

There are many possible ways for teachers and students to reduce the gap between current and desired understandings in response to feedback.

- 1 Teachers can provide specific goals and information about the criteria for success in attaining them.
- **2** Teachers can clarify goals, enhance commitment or increase effort to reaching them through feedback.
- 3 Teachers can create a learning environment in which students develop self-regulation and error detection skills.
- 4 Students can increase their effort, particularly when the effort leads to tackling more challenging tasks or appreciating higher quality experiences, rather than just doing 'more'.
- 5 Students may develop effective error detection skills, which lead to their own self-feedback aimed at reaching a goal.
- **6** Students can seek better strategies to complete the task or be taught them.

## What did the researchers find?

Some feedback is effective in reducing the discrepancy between current understandings and what is desired, and some is ineffective.

Feedback was **effective** when:

- it answered three major questions asked by the teacher and/or student
  - 1 Where am I going? (What are the goals?)
  - 2 How am I going? (What progress is being made toward these goals?)
  - *3* Where to next? (What activities need to be undertaken to make better progress?)

Note: Testing was one method teachers could use to address the question "How am I going...?" but tests often failed to convey feedback information that helped teachers and students to know "How they are going...?"

- it consisted of information about progress and/or about how to proceed.
- it involved students receiving information feedback on the task and how to do it more effectively.
- it provided information that led to greater possibilities for learning (strategies and processes) as opposed to 'more' (more information, more tasks, more expectations).
- it provided information on correct rather than incorrect responses, and was built upon changes from previous trials.
- it consisted of written comments instead of grades.

### Feedback was **ineffective** when:

- it was not directed toward the attainment of a goal.
- goals were poorly defined (feedback did not help students to reduce the discrepancy in the gap between current learning and intended learning because the gaps were unlikely to be clear for students to see a need to reduce them).
- it consisted of praise (praises carried little information that provided answers to any of the three questions and too often deflected attention from the task).
- it consisted of punishment and/or extrinsic rewards (tangible rewards significantly undermined intrinsic motivation, particularly for interesting tasks compared with uninteresting tasks).
- it consisted of marks alone or comments accompanied by marks.

How do you assist students in reducing the discrepancy between current understandings and desired goals?

