

Spotlight

Reframing feedback to improve
teaching and learning

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Introduction



The research is clear: improving feedback practices can significantly improve student learning and the quality of teaching in classrooms.

Effective feedback practices provide the bridge between assessment and learning. High quality feedback can improve student learning by as much as eight months. There's a strong evidence base behind the impact of feedback. It is a cost-effective approach to enhancing student outcomes and it can be implemented in any education context.

Teaching and learning activities, including formative and summative assessments, provide opportunities for teachers to gather evidence about students' progress. This informs teacher feedback to students about their learning and what they need to do next to move forward.

The evidence also provides feedback to teachers, allowing them to evaluate and, if necessary, adapt or change strategies to ensure they are meeting the learning needs of their students.

The *Australian Professional Standards for Teachers* make clear that teachers at all career stages are expected to be able to assess student learning and to provide feedback to students on their learning.

Australian and international research can assist educators, especially school leaders and teachers, to understand the role of feedback in learning and to take action to improve the way feedback is used in classrooms.

At a glance

Quality feedback:

- has the potential to markedly improve student learning
- reduces the gap between higher and lower-achieving students.

How effective can feedback be?

Although there are differences in the reported impact, the research consistently shows the value of feedback.

Hattie and Timperley (2007) report on research aimed at identifying those influences that are most effective in improving student achievement. They reviewed 196 studies on feedback and determined that effective feedback can almost double the average student growth over a school year. Dylan Wiliam (2010) states that studies on feedback typically note that the pace of student learning is accelerated by at least 50%, meaning student learning is increased by an additional six months or more over a year. Evidence for Learning's [Teaching & Learning Toolkit](#) positions effective feedback as increasing student learning by, on average, an additional eight months in a year.

In an earlier study, Black and Wiliam (2010) add that many of the studies also show that improved formative assessment (or feedback) helps lower achieving students more than the rest, and so raises the overall standard of attainment while reducing the gap between higher- and lower-achieving students.



At a glance

Effective feedback is:

- information about student's progress towards a learning goal.

What does effective feedback look like?

Defining feedback

Collectively the research defines feedback as information¹:

- for the learner and teacher about the learner's performance
- about performance relative to learning goals
- based on evidence of learning
- from the teacher, the student or peers
- leading to changes in teacher and student behaviour.

There is wide agreement about the intent of feedback. Effective feedback is designed to achieve improvement in student learning, continuously driving a student's current performance towards a current learning goal.



¹ Adapted principally from Hattie and Timperley, 2007; Black and William, 2010; and Evidence for Learning, 2016

At a glance

Feedback questions:

1

Where am I going?



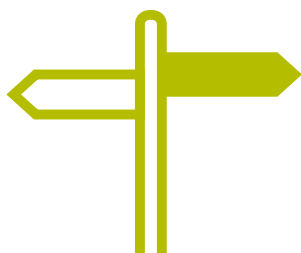
2

How am I going?



3

Where to next?



Using feedback effectively

Feedback relies on clearly defined goals (including learning intentions and success criteria) and on learning tasks or activities to track a student's progress towards those goals. The information gathered through these activities provides the basis for feedback to a student.

There are two well-referenced models that explain the underlying principles of feedback: Hattie and Timperley (Hattie & Timperley, 2007) and Black and Wiliam (Black and Wiliam, 1998, 2010 and 2009 and Wiliam, 2010). Both models agree that the purpose of feedback is to achieve changes in student learning so that student understanding and performance meet the identified learning goals. At the heart of both models are three similar core elements to address within the feedback process.

Comparison of models

Hattie and Timperley model of feedback (2007)	Black and Wiliam model of formative assessment (2009)
Where am I going?	Where the learner is going
How am I going?	Where the learner is right now
Where to next?	How to get there

Both models agree that good feedback processes produce two key outcomes:

- Teachers use and adapt effective teaching strategies to help students make progress in areas identified as needing attention
- Students change what they do to address the learning goals more effectively.

Black and Wiliam (2009) define five key strategies for formative assessment or feedback:

1. clarifying, sharing and understanding learning intentions and criteria for success
2. engineering classroom activities that elicit evidence of learning
3. providing feedback that moves students forward
4. activating students as instructional resources for one another
5. activating students as the owners of their own learning.

At a glance

Feedback levels:

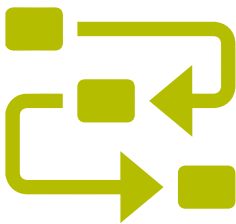
1

Task



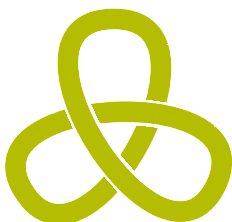
2

Process



3

Self-regulation



Black and William emphasise student self-regulation, which is consistent with the most powerful level of feedback identified by Hattie and Timperley.

	Level	Description	Impact
1	Task	how well tasks are understood and performed	Useful
2	Process	the main process needed to understand/perform tasks	Powerful
3	Self-regulation	self-monitoring, directing and regulating actions	Powerful
4	Self level	personal evaluations and affect* (usually positive) about the learner	Ineffective

* For example “I love the way you draw with so many colours, you’re a brilliant student” or “You work too slowly”.

Bringing it together

The table below brings together both models and additional relevant research into a synthesised frame.

Purpose	Feedback should identify and help continuously drive a student’s understanding or performance towards a learning goal.
Focus	Feedback must answer one or more of these questions for the student (and the teacher): <ul style="list-style-type: none">• Where am I going?• How am I going?• Where to next?
Level	Feedback can be provided at one or more of four levels: <ol style="list-style-type: none">1. The learning activity – how well the task is understood or performed2. The process of learning – what the student has to do to perform the task3. The student’s management of their learning – planning and self-monitoring4. The student as an individual – personal qualities shown by the student.
Outcome	As a result of the feedback process, changes could include: <ul style="list-style-type: none">• increased student effort• student use of more effective strategies• improved student autonomy, self-assessment and self-management• teacher provision of more appropriate and specific goals• teacher adaptation of teaching strategies to meet students’ needs.

The characteristics of good feedback

Evidence shows consistency in the characteristics of effective and ineffective feedback.²

Area	More effective feedback	Ineffective feedback
Setting a goal	A specific and challenging goal is set, often with criteria for a high quality performance on a task.	Goals are vague or not used.
	The goal is communicated so that students understand it.	Students do not understand the goals or the success criteria.
	Feedback addresses task goals directly.	
Kind of feedback	Feedback draws attention to positive elements of the performance: for example, the details of correct responses.	Feedback is focused solely on incorrect responses.
	Feedback includes constructive criticism: advice that provokes the student to improve task performance.	Feedback that does not provide information or support to improve performance or understanding.
	Feedback refers to changes in performance from previous efforts.	There is a focus on comparisons with other students, or marks and grades.
	Feedback includes an element of self-assessment by students (including peer assessment) as part of the process of encouraging student autonomy and responsibility.	A reliance on extrinsic rewards (stickers, stars). Feedback includes punishment.
Level of feedback	Feedback provides information about a task, how well it was performed and how to do it more effectively.	Non-specific feedback is given: e.g. praise or criticism for task performance without detail.
	Feedback at the process level: how can the student improve the learning processes needed to understand and perform the task?	Feedback at the self level: comment on personal qualities of the student, either positive or negative that provides little or no information about processes or performance.
	Feedback at the self-regulation level: how can the student do a better job of planning, monitoring and managing their actions and using strategies in approaching the task? This is also described as “metacognitive” feedback.	

² Adapted principally from Hattie and Timperley, 2007; Black and Wiliam, 2010; Wiliam, 2010; Heitink et al, 2016; Van den Bergh et al, 2013; Van den Bergh et al, 2014; Parr and Timperley, 2010; and OECD, 2005

Praise for intelligence can hinder learning

Praising students for intelligence can reinforce a fixed mindset. For example, “You did a brilliant job, you are very smart”.

Students invest in how they'll be judged by others for their fixed intelligence, rather than engaging in learning opportunities that risk them making mistakes or revealing deficiencies.

These students may become less confident, less resilient, less motivated and may significantly decrease their effort in response to setbacks.

By contrast, students who receive praise for effort, or process feedback tend to show greater engagement, motivation and improvement.

“You did a brilliant job. Your original strategy didn't work, but you stuck with it. You tried another approach and you were able to solve the problem.”

These students focus on the processes of learning, which they can improve on, rather than being derailed by the idea of fixed ability. This focus on the process of achievement is a key tenet of the growth mindset.

Adapted from Dweck, 2007.



At a glance

School leaders can:

- prioritise feedback in their school
- invest in professional learning for teachers
- foster a culture that supports effective feedback.

How can we improve feedback in schools?

The role of school leadership

The Australian Professional Standard for Principals recognises the critical role of school leaders in helping teachers to incorporate effective feedback practices into their classrooms and implement consequent changes in assessment, teaching and learning. While there are common principles and evidence for effective practice, it will look different in each classroom.

Research on feedback finds that the kinds of changes needed take time to achieve, though the potential gains are significant. Improving feedback has implications for the way teachers teach, and the role students play. Without strong leadership support for implementation, feedback will not achieve its full benefits.

The evidence base suggests a number of actions that can support change within the school. School leaders should³:

- focus on feedback as a priority and as a whole school approach
- invest in professional learning for teachers, including opportunities to work collaboratively, to review beliefs and trial strategies for giving, receiving and acting on effective feedback
- foster a culture of trust, mutual respect and cooperation
- provide resources for teachers including examples of implementation and examples of what effective feedback looks like in practice
- ensure students are supported to build capacity in self-assessment and in giving, receiving and acting on feedback so that they can understand the goals of their learning and grasp what they need to do to improve
- engage in collective efforts to trial and share learning about feedback, as a school and within groups of schools.

AITSL resources

AITSL has developed a series of resources to support the implementation of evidence-based feedback practices. These include case studies that illustrate how school leaders and teachers have acted on the principles of effective feedback in their schools and classrooms, as well as practical supports for planning, implementing and evaluating implementation and impact.

These resources and related materials are available on the AITSL website at www.aitsl.edu.au

³ Drawn principally from Heitink et al, 2016; Andrade and Valtcheva, 2009; Black and Wiliam, 2010; OECD, 2005

At a glance

Teachers can:

- include opportunities to draw out student thinking and understanding
- identify “gaps” and next steps for each student
- provide feedback to help each student address their learning “gap”.

The role of the teacher

Teachers engage in feedback practices every day. With school leadership support and access to high quality resources, teachers can ensure that the daily feedback they provide to their students achieves the greatest possible benefits.

The learning process usually includes a teaching intervention and a student response. Following this, feedback is provided about an aspect of the student’s response. For assessment to function formatively, the feedback must be used to inform teaching and learning choices, and as the impetus to adjust strategies if need be.

Teachers need to include opportunities in their classrooms for eliciting student thinking and understanding. In addition to learning tasks and activities, questioning and discussion can provide valuable insight into student progress and can reveal misconceptions.

Teachers are often required to interpret information about learning and to provide feedback in the moment, with little time for reflective analysis. Research suggests that a teacher’s level of pedagogical knowledge and content knowledge can enhance their ability to provide useful feedback (Par & Timperley, 2010; Heitink et al, 2016). In addition, teachers need to be able to integrate feedback processes with their pedagogical content knowledge in order to better attend to student learning needs and to provide useful feedback (Heitink et al, 2016).

Providing high quality feedback involves the ability to identify next steps for all students on their learning journey after noticing a “gap”. This requires:

- understanding what high quality performance looks like
- the capacity to diagnose how the student’s work falls short of that level
- the ability to help the student see the gap and how to address it.

Feedback supports students to understand what is to be done and how to improve their performance. It also enables a teacher to see how teaching practice can be improved, and which teaching and learning strategies are more likely to be effective.



At a glance

- Quality feedback must incorporate clear learning goals
- Teachers should track student progress against goals
- Effective feedback increases equity of student outcomes.

Working with goals and criteria

The task of feedback is to help students close the gap in performance. However, students can only identify the gap if they understand the goal of the teaching and their learning.

Van den Bergh et al (2014) argue that the quality of feedback is determined partly by whether clear learning goals are established and communicated. There is very good evidence that setting specific goals, often with criteria for a high quality performance on a task, effectively and significantly increases individual performance.

Similar evidence of improved outcomes associated with formative assessment are reported by the Organisation for Economic Co-operation and Development (OECD). Its paper, *Formative Assessment: Improving Learning in Secondary Classrooms* (2005) reports that formative assessment not only raises the level of student attainment, it also increases equity of student outcomes and improves attendance and students' ability to learn. A key factor in making these gains is establishing and communicating learning goals, tracking progress and, where necessary, adapting goals to better meet student needs.

This also means educators need to consider students' prior understanding and skills. As Black and Wiliam note:

“New understandings are not simply swallowed and stored in isolation; they have to be assimilated in relation to pre-existing ideas.

The new and the old may be inconsistent or even in conflict, and the disparities have to be resolved by thoughtful actions on the part of the learner.

Realising that there are new goals for the learning is an essential part of this process of assimilation.”

Black and Wiliam, 2010, p 85.

At a glance

- Clear goals enable students to manage their own learning actions
- Students who can monitor their own progress learn more
- Students need feedback training for maximum benefit
- A feedback culture enables students to assess their own work.

Peer feedback and self-assessment

Establishing clear goals also enables another key feature of high quality feedback: initiation of student self-assessment and peer assessment.

Self-assessment is closely related to the “self-regulation” level of feedback, which focuses on how students manage and monitor their own actions in pursuit of a learning goal. Feedback at this level “is powerful in terms of deep processing and mastery of tasks”(Hattie & Timperley, 2007).

Andrade and Valtcheva (2009) assert that self-assessment should be criterion-referenced. Students reflect on the quality of their work, judge the extent to which it meets goals or criteria, and revise it accordingly. Students who set goals make plans to meet them and monitor their progress, learn more and do better in school. These “learning to learn” skills enable students to succeed in the world beyond school, enhancing “the ability to define goals, adjust learning strategies, and to assess one’s own work and one’s peers’ work”(OECD, 2005).

Whilst peer- and self-assessment may give students a better understanding of the criteria describing what quality work looks like, these are not automatic processes (Harris et al, 2015). They need to be fostered and encouraged, and students need training in feedback to gain maximum benefit.

Student self-assessment, in which students have an overview of their goals and progress, in turn feeds back into improved teaching, because students and teachers can discuss goals and reflect on progress.

Classroom culture

Adopting feedback approaches can positively impact the culture of the classroom.

Feedback is founded on the belief that all students can achieve success in learning. It places the emphasis on students feeling safe to take risks and make mistakes as they progress. It assumes that every student, regardless of achievement, has untapped potential.

When each student understands the goals and the criteria for success, and has advice and support in making the necessary changes, we can expect all students to learn. This is a culture in which students build self-esteem.

While the teacher retains responsibility for teaching and learning, a feedback culture provides students with the tools they need to judge the quality of their own work and inform their own decisions about improvements. When each student is working on specific goals and has targeted advice about the next steps, the teacher will interact frequently with small groups and individuals. The focus of the classroom will be on progress, development, improvement and achievement (OECD, 2005; Black and Wiliam, 2010).

Conclusions

The Australian Professional Standards for Teachers make clear that teachers at all career stages are expected to be able to assess student learning and to provide feedback to students on their learning.

Evidence supports the benefits of effective feedback practice for students, including marked impacts on student growth and the rate of learning.

Quality feedback is critical to effective teaching and learning. The keys to unlocking the benefits of effective feedback include:

- teachers communicating clear learning goals.
- teachers including opportunities in their classrooms for gathering evidence about student understanding and progress towards the set goals, and using this to instruct students on their next learning steps.
- teachers understanding which strategies support learning and when they may need to adapt or change their strategies.
- using feedback to stimulate improved learning and to contribute to student engagement and self-regulation.
- school leaders supporting teachers to enhance their feedback practices by implementing a whole-school approach and prioritising the work. They can also provide access to resources, professional learning and opportunities for collaboration.
- the appreciation that these changes take time and careful planning to implement, but they go to the heart of education and address its central purpose.

Given the compelling evidence, educators are encouraged to incorporate effective feedback practices.



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