



Giving Feedback

This guide provides examples of various styles of feedback utilised in a range of first-year experience (FYE) grants. Each example has been designed to enable students to reflect and assess their own learning development (see Learning2014 Strategy and Video 2015).

Feedback supports students in their learning, regardless of whether the feedback takes place in a formal or informal situation. It helps students to improve their learning approaches, identify any misunderstandings (gauge how well they are doing) and provides ways to improve their learning. Feedback needs to be timely, understood and applied (Brown, Bull, & Pendlebury 1997). For the majority of students, feedback involves receiving detailed written comments specific to a draft of their assignment. These comments are related to clear criteria, and are focused on how they can improve their work. Formative assignment feedback may include overall generic comments, written comments on individual student submissions, to provide students with opportunities to close the gap between current and desired performance. **learning.futures** approaches prioritise feedback that moves beyond formalised summative feedback from lecturers and tutors to include: early diagnostic feedback, ‘benchmarking’ and discussion of criteria, feedback on draft work, lecturer, tutor and peer feedback, self-assessment and reflection (UTS **learning.futures** 2015).

Characteristics of feedback

Sadler (1989) describes feedback as involving three critical elements: a standard being aimed for; a comparison of the actual level of performance; and appropriate action to bring the two closer together. He argues that, to be considered feedback, comments need to be directed to closing ‘gaps’ in student’s understanding. However, Price et al. (2010) note that designing feedback to assist students to identify the gap between what has been understood and the expected standard of performance may be difficult. Nicol and Macfarlane-Dick (2006) suggest the following principles to guide students towards achieving their learning goals.

Feedback should:

- deliver high-quality information to students about their learning
- help students clarify what good performance is (goals, criteria, expected standards)
- provide opportunities to close the gap between current and desired performance
- encourage academic and student dialogue around learning
- encourage positive motivational beliefs and self-esteem
- be designed to facilitate the development of reflection and self-assessment in learning
- provide information to academics that can be used to help shape the teaching.

Providing students with feedback on their learning and ways to improve their learning early in the session enables student to judge their progress and address concerns. It is important to provide this feedback to students prior to the census date (week 4/5 of session) to enable them to decide whether to continue their enrolment within the subject, or possibly their course. Feedback may take the form of weekly testing, diagnostic testing, online quizzes, and other forms of early low stakes assessment. Besides low stakes tasks, feedback can also include weekly classroom activities, specifically designed to enable individual students to improve their learning.

“The early low stakes weekly quizzes served as a bridge between the weekly lectures (abstract content) and the hands-on weekly tutorials.”

DAB Lecturer, 2014

“The quizzes were very handy and allowed the subject to sink into my mind as it was study every week and overviewing past knowledge.”

DAB Student 2014

Examples of using feedback from across UTS

1. Quizzes for feedback and feedforward

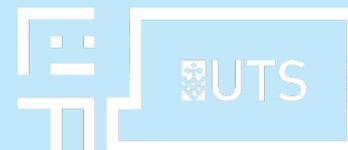
In the first-year subject Construction (DAB), self-paced and self-directed learning with weekly low stakes online quizzes were introduced across the first six weeks of the session. The quizzes, served as a bridge between the weekly lectures and the hands-on weekly tutorials and as they could be undertaken many times they created a platform for students to review and improve their understandings of the often intimidating nature and complexity of the subject’s technical content. Each quiz was specifically designed to encourage revision of previous weeks’ material combined with reinforcement of current learning and segue to future tasks. With incorrect responses, students were directed to review lecture notes; or if correct, they were provided links to external sources curated to provide resources for the subject. With this approach, students were more prepared for each week’s class and demonstrated a better grasp of fundamental concepts and technical vocabulary. The failure rate for the formal exam quiz was reduced by 30% with this weekly feedback design. (FYE grant 2014 & 2015 DAB)

2. Quizzes for feedback and reflection

Students in the subject Physical Modelling are required to complete weekly topic quizzes from week 1 to the end of session. A new topic is taught each week. Students were able to complete any quiz at any time. Once a topic was chosen, the student was encouraged to reflect on his/her confidence levels in that topic, and the online question bank provided a test to reflect their past attainment in the topic matched to their confidence level. Each week, the student was reminded of their weekly topic test result, and their overall proficiency. For the engineering students undertaking this subject, achievement in the topic tests encouraged personal reflection and a game-like attraction. (FYE grant 2015, Science)

3. Feedback using mastery testing

Early, frequent low stakes assessment occurs in ‘Programming Fundamentals’ where the first 50 marks comprise five different types of mastery tests, conducted in weekly lab sessions (online marking). The first mastery test was in week 3. If a student failed a particular mastery test, the student repeated an equivalent test each week until they did pass it. Students had to pass all five different types of tests by the end of the session. With this approach, the failure rate in this subject moved from higher than 20% to only 7%. (FYE grant 2015, FEIT)



Mastery Testing in First-Year Mathematics

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Mastery learning works off the assumption that all students can learn if given appropriate learning conditions, in particular, enough time and support to learn. Students undertake a mastery test (success is based on a prescribed level of performance, typically 75% or 80% of marks available). These mastery tests are brief, online, supervised and administered a week or two after instruction.

Feedback assists students to develop their mastery in the subject content. It links directly to the test questions, is immediate, and has summative and formative components. The formative feedback links incorrect questions directly to a range of learning online resources, such as online video, worked examples, and online practice questions.

Other targeted feedback is provided through peer and one-to-one tutoring in the Mathematics Study Centre. Students can test their mastery in a second test, and, if needed, in a final third test.

Improvements in student achievement, satisfaction and experience have been reported:

Having the mastery testing system was really helpful ... I found that being able to view my results and having second attempts encouraged me to study and learn much more.

The second chance in the test really helped me to learn where I had made my mistakes and to learn from them and to come back and achieve a great mark the second time around.

Benchmarking in First-Year Science

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Over a series of FYE grants, Bio-complexity has introduced a strategy where students examined the criteria for assessment, marked exemplars using the SPARK^{PLUS} technology (benchmarking), and engaged in whole group discussion on the meaning of the assessment.

There are over 600 students in this class and 20 tutors. The benchmarking activity was enacted by students in their own time, where they were able to add comments on each criterion as well as provide a grade for these criteria. Once all submissions were completed, the students were able to compare their own grading with the lecturer's benchmark grade and comment. This process helped the individual student to gauge their understanding of the task based not only on the class means for each criteria, and the comments. The tutors in the subject undertook a similar process.

Students completed the assessment task and a self-assessment of their own work using the assessment criteria. The assignments were graded by the tutors, in ReView, with individual feedback given on some criteria and detailed generic criteria explanations for the other criteria. Students who completed SPARK^{PLUS} benchmarking were also able to address their feedback in a further submission, accompanied by a reflective statement describing how they had improved and received a higher grade.

Over 80% of the students completed the benchmarking and around half took the opportunity to re-submit. There was very little complaint about the grading of the assignment, and students were pleased that the tutors also completed the same benchmarking activity – it contributed to the sense of fairness in the marking process.

4. Feedback on assessment criteria using benchmarking

Feedback may be any discussion with students about the difference between what is expected in an assignment and their actual results. Model answers provide past student examples chosen as they distinguish high from low quality. In an example from first-year engineering, the tutor designed her tutorial for students to work in groups, benchmark their understanding of assignment criteria by marking sample assignments, form a group consensus to grade the sample assignments, and debate with other groups the reasons for their decision. (FYE grant 2013 FEIT)

5. Feedback to develop reflective practice

In the first-year Law subject, Ethics, Law and Justice, students develop their skills in reflective practice to improve their performance and to recognise the skills as an important professional skill for the discipline of Law. Students were taught how to become reflective practitioners through the use of weekly blogs and a final reflective journal. Tutors were also trained in recognising reflective approaches and providing feedback to develop these skills in the students' development. (FYE grant 2014 Law)

6. Feedback using online tools

The development of an online community of students and tutors helps students to gauge their weekly success. Whether using UTSONline communities, or closed Facebook pages, discussion on specific topics over the session can be designed, where students post questions, and the subject coordinator, tutors and peers respond. Students note the importance of structure underpinning the online environment, to enable them to receive both tutor and peer feedback.

The subject had a closed Facebook page, which worked extremely well as students posted questions there at all times of the day and night, and the tutors and I monitored it often and replied. Students helped each other out more also, and it completely reduced student emails to me and the tutors to almost NIL. (FYE grant 2014 FASS)

7. Feedback in tutorials using pre-work and post-work

The use of online interactive tutorials as pre-work in one FYE grant has prepared students to more easily complete the tutorial activity, and the follow-up post workshop activity. The task was to prepare students to read scientific texts and be able to unpack scientific journal articles as a means to understand and develop skills in scientific writing. The interactive tutorials, designed with Adobe Captivate, had a range of question styles – MCQ, drag and drop, mix and match, hover, and the feedback provided correct and incorrect answers, along with videos and voice-overs.

In class, students used the skills and concepts introduced in the online interactive tutorials to read and evaluate a scientific article collaboratively. The post-workshop activity was designed for students to write their own abstract, a concept first introduced in the reading tutorials. Here students applied the concepts that they learnt in the online tutorials and workshop to their own scientific writing. (FYE grant 2014, 2015, Science)

8. Feedback in tutorials using annotation tools in class

In this example, the academic used their tablet and a free annotation tool (Skitch) to provide immediate feedback to students on their homework tasks. An image of the student's answer to a homework problem is projected onto the class (computer) screen, and with the use of the annotation technology, the academic (and peers) can discuss the student's solution. Contrary to expectations, students found this

“Reflecting on the topics each week allowed you to determine your own opinions/beliefs which help shape your individual direction. The blog posts really made me reflect and re-evaluate my opinion weekly. The final reflection helped me to see how far I'd come from the start.”

Law Student 2014

level of feedback as directly useful to their understandings. As a consequence, there was notably higher levels of class participation, a lot more questions asked, and discussions between the tutor and students. (Business, first-year Accounting).

9. Feedback throughout the semester

A student entering the study of chemistry may have limited abilities in mathematics and chemistry. Yet, this first-year, first-session subject is undertaken by all students enrolled in a science degree. Since 2012, the subject has been redesigned to add many layers of feedback to help students become successful in their study of chemistry. (FYE grant 2012, 2013 & 2014 Science). It is presented as an example of feedback throughout the session.

- Firstly, student skills in mathematics are assessed with a short online diagnostic test early in the session. Students can act on their results with self-study in online mathematics resources. Feedback on student communication skills are provided over the first four weeks of the session, utilising student presentations on topical chemistry newsworthy items, with peer and tutor feedback, and submitted written tasks linked to the presentation and feedback.
- Throughout the session, students are required to complete pre-lab quizzes (skills required to perform practical classes), undertake weekly paper-based tests (20 minutes) in tutorials (knowledge level assessment), and in class complete a personal online reflection on their professional skill performance (organisational skills, professional skills and interpersonal skills). Quizzes provide immediate feedback, paper tests are marked and returned the following week, and demonstrators provide feedback on students developing professional skills immediately following their practical sessions.
- Students have been observed to be more confident of their knowledge and ability in chemistry, observed to work professionally in class groups and have achieved significantly better results than in past years despite growth in student numbers (over 50% growth in four years).

10. Applying feedback within a subject to rectify students misconceptions

Most students read and pay close attention to written comments (Higgins, Hartley & Skelton 2002) in order to use the advice in future assignments, i.e. to feedforward into the next version of their work. Encouraging students to apply the feedback to improve the quality of later assignments is demonstrated in a first-year subject in Science. Students were encouraged to resubmit their first assignment to demonstrate that they were able to rectify their misconceptions. There were certain conditions for students to undertake this option: they must engage in the online peer review of past exemplars, engage in a self-appraisal and self-improvement using ReView software.

11. Applying feedback within a subject to improve the next assessment

In a first-year subject in Health, students utilised feedback from their first assignment to develop a more advanced approach in the following assignment. Students were given a problem-based clinical case study and asked to present a paper (using a designated framework) early in the session. A grade was then awarded with written feedback. In the later part of the session, students were given an in-class test which comprised the same case study used in Part 1 but with some added questions. The students were randomly put into groups and had 40 minutes to decide on their solution to the new questions. The solution was presented to the class by the group and marked.

“It was nice to see other students’ work because it made you feel like you’re not the only one who got it wrong or didn’t understand.”

Business Student 2014

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